Fence to Fence Environmental Services at Joint Base San Antonio

Storm Water Management Program for Joint Base San Antonio-Lackland, Texas

April 2020

Submitted to:

Mr. Paul Mehaffey
AFCEC/CZOW
266 F Street West, Bldg 901
JBSA-Randolph, TX 78150

Mr. Richard Hopewell
JBSA Water Quality Manager
1651 5th Street West, Hangar 62
JBSA-Randolph, TX 78150

Prepared by:

Environmental Quality Management, Inc. (EQM)
1800 Carillon Boulevard
Cincinnati, OH 45240
513.825.7500

In association with:

Tetra Tech
711 Navarro St., Suite 560
San Antonio, TX 78205
210.299.7900

USAF CONTRACT NO. FA8903-15-F-0008
TASK ORDER T34230-41AR

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF ACRONYMS

AFI	Air Force Instruction
BMP	best management practice
CATEX	Categorical Exclusions
CEP	Civil Engineer Squadron Programming Flight
CGP	Construction General Permit
CON	Construction Site Stormwater Runoff Control
CWA	Clean Water Act
DoD	Department of Defense
EIAP	Environmental Impact Analysis Program
EPA	Environmental Protection Agency
ETL	Engineering Technical Letter
IDE	illicit discharge elimination
IDDE	illicit discharge detection and elimination
IP	Implementation Plan
IPMP	Integrated Pest Management Plan
ISWMP	Integrated Solid Waste Management Plan
JBSA-LAK	Joint Base San Antonio-Lackland
LID	Low Impact Development
MCM	Minimum Control Measures
MEP	maximum extent practicable
MS4	municipal separate storm sewer system
MSGP	Multi Sector General Permit
NEPA	National Environmental Policy Act
NOC	Notice of Change
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
P2	Pollution Prevention and Good Housekeeping
PC	Post-Construction
PCB	polychlorinated biphenyl
PEO	Public Education, Outreach, and Involvement
QAE	Quality Assurance Evaluator
SPCC	Spill Prevention Control and Countermeasure
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code

TCEQ	Texas Commission on Environmental Quality
TMDL	total maximum daily load
TPDES	Texas Pollutant Discharge Elimination System
UA	Urbanized Area
UFC	Unified Facilities Criteria
UIF	Unfavorable Information File

CERTIFICATION

This section contains the certification, signed by the appropriate Responsible Official. Insert scanned document into this section, or insert the statement prescribed by the regulator below.

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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Responsible Official Certification

Printed Name:_____ Date: _____

Signature:_____ Title: _____

DOCUMENT CONTROL

Record of Updates – The Storm Water Management Program (SWMP) is modified and updated in accordance with (IAW) applicable permit requirements.

Page/Section	Nature of Change	Date of Change	Approved By

Record of Review – IAW Air Force Instruction (AFI) 32-1067, *Water and Fuel Systems*, the SWMP is reviewed based on permit requirements

Review Date	Review Participants	Notes/Remarks	Results in Plan Update (Yes or No)

Version Table – A new version of the plan is created when pen and ink changes are incorporated. Below is a list of all versions under the current permit.

Version Number	Description	Date

1.0 INTRODUCTION

Joint Base San Antonio-Lackland (JBSA-LAK), a United States Department of Defense (DoD) installation encompassing a total land area of 8,881 acres, is located within the city limits of San Antonio, Texas. JBSA-LAK is comprised of three, adjacent military properties: Main Base Lackland (MBS), Kelly Field Annex (KFA), and Lackland Training Annex (LTA). The installation is primarily surrounded by urban residential and industrial properties. JBSA-LAK's mission is to command, operate, and administer resources and provide support to assigned, attached, satellite, and tenant units. Diverse operations at JBSA-LAK include the operation and maintenance of roads, sanitary and storm sewers, buildings, offices, hospitals, housing, dormitories, and other military training and operations.

JBSA-LAK personnel must comply with federal and state regulations related to environmental protection while ensuring mission accomplishment. One of the primary environmental laws impacting JBSA-LAK is the federal Clean Water Act (CWA) and associated implementing regulations. The purpose of the CWA is to protect and restore the physical, chemical, and biological integrity of our nation's waterways by controlling and limiting discharges of pollutants to these waterways. Research has shown that urban runoff is a leading cause of water pollution throughout the country and urban runoff contributes pollutants of concern such as sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons, trash, andpesticides to waterways. In addition, the impervious nature (i.e., pavement and hardscape) of most urban communities has resulted in stormwater discharges that have greater volumes, velocity, and pollutant loads than pre-development runoff.

JBSA-LAK owns and operates a stormwater conveyance system, and the installation is wholly located within the San Antonio Urbanized Area (UA) as defined by the United States Census Bureau. Based on the CWA implementing regulations and JBSA-LAK's proximity to an urbanized area, JBSA-LAK is a regulated small municipal separate storm sewer system (MS4). As such, JBSA-LAK is required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) for surface water discharges associated with municipal stormwater discharges. The State of Texas has been delegated authority from the U.S. Environmental Protection Agency (EPA) for implementing and enforcing the CWA and NPDES permit program within the State. On 24 January 2019, the Texas Commission on Environmental Quality (TCEQ) reissued Texas Pollutant Discharge Elimination System (TPDES) General Permit No. TXR040000 for stormwater discharges from small MS4s. As a regulated small MS4 within the State of Texas, JBSA-LAK continues to be eligible for coverage under General Permit No. TXR040000 (MS4 Permit). Additional guidance used in preparation of this document includes:

- 2014 Texas Integrated Report Index of All Water Quality Impairments, approved November 19, 2015.

In accordance with the MS4 Permit, JBSA-LAK must develop and implement a Stormwater Management Program (SWMP) designed to reduce the discharge of pollutants to the maximum extent practicable (MEP) and to meet applicable water quality requirements of the CWA. The SWMP must identify best management practices (BMPs) and comply with the Remand Rule to ensure clear, specific and measurable goals are implemented to address the five Minimum Control Measures (MCMs), which are:

1. Public Education, Outreach and Involvement (PEO);
2. Illicit Discharge Detection and Elimination (IDDE);
3. Construction Site Stormwater Runoff Control (CON);
4. Post-Construction Stormwater Management in New Development and Redevelopment (PC); and
5. Pollution Prevention/Good Housekeeping for Municipal Operations (P2).

This document outlines the JBSA-LAK SWMP and identifies specific BMPs and measurable goals for each MCM. The SWMP contained herein details actions that will be implemented over the 5-year MS4 Permit term and will assist JBSA-LAK personnel with implementing, tracking, and documenting SWMP activities. The JBSA-LAK Water Quality Program Manager administers the SWMP and participates as a member of the MS4 Field Staff.

1.1 PURPOSE

This SWMP will serve as a framework for identifying, assigning, and implementing control measures and BMPs intended to eliminate or reduce the discharge of pollutants from the MS4 and protect downstream water quality. In addition to these primary objectives, the SWMP will:

- Serve as a planning and guidance document for JBSA-LAK organizations, contractors, and the JBSA-LAK community to minimize water quality impacts from municipal activities;
- Be dynamic and adaptively managed to address changes to MS4 Permit goals, organizational structure, responsibilities, and operations; and
- Define techniques and measurable goals for measuring BMP effectiveness.

1.2 ORGANIZATION

Section 1.0 introduces the background and requirements associated with JBSA-LAK's MS4 Permit as well as summarizes the purpose of this SWMP; Section 2.0 provides an overview of JBSA-LAK, including a description of activities, drainage basins and receiving waterways; Section 3.0 describes SWMP implementation; and Sections 4.0 through 8.0 identify and describe the BMPs and associated measurable goals that will fulfill the requirements of the five applicable MCMs outlined in the MS4 Permit. Section 9.0 describes the recordkeeping and reporting requirements for JBSA-LAK.

1.3 PERMIT ELIGIBILITY AND DEFINITIONS

The MS4 Permit contains specific limitations and eligibility requirements to obtain coverage under the statewide general permit. The MS4 Permit also contains terms and conditions specific to different categories of MS4s. The following paragraphs discuss permit eligibility and definitions applicable to JBSA-LAK.

1.3.1 JBSA-LAK MS4 Definition and Categorization

JBSA-LAK is a non-traditional, Level 2 MS4 operator based on the following MS4 Permit definitions:

Non-traditional MS4:

> *"A small MS4 that often cannot pass ordinances and may not have the enforcement authority like a traditional small MS4 would have to enforce the stormwater management program. Examples of non-traditional small MS4s include counties, transportation authorities, municipal utility districts, drainage districts, military bases, prisons and universities."*

Level 2 MS4:

"Level 2: Operators of traditional small MS4s that serve a population of at least 10,000 but less than 40,000 within an Urbanized Area. This category also includes all non-traditional small MS4s."

This SWMP complies with the MS4 Permit requirements applicable to non-traditional, Level 2 MS4 operators.

1.3.2 Legal Authority and Enforcement Measures

Part III, Section A.3 of the MS4 Permit requires permitted entities to identify the legal authority for implementing and enforcing the SWMP. For non-traditional MS4s that often lack the legal authority to pass and enforce ordinances, the MS4 Permit provides two options for demonstrating legal authority. The first option is applicable to JBSA-LAK and states the following:

> *"Where the permittee lacks the authority to develop ordinances or to implement enforcement actions, the permittee shall exert enforcement authority as required by this general permit for its facilities, employees, contractors, and any other entity over which it has operational control within the portion of the UA under the jurisdiction of the permittee. For discharges from third party actions, the permittee shall perform inspections and exert enforcement authority to the MEP."*

Additionally, the MS4 Permit requires the following with respect to SWMP enforcement:

> *"Permittees with enforcement authority (i.e., traditional small MS4s) shall develop a standard operating procedure (SOP) to respond to violations to the extent allowable under state and local law. When the permittee does not have enforcement authority over the violator, and the violations continue after violator has been notified by the permittee, the permittee shall notify either the adjacent MS4 operator with enforcement authority or TCEQ's Field Operations Support Division."*

JBSA-LAK has established regulation, and commands full jurisdiction, fiscal authority and legal resources to implement its SWMP. As a military installation, personnel living and working on JBSA-LAK must abide by Federal, State, and local laws as well as military, contractual, and JBSA-LAK specific regulations and policies. There are well established legal mechanisms to address SWMP enforcement on JBSA-LAK including, but not limited to, the Uniform Code of Military Justice, Federal Acquisition Regulations, and Office of Personnel Management regulations. Enforcement measures can include administrative and criminal penalties for installation employees, military members, housing residents, and contractors. JBSA-LAK's Water Quality Program Manager will oversee SWMP enforcement, coordinate with appropriate enforcement agent, and document any enforcement action taken.

1.3.3 Compliance with Water Quality Standards

MS4 discharges that would cause, have the reasonable potential to cause, or contribute to a violation of water quality standards are not eligible for coverage under the MS4 Permit. JBSA-LAK stormwater discharges to Lower Leon Creek (Segment 1906) and Medio Creek (Segment 1912A). Discharges from JBSA-LAK are not expected to cause or contribute to a violation of water quality standards or fail to protect and maintain existing designated uses.

1.3.4 Impaired Water Bodies and Total Maximum Daily Load

MS4 discharges to impaired water bodies, for which there is an approved total maximum daily load (TMDL) are not eligible for coverage under the MS4 Permit unless the discharges are consistent with the approved TMDL. A water body is impaired for purposes of the permit if it has been identified, pursuant to the latest TCEQ and EPA approved CWA §303(d) list or the Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d), which lists the water bodies as not meeting Texas Surface Water Quality Standards.

On August 9, 2016, the EPA approved the State of Texas 2014 Texas Integrated Report of Surface Water Quality 303(d) list of water quality limited water bodies. The 303(d) list includes all surface waters in the State for which beneficial uses of the water, such as drinking, recreation, aquatic habitat, and industrial use, are impaired by pollutants. These are water-quality-limited estuaries, lakes, and streams that fall short of

State Water Quality Stream Standards. Some of the approved 303(d) list water bodies have existing TMDLs, while other segments require the establishment of TMDLs by TCEQ assessment.

The 2019 MS4 General Permit added a requirement that states MS4 operators shall annually check, in conjunction with preparation of the annual report, if a water body has been added to the latest EPA approved *Texas Integrated Report of Surface Water Quality* for Clean Water Act Sections 305(b) and 303(d) which lists the category 4 and 5 water bodies. Newly listed waters must be addressed in the SWMP within 2 years following the approval date of the new list(s). The permit allows the MS4 operator to implement BMPs to address the pollutant of concern without submitting a notice of change (NOC). (Permit Part II.D.4)

JBSA-LAK discharges municipal stormwater into one impaired water bodies within the San Antonio River Basin.

- The segment of Lower Leon Creek (Segment 1906), from the confluence with the Medina River in Bexar County to a point 100 meters (110 yards) upstream of SH 16, northwest of San Antonio, is classified in the *2014 Texas Integrated Report* - Texas 303(d) List (Categories 4 and 5) as an impaired water body for depressed dissolved oxygen and for polychlorinated biphenyls (PCBs) in edible aquatic animal tissues. TMDLs for dissolved oxygen and PCBs in edible tissue are currently being developed. An Implementation Plan (I-Plan) has not been approved by the EPA and no waste load allocations have been imposed on JBSA-LAKs MS4 permit, at this time.

JBSA-LAK has not been established by TCEQ as a majority contributor of bacteria to the Medina River. Additionally, the TCEQ Executive Director has not determined that coverage under an individual permit is required based on consideration of an approved TMDL model and IP, anti-backsliding policy, history of substantive non-compliance or other regulatory considerations and requirements, or other site-specific considerations.

1.3.5 Discharges to the Edwards Aquifer Recharge Zone

The MS4 Permit contains additional requirements and approvals for MS4 discharges to the Edwards Aquifer Recharge Zone or Contributing Zone. Stormwater from JBSA-LAK does not discharge to the Edwards recharge or contributing zones. As such, JBSA-LAK is not required to prepare a Water Pollution Abatement Plan or obtain additional approvals related to discharges from the JBSA-LAK MS4.

1.3.6 Discharges to Specific Watersheds and Water Quality Areas

Stormwater from JBSA-LAK does not discharge to a Watershed Protection area. Discharges prohibitedby 30 Texas Administrative Code (TAC) Chapter 311 relating to Watershed Protection are not authorized by the MS4 Permit.

1.3.7 Protection of Streams and Watersheds by Home Rule Municipalities

Stormwater from JBSA-LAK does not discharge to a home-rule municipality designed area.

1.3.8 Endangered Species Act

Discharges that would adversely affect listed endangered or threatened species or critical habitat are not authorized by the MS4 Permit. No Federally listed endangered or threatened species have been identified within the confines of JBSA-LAK. Stormwater discharges from JBSA-LAK are not expected to impact threatened and/or endangered species or critical habitat.

1.3.9 Public Notice Process Documentation

Following the Notice of Intent (NOI) submittal, TCEQ's Office of Chief Clerk will review the NOI and SWMP (completeness review), provide a preliminary decision concerning permit coverage, and provide

specific instructions for completing the public notice requirements of the MS4 Permit. JBSA-LAK will be required to place a notice in a local newspaper informing the public of MS4 Permit filing coverage. The notice is to provide the public with an opportunity to submit comments on the NOI and SWMP and allow the public a method to request a public meeting. The decision to hold a public meeting is determined by TCEQ if significant public interest is identified.

At a minimum, the public notice must include the following information:

- The legal name of the MS4 operator and indication of whether the NOI is for a new authorization or is a renewal of an existing authorization;
- MS4 operator address;
- A brief summary of the information included in the NOI, such as the general location of thesmall MS4 and a description of the classified receiving waters that receive the discharges from the small MS4;
- The location and mailing address where the public may provide comments to theTCEQ;
- The public location where copies of the NOI and SWMP, as well as the executive director's general permit and fact sheet, may be reviewed;
- If required by the TCEQ executive director, the date, time, and location of the public meeting;
- Evidence the notice was published per Part II, Section E.12. (d); and
- If TCEQ determines a public meeting is necessary, document key public information submittal steps identified in the MS4 Permit.

Documentation of JBSA-LAK's public notice process, including NOI filing, correspondence with TCEQ, and public comments, as applicable, are included in Appendix C of this document.

2.0 JBSA-LAK OVERVIEW

JBSA-LAK is located in Bexar County, Texas, within the city limits of San Antonio, Texas. Activities on JBSA-LAK include: flight line operations, vehicle maintenance and storage yards, civil engineering operations, dormitories, lodging, schools and daycare facilities, shopping centers, gas stations, medical facilities (Wilford Hall Medical Center, electric utilities (Total Energy Plant), landscaped physical training areas (golf course, parade fields, dog training area, recreation), and open space.

2.1 OUTFALL AND RECEIVING WATER DESCRIPTION

Discharges from the regulated outfalls flow directly or indirectly into Lower Leon Creek (Segment 1906), Indian Creek (no assigned segment number), or Upper Medio Creek (Segment 1912A); all within the San Antonio River Basin and ultimately to the Gulf of Mexico via the following paths:

- Lower Leon Creek (Segment 1906) flows into the Medina River (Segment 1903), which flows into the Upper San Antonio River (Segment 1911), which continues as the Lower San Antonio River (Segment 1901) then flows into the Guadalupe River-Tidal (Segment 1801) before discharging into the San Antonio Bay, an intercoastal estuary within the Gulf of Mexico.
- Indian Creek flows into Kilroy Lake, which flows into Lower Leon Creek (Segment 1906) then flows into the Medina River (Segment 1903), which flows into the Upper San Antonio River (Segment 1911), which continues as the Lower San Antonio River (Segment 1901) then flows into the Guadalupe River-Tidal (Segment 1801) before discharging into the San Antonio Bay, an intercoastal estuary within the Gulf of Mexico.
- Upper Medio Creek (Segment 1912A) flows through O.R. Mitchell Lake to 1 Medio Creek (Segment 1912), which flows into the San Antonio River (Segment 1911), which continues as the Lower San Antonio River (Segment 1901) then flows into the Guadalupe River-Tidal (Segment 1801) before discharging into the San Antonio Bay, an intercoastal estuary within the Gulf of Mexico.

2.2 ALLOWABLE NON-STORMWATER DISCHARGES

The following allowable non-stormwater sources may be discharged from the JBSA-LAK's MS4 and are not required to be addressed in the IDDE or other minimum control measures, unless determined by JBSA-LAK or TCEQ, to be significant contributors of pollutants.

1. Water line flushing (excluding discharges of hyper chlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life);
2. Runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater, or surface water sources;
3. Discharges from potable water sources that do not violate Texas Surface Water Quality Standards;
4. Diverted stream flows;
5. Rising ground waters and springs;
6. Uncontaminated ground water infiltration;
7. Uncontaminated pumped ground water;
8. Foundation and footing drains;
9. Air conditioning condensation;
10. Water from crawl space pumps;
11. Individual residential vehicle washing;
12. Flows from wetlands and riparian habitats;
13. Dechlorinated swimming pool discharges;
14. Street wash water excluding street sweeper waste water;

15. Discharges or flows from emergency firefighting activities (firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
16. Other allowable non-stormwater discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1);
17. Non-stormwater discharges that are specifically listed in the TPDES MSGP TXR050000 or the TPDES Construction General Permit (CGP) TXR150000;
18. Discharges that are authorized by a TPDES or NPDES permit or that are not required to be permitted; and
19. Other similar occasional incidental non-stormwater discharges such as spray park water, unless the TCEQ develops permits or regulations addressing these discharges.

3.0 STORMWATER MANAGEMENT PROGRAM IMPLEMENTATION

3.1 MINIMUM CONTROL MEASURES AND BMPS

Minimum Control Measures or MCM is the term used by TCEQ for the five MS4 program elements aimed at achieving improved water quality. The MS4 Permit specifies the SWMP must include BMPs and measurable goals to address each MCM. The five MCMs applicable to JBSA-LAK are:

1. Public Education, Outreach and Involvement (PEO);
2. Illicit Discharge Detection and Elimination (IDDE);
3. Construction Site Stormwater Runoff Control (CON);
4. Post-construction Stormwater Management in New Development and Redevelopment (PC); and
5. Pollution Prevention and Good Housekeeping for Municipal Operations (P2).

Sections 4.0 through 8.0 of this SWMP present the BMPs, measurable goals, and implementation schedule for JBSA-LAK to address each of the MCMs. The MS4 Permit, for the most part, allows the permittee to evaluate, propose, schedule and implement BMPs; however, certain BMPs are prescribed by the permit. JBSA-LAK has implemented many of the BMPs listed in Sections 4.0 through 8.0 under the previous MS4 Permit and SWMP. This SWMP includes BMPs for each of the MCM that have been implemented, proposed to be implemented, and continue to be implemented from the previous MS4 Permit. Unless otherwise identified in this SWMP, BMP implementation frequency is reflected in each MCM table as "Implementation Schedule".

4.0 PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT

The first of the five MCMs described in this SWMP is Public Education, Outreach, and Involvement (PEO). The goal of this MCM is to ensure greater public awareness of and compliance with the MS4 Permit. Specifically, this MCM is intended to educate the JBSA-LAK community (hereafter referred to as "the public") about the importance of protecting stormwater quality for the benefit of the environment and human health.

Public education, outreach, and involvement are necessary to foster interest and support for JBSA-LAK's stormwater program. A JBSA-LAK community educated and involved in SWMP implementation will ensure greater BMP effectiveness and compliance with the MS4 Permit. As members of the public become aware of what is expected of them and others in the community, they will be more likely to support the SWMP. These habits are likely to be carried into their everyday lives whether located on or off-installation.

JBSA-LAK PEO program goals are to:

- Provide a consistent message for the length of time necessary to focus public behavior;
- Foster support for the purpose and goals of the SWMP;
- Specifically address potential sources of bacteria and activities/controls to reducebacteria discharges from the JBSA-LAK MS4;
- Change specific behaviors, which adversely affect stormwater quality; and
- Increase community awareness and understanding of the individual actions that can be taken to protect and improve the quality of surrounding water bodies.

The JBSA-LAK target audience for the PEO MCM includes:

- Civilian and military personnel assigned to JBSA-LAK;
- Residents living on JBSA-LAK; and
- Contractors performing work on JBSA-LAK.

The following clear, specific, and measurable BMPs will be implemented by JBSA-LAK to satisfy the PEO MCM. Where appropriate, the selected BMPs will specifically address bacteria and other pollutants of concern. JBSA-LAK will utilize existing federal, state, and Air Force-developed stormwater education and outreach materials whenever possible. When necessary, new PEO materials will be created and distributed. When required, all federal, state, and local public notice requirements will be followed during implementation of this MCM. PEO BMPs are presented in the following subsections and are summarized in Table 1.

4.1 PEO-1 HAZARDOUS WASTE GENERATOR TRAINING

Implementation Details

Hazardous waste is fully regulated by the Solid Waste Disposal Act, Texas Health and Safety Code (H&HC) 361.01 to 361.912 and regulations at 30 TAC 33, 30 TAC 39, 30 TAC 305,9 and 30 TAC 335.
and include the proper collection, management, temporary storage and disposal. Hazardous waste generated at JBSA-LAK is properly containerized in compatible containers and disposed of at a licensed hazardous waste facility. These practices minimize potential stormwater exposure. Organizations generating hazardous waste will ensure appropriate satellite accumulation point management personnel receive

training. The JBSA Hazardous Waste Program Manager ensures that required training is available for satellite hazardous waste managers and performs periodic inspection of satellite accumulation points for proper waste management and hazardous waste compliance.

Measurable Goal

- Ensure 100% of satellite accumulation point managers obtain annual refresher hazardous waste management training and perform quarterly inspections of satellite accumulation points. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure corrective measures have been implemented by the responsible party. (Annually by 31 December of each year)

4.2 PEO-2 PROVIDE STORMWATER AWARENESS MATERIALS TO NEW INSTALLATION HOUSING OCCUPANTS

Implementation Details

JBSA has housing units on the installation that are available for lease by military and other authorized personnel. All new housing occupants are provided a Resident Guide containing information related to responsibilities, rules, and expectations for occupants. The Resident Guide includes stormwater related guidelines that housing residents will implement to protect water resources including guidelines for: pet waste management, waste management, hazardous material management, water conservation, and general good housekeeping. The JBSA Water Quality Program Manager and Housing Manager are responsible for ensuring environmental awareness information is provided to all new housing occupants.

This proposed BMP specifically addresses bacteria impairment.

Measurable Goals

- Provide stormwater awareness information to the JBSA Housing Manager for dissemination as part of the housing Resident Guides, to 100% of new residents. The Housing Manager will provide the JBSA Water Quality Program Manager with the number of new residents that receive the Resident Guide. (Annually by 31 December of each year)

4.3 PEO-3 PUBLISH STORMWATER/WATER QUALITY RELATED NEWSPAPER ARTICLE

Implementation Details

The *JBSA Legacy* is the official newspaper of JBSA. This publication discusses JBSA specific events and activities. This newspaper is distributed to residents, installation organizations, and at common areas such as the Commissary and Exchange shopping centers. The *JBSA Legacy* is widely used to convey important information to the installation population and offers an excellent opportunity to reach a broad audience on the installation. At least once per year, an article will be published in *JBSA Legacy* discussing stormwater protection and actions JBSA personnel can take to prevent stormwater pollution. This proposed BMP specifically addresses bacteria impairment and may be an article focused on public awareness, an interactive game such as a crossword puzzle or a contest to encourage public involvement.

Measurable Goal

- Publish one stormwater protection related article per year in the *JBSA Legacy* newspaper. (Annually by 31 December of each year)

4.4 PEO-4 MAINTAIN PET WASTE MANAGEMENT POLICY FOR ALL EXISTING HOUSING OCCUPANTS

Implementation Details

JBSA-LAK's privatized housing contractor requires each tenant to maintain sanitary conditions within the residential areas of JBSA-LAK, including proper pet waste management. Pet waste management requirements are included in residential guidelines. The JBSA-LAK Water Quality Program Manager will maintain a copy of the Resident Guide that is incorporated by reference in the lease agreement. This BMP specifically targets bacteria pollutant discharges from the JBSA-LAK MS4. This BMP is not applicable to dormitory residents, as pets are prohibited.

This proposed BMP specifically addresses bacteria impairment.

Measurable Goal

The JBSA-LAK Water Quality Program Manager will obtain and maintain a copy of the privatized housing Resident Guide to ensure pet waste management continues to be required for all housing occupants. The JBSA-LAK Water Quality Program Manager will not maintain copies of lease agreements. (Annually by 31 December of each year)

4.5 PEO-5 INCORPORATE SEDIMENT, EROSION, AND ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) AWARENESS TRAINING INTO STORMWATER TRAINING PROGRAM

Implementation Details

Members of the installation Stormwater Pollution Prevention Team (SWPPT) receive annual training on industrial stormwater compliance requirements. The JBSA-LAK Water Quality Program Manager will incorporate sediment, erosion, and IDDE awareness training into this existing stormwater training program.

Measurable Goal

- Provide erosion, sedimentation and IDDE awareness training to 100% of SWPPT members at least once per year as part of the industrial stormwater training program. (Annually by 31 December of each year)

4.6 PEO-6 PLACE SWMP ON JBSA WEBSITE

Implementation Details

JBSA maintains a public internet website, JBSA.mil, which provides installation personnel with access to JBSA news, information, resources, and related announcements. Once TCEQ approves the SWMP, the SWMP will be posted on JBSA.mil. Updates to the SWMP and MS4 Annual Reports will also be updated to the website as required.

Measurable Goal

- Place SWMP and MS4 Annual Reports on JBSA website. (Annually by 31 December of each year)

4.7 PEO-7 ENVIRONMENTAL HOTLINE

Implementation Details

Maintain an Environmental Hotline through which the public can ask questions or identify stormwater issues, including reporting illicit discharges and spills. The hotline phone number will be advertised on stormwater–related outreach materials. The JBSA Water Quality Program Manager is responsible for continued distribution and advertisement of the hotline number as well as documenting hotline calls, and actions taken to respond to callers.

Note: Procedures for receipt and consideration of input from the public regarding construction activities will be advertised on the www.jbsa.mil website once per year. The public can provide input to the MS4 via hotline and/or website.

Measurable Goal

- Maintain hotline phone number and document 100% of calls received from the public and actions taken. (Annually by 31 December of each year)

4.8 PEO-8 STORM DRAIN DECALS

Implementation Details

Maintain storm drain decals on or nearby stormwater drain inlets to educate installation personnel that storm drains lead directly to receiving water bodies. Track installed decals to determine maintenance or replacement needs. The JBSA Water Quality Program Manager is responsible for coordinating installation of the storm drain decals.

Measurable Goal

- Maintain storm drain decals on 50% of storm drain inlets and maintain record of installation locations. (Annually by 31 December of each year). The JBSA Water Quality Program Manager will report the number of new or replaced decals on the MS4 annual report.

4.9 PEO-9 CONDUCT COMMUNITY OUTREACH EVENT

Implementation Detail

JBSA Environmental Management personnel have been actively promoting and organizing special events for recognized environmental awareness days, such as Earth Day. Past events have included environmental related booths, displays, and outreach materials. JBSA will continue to organize and conduct at least one community outreach event per year to promote environmental stewardship. The Installation Management, Environmental Chief is responsible for overseeing the planning and execution of the community outreach event.

Measurable Goals

- Conduct one community outreach event per year to promote environmental stewardship. (Annually by 31 December of each year). In preparation for the MS4 Annual Report the Water Quality Program Manager will provide the number of stormwater related outreach materials distributed during the event(s).

4.10 PEO-10 REVIEW STANDARD CONTRACTING SPECIFICATIONS PERTAINING TO HAZARDOUS WASTE AND STORMWATER MANAGEMENT

Implementation Details

Contracting specifications will include hazardous waste and stormwater management requirements that compel contractors conducting business on the installation to properly manage, store and dispose of hazardous waste, and comply with stormwater management requirements. All contractors will be required to comply with operating procedures. The Water Quality Manager will visit sites and evaluate O&M activities to identify pollutants of concern that has potential to discharge from O&M activities into stormwater. This includes roads and parking lots, bridge maintenance, cold weather operations, and right-of-way maintenance. JBSA maintains structural BMPs, if applicable.The JBSA Water Quality Program Manager will review and update, standard contracting specifications annually. The purpose of this annual review is to ensure hazardous waste and stormwater management requirements are detailed and required for contractors performing work on JBSA. The JBSA Water Quality Program Manager will coordinate with the Hazardous Waste Program Manager and Contracting Officer's representatives during the review process.

Measurable Goals

- Perform annual review of standard design and construction specifications and update, if necessary. Maintain documentation of annual review and 100% of comments provided to contracting agents. (Annually by 31 December of each year)

4.11 PEO-11 PROVIDE SEDIMENT, EROSION, AND STORMWATER AWARENESS TRAINING TO FACILITY MANAGERS

Implementation Details

Each facility on JBSA has a designated Facility Manager who is the interface between the facility occupants and the Civil Engineer Squadron. The Facility Manager is responsible for reporting maintenance requirements, conducting facility inspections, and coordinating maintenance activities. As the focal point for facility specific maintenance issues, the Facility Manager can help identify sediment, erosion, and other stormwater problems occurring near individual facilities. Facility Managers must attend an initial training program as well as an annual refresher. Sediment, erosion, and stormwater awareness training has been incorporated into this existing training program. The JBSA Water Quality Program Manager is responsible for providing training materials. The Civil Engineer Operations Flight is responsible for providing the training and documenting attendance.

Measurable Goals

- Review and update Facility Manager Training program to include sediment, erosion, and stormwater awareness training. (Annually by 31 December of each year)
- Provide training at least once per year to 100% of facility managers and maintain attendance record. (Annually by 31 December of each year)

4.12 PEO-12 INSTALLATION-WIDE CLEAN-UP DAY

Implementation Details

Conduct at least one installation-wide clean-up activity per year. The installation-wide clean-up will include collecting litter and debris around facilities, in parking lots, and drainage areas.

Measurable Goal

- Conduct installation wide cleanup day at least once per year. Document dates of cleanup day and estimated number of participants. (Annually by 31 December or each year)

4.13 PEO-13 STORMWATER MESSAGE ON INSTALLATION MARQUEES

Implementation Details

Marquees have been installed at key locations throughout JBSA. The marquees are used to advertise key events and provide information concerning installation wide issues. The JBSA Water Quality Program Manager will develop a stormwater awareness message for advertisement on the installation's marquees.

Measurable Goal

- Utilize the installation's marquees to advertise a stormwater awareness message at least once per year. Document the message that was presented on the marquee and dates the message was displayed on the MS4 Annual Report. (Annually by 31 December of each year)

4.14 PEO-14 HORSE STABLE MANURE MANAGEMENT AWARENESS TRAINING

Implementation Details

Horse stables are present on JBSA-LAK and will be specifically targeted for manure management activities in support of the bacteria impairments associated with MS4 receiving waters. Under this BMP, the JBSA Water Quality Program Manager requires horse stable management to complete annual Manure Management Awareness Training. The horse stable manager is responsible for disseminating information to horse stable workers and users as appropriate.

This proposed BMP specifically addresses bacteria impairment.

Measurable Goal

- Provide annual stormwater and Manure Management Awareness training to horse stable manager, who will train 100% of horse stable staff. The JBSA Water Quality Program Manager will document the number of trained horse stable staff in the annual report. (Annually by 31 December of each year)

Table 1
Public Education, Outreach, and Involvement BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
PEO-1	Hazardous waste generator training.	Provide training at least annually to 100% of satellite accumulation point managers and perform quarterly inspections of satellite accumulation points.	JBSA Hazardous Waste Program Manager	Annually by 31 December of each year
PEO-2	Provide stormwater awareness materials to new installation housing occupants.	Provide stormwater awareness information as part of the housing Resident Guides, to 100% of new residents.	JBSA Water Quality Program Manager, Environmental Chief	Annually by 31 December of each year
PEO-3	Publish stormwater/water quality related newspaper article.	Publish one stormwater protection related article per year.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-4	Maintain pet waste management policy for housing occupants.	Maintain copy of the Resident Guide for current housing residents.	Privatized Housing Contractor/Water Quality Program Manager	Annually by 31 December of each year
PEO-5	Incorporate sediment, erosion, and illicit discharge awareness training into stormwater training program.	Provide training at least annually to 100% of SWPPT members.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-6	Place SWMP on JBSA public internet site.	Place SWMP and MS4 Annual Reports on JBSA.mil.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-7	Maintain Environmental Hotline.	Maintain hotline phone number and document 100% of calls and actions taken.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-8	Maintain storm drain decals.	Maintain storm drain decals on 50% of storm drain inlets and document locations of new and replaced decals.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 1, Page 1 of 2

Table 1 (Continued)
Public Education, Outreach, and Involvement BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
PEO-9	Conduct community outreach event.	Conduct one community outreach event per year to promote environmental stewardship. Provide number of stormwater related outreach materials distributed.	Installation Management, Environmental Section Chief	Annually by 31 December of each year
PEO-10	Review standard contract specifications pertaining to hazardous waste and stormwater management.	Review and update JBSA standard design and construction specifications. Maintain documentation of annual review and 100% of comments providedto contracting agents.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-11	Provide sediment, erosion, and stormwater awareness training to facility managers.	Review and update Facility Manager Training Program to include sediment, erosion, and stormwater awareness training.	JBSA Water Quality Program Manager	Annually by 31 December of each year
		Provide training at least once per year to 100% of facility managers and maintain attendance record.	Civil Engineer Operations Flight	Annually by 31 December of each year
PEO-12	Installation-wide clean-up day.	Perform annual installation wide clean-up. Document date of clean-up day and number of participants.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-13	Stormwater message on installation marquees.	At least once per year, advertise stormwater awareness message on installation marquee and document dates and message.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PEO-14	Horse stable manure management awareness training.	Provide annual stormwater and Manure Management Awareness training to horse stable manager and document number of staff trained.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 1, Page 2 of 2

5.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

An illicit discharge is defined as "a point source discharge of pollutants to an MS4 which is not composed entirely of stormwater and not authorized by an NPDES permit." Discharge sources must be controlled, and illegal behavior prohibited.

The goal of the IDDE MCM is to prevent the discharge of pollutants to receiving waters by eliminating illicit discharges to JBSA-LAK's stormwater conveyance system. EPA studies have shown that pollutant levels from illicit discharges can be high enough to significantly degrade receiving water quality and threaten aquatic life, wildlife, and human health. Sources of illicit discharges include sanitary wastewater, effluent from septic tanks, car wash wastewaters, improper waste disposal, roadway spills, and other uncontrolled wash/rinse waters.

IDDE BMPs are presented in the following subsections and then summarized in Table 2.

5.1 IDDE-1 UPDATE AND MAINTAIN EXISTING STORM SEWER SYSTEM MAP

Implementation Details

The MS4 Permit requires all permitted entities to maintain an updated MS4 map (Appendix A). As a minimum, the map must include location of all outfalls, location and name of all surface waters receiving discharge, and priority areas if applicable. JBSA-LAK has developed a map of the installation's storm conveyance system that identifies storm drain inlets, manholes, culverts, pipes, outfalls, and receiving waters. As needed, this map will be updated to account for modifications of the system. Construction contractors are required to provide as-built drawings of storm sewer system modifications for incorporation into the overall installation map. JBSA-LAK personnel will review the storm sewer system map at least annually to ensure updates are being made. Updated maps are used during engineering design and construction activities to limit the potential illicit discharges.

Measurable Goal

- Conduct annual review of the storm sewer collection system map and make required updates. (Annually by 31 December of each year)

5.2 IDDE-2 MS4 FIELD STAFF TRAINING

Implementation Details

The MS4 Permit requires training and procedures for MS4 Field Staff concerning IDDE. The JBSA MS4 Field Staff includes the JBSA Water Quality Program Manager and Civil Engineer Squadron Heavy Repair Element. The Civil Engineer Squadron Heavy Repair Element maintains the MS4 and may come into contact with, or otherwise observe, an illicit discharge as part of their normal job responsibilities. Annual training will be provided to the JBSA MS4 Field Staff. Training will include definition of illicit discharge, reporting procedures, and an overview of investigation procedures. Training materials and attendance rosters must be maintained in accordance with the MS4 Permit.

Measurable Goal

- Perform and document annual training of 100% of MS4 Field Staff concerning IDDE. (Annually by 31 December of each year)

5.3 IDDE-3 CONDUCT DRY WEATHER SCREENING OF ALL JBSA-LAK OUTFALLS

Implementation Details

All stormwater outfalls on the installation will be examined at least once per year. This visual monitoring will occur during dry periods, so that any flow through the storm conveyance system can be noted and tracked to its source. The JBSA Water Quality Program Manager is responsible for ensuring the dry weather screening is accomplished.

Measurable Goal

- Conduct dry weather screening of all JBSA-LAK outfalls once per year. Document findings, any illicit discharges identified during screening, and corrective actions taken. (Annually by 31 December of each year)

5.4 IDDE-4 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROCEDURES

Implementation Details

JBSA personnel are committed to detecting, investigating, and eliminating illicit discharges to the storm sewer system. JBSA personnel recognize the impacts an illicit discharge can have on a public waterway and the importance of taking corrective actions in a timely manner. The primary method to detect illicit discharges is via dry weather screening, described in IDDE-3, and Environmental Hotline, as described in PEO-6. If an illicit discharge is identified through this screening or other evidence, JBSA will investigate using the procedures outlined in the U.S. EPA's *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*.

Measurable Goals

- The JBSA Water Quality Program Manager and Civil Engineer Squadron Heavy Repair Element will each maintain one printed copy of the U.S. EPA Illicit Discharge Detection and Elimination Manual. (Annually by 31 December of each year)

5.5 IDDE-5 ILLICIT DISCHARGE DOCUMENTATION

Implementation Details

Upon becoming aware of an illicit discharge, JBSA-LAK will conduct an investigation to identify and locate the source of such illicit discharge as soon as practicable. Within 48-hours of observation, JBSA-LAK will notify an adjacent MS4 operator of an illegal connection or illicit connection discharging to the adjacent MS4. If JBSA-LAK is notified by another MS4 operator of an illegal connection or illicit discharge to the JBSA-LAK MS4, JBSA-LAK will comply with the requirements specified in the MS4 Permit.

If, and when, the source of the illicit discharge has been determined, JBSA-LAK will require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge. Resulting from the investigation, JBSA-LAK will prioritize the investigation of discharge based on their relative risk of pollution. An example of a high priority is a sanitary wastewater discharge to the MS4. JBSA-LAK will report to the TCEQ immediately upon becoming aware of the occurrence of any illicit discharge believed to be an immediate threat to human health or the environment. JBSA-LAK will track all investigations and document, the date(s) the illicit discharge was observed; results of the investigation; follow-up of the investigation; and the date the investigation was closed. JBSA-LAK will conduct inspections, as determined appropriate, in response to complaints, and shall conduct follow-up inspection as needed to ensure that corrective measures have been implemented by the responsible party generating the illicit discharge.

This proposed BMP specifically addresses bacteria impairment.

Measurable Goal

- Document all illicit discharge identification, investigation, and elimination activities. Ensure all sanitary sewer overflows are documented and reported to the JBSA Water Quality Program Manager. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure corrective measures have been implemented by the responsible party. (Annually by 31 December of each year)
- Annually review sanitary sewer overflows and evaluate trends. If trends in maintenance, location (such as lift stations or near food service areas), or other trends are identified, coordinate with the MS4 Field Staff to develop an improvement plan. Document annual sanitary sewer overflow review and improvement plan, if required. (Annually by 31 December of each year)

5.6 IDDE-6 ENGINEERING DESIGN REVIEW OF NEW CONSTRUCTION PROJECTS TO ENSURE ILLICIT DISCHARGE CROSS CONNECTIONS ARE NOT DESIGNED

Implementation Details

The design review process at JBSA involves multiple levels of review for proposed construction projects. Design reviews allow JBSA personnel the opportunity to identify and eliminate potential illicit discharges prior to construction. The installation design review process will be followed and design review comments will be maintained with the project folder.

Measurable Goal

- Follow design review process and maintain 100% of comments with project folders. (Annually by 31 December of each year)

5.7 IDDE-7 MAINTAIN EXISTING ILLEGAL DUMPING AND INSTALLATION POLICY NON-COMPLIANCE ENFORCEMENT PROCEDURES

Implementation Details

JBSA will maintain existing illegal dumping and non-compliance enforcement procedures. As a military installation, all personnel working, visiting, or otherwise having access to the installation are subject to specific laws, regulations, and policies while on JBSA. Enforcement procedures for non-compliance with laws, regulations, and policies are included in the Uniform Code of Military Justice, contracts subject to Federal Acquisition Regulations, Air Force Instruction (AFI) 51-202, *Nonjudicial Punishment*, AFI 36-704 *Discipline and Adverse Actions*, AFI 36-2907 *Unfavorable Information File (UIF) Program* among others. Enforcement procedures can vary based on specific situations. Military and civilian employees can receive verbal reprimands, written reprimands in employment records, demotions, loss of pay, and discharge from Federal service as examples.

Residents living in the privatized housing units on JBSA are subject to specific terms and conditions of the lease agreement, including possible eviction for non-compliance with rules and regulations. In the most severe cases, the Installation Commander has the authority to bar individuals from accessing JBSA. Enforcement procedures on JBSA are administered by individual supervisors, commanders, Security Forces Squadron, and potentially off-installation law enforcement officers. This existing illicit discharge and illegal dumping policy has worked effectively for JBSA under the installation's previous MS4 Permit. The Water Quality Program Manager will document IDDE actions.

Measurable Goal

- Document the number of all enforcement actions taken on the Annual Report. (Annually by 31 December of each year)

5.8 IDDE-8 PROCEDURES FOR INDIVIDUAL SEWAGE DISPOSAL SYSTEMS

Implementation Details

There are individual sewage disposal systems in operation on JBSA. These systems are periodically inspected by the MS4 Field Staff and septic tanks are pumped as required. If by inspection, or other evidence reveals that an individual sewage disposal system is malfunctioning or failing, the JBSA MS4 Field Staff will investigate and develop a corrective action plan to address the failing, individual sewage disposal system.

This proposed BMP specifically addresses bacteria impairment.

Measurable Goal

- Prevent individual sewage disposal systems from failing at JBSA-LAK. Each individual sewage disposal system in operation on JBSA-LAK will be inspected annually. Inspection results, corrective action plan, and corrective action plan implementation will be documented. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure corrective measures have been implemented by the responsible party. (Annually by 31 December of each year)

Table 2
Illicit Discharge Detection and Elimination BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
IDDE-1	Update and maintain existing storm sewer system map.	Conduct annual review of the MS4 map and make required updates.	JBSA Water Quality Program Manager	Annually by 31 December of each year
IDDE-2	MS4 Field Staff training.	Conduct annual training of 100% of MS4 Field Staff concerning illicit discharge detection and elimination.	JBSA Water Quality Program Manager	Annually by 31 December of each year
IDDE-3	Dry weather screening of all JBSA-LAK outfalls.	Conduct annual dry weather screening of all MS4 outfalls.	JBSA Water Quality Program Manager	Annually by 31 December of each year
IDDE-4	Illicit discharge detection and elimination procedures.	Maintain copies of US EPA Illicit Discharge Detection and Elimination Manual.	JBSA Water Quality Program Manager	Annually by 31 December of each year
IDDE-5	Illicit discharge documentation.	Document all illicit discharge identification, investigation, and elimination activities. Report sanitary sewer overflows to Water Quality Program Manager.	JBSA Water Quality Program Manager/MS4 Field Staff	Annually by 31 December of each year
		Annually review sanitary sewer overflows and evaluate trends.	JBSA Water Quality Program Manager	Annually by 31 December of each year
IDDE-6	Engineering design review of new construction projects to ensure illicit cross connection are not designed.	Follow design review process and maintain 100% of comments with project folders.	Programming Flight Chief	Annually by 31 December of each year
IDDE-7	Maintain existing illegal dumping and installation policy non-compliance enforcement procedures.	Document all reported discharges and enforcement actions taken.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 2, Page 1 of 2

Table 2 (Continued)
Illicit Discharge Detection and Elimination BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
IDDE-8	Procedures for individual sewage systems.	Prevent individual sewage disposal systems at JBSA-LAK from failing. Document annual inspections of all systems and corrective action plan for any failing systems identified.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 2, Page 2 of 2

6.0 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The purpose of the Construction Site Stormwater Runoff Control (CON) MCM is to prevent soil/sediment, construction materials, and wastes from leaving the site and entering the stormwater collection system or otherwise discharge to Waters of the United States. Sediment is usually the primary pollutant of concern; during a short period of time, construction sites can contribute more sediment to waterways than can be deposited naturally over several decades. The resulting siltation, along with the contribution of other pollutants from construction sites, can cause physical, biological, and chemical harm to local waterways.

The following BMPs will be implemented by JBSA-LAK over the permit term to address the CON MCM. Pollutants of concern, specifically targeted by the BMPs established in this section, include: sediment, solid and sanitary wastes, oil and grease, concrete truck washout wastewater, construction materials/chemicals, and construction debris. CON BMPs are summarized in Table 3.

JBSA-LAK has elected to require all construction projects proposing to disturb one or more acres (defined as both "small" and "large" construction activities) to comply with TPDES CGP TXR150000. Prior to filing an NOI for CGP coverage, the construction site operator is required to develop a CGP compliant Stormwater Pollution Prevention Plan (SWPPP). Also, JBSA requires erosion and sediment control for all construction sites larger than 1 acre, or smaller than one acre that are part of a larger development plan.As the day-to-day operator, the construction contractor is required to maintain a compliant field SWPPP documenting required CGP modifications; complete CGP required inspections; and ensure BMPs are installed and maintained in accordance with the CGP and site specific SWPPP. In the event a construction contractor is not complying with the mentioned SWPPP, the JBSA project manager can and will halt construction and enforce sanctions until compliance is obtained.

Proposed projects of less than one-acre are required to control stormwater runoff from disturbed areas, limiting erosion and sediment transport to Waters of the United States. Some BMPs discussed below assist in providing guidance for less than one-acre construction projects.

In accordance with the MS4 Permit, the following "construction related" discharges are prohibited from being discharged into the MS4:

- 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; and
- Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs.

6.1 CON-1 IMPLEMENT CONSTRUCTION PROJECT OVERSIGHT PROGRAM

Implementation Details

Construction project oversight inspections are one of the key components of successful SWMP enforcement. Oversight inspections accomplish the following:

- Ensure detailed on-site knowledge of CGP/MS4 project permit(s) and compliance requirements.
- Allow JBSA additional opportunities to provide guidance and education regarding construction site runoff control.

- Enable JBSA to establish a relationship with construction personnel.
- Enable JBSA to provide timely feedback on construction site stormwater compliance issues.
- Enhance JBSA MS4 stormwater quality protection goals.
- Provide documentation of required corrective action.
- Ensure corrective action is completed and documented in a timely manner.

All JBSA construction sites will be inspected for CGP compliance and MS4 Permit conformance at least one time and semi-annually for projects lasting longer than six months. MS4 Field Staff will perform and document inspection results. The Water Quality Program Manager will maintain the inspection results and oversee follow-up actions to ensure compliance at the construction site. Repeat CGP non-compliance at construction sites as identified by either Construction Quality Assurance Evaluators (QAEs) or the JBSA Water Quality Program Manager will be elevated to the Environmental Chief, Deputy Civil Engineer and Contracting Officer.

Measurable Goal

- Perform inspections of all active CGP permitted construction sites on JBSA-LAK at least once, and twice per year for construction sites lasting longer than six months. The JBSA Water Quality Program Manager will document the number of sites inspected and number of construction sites requiring action from the Environmental Section Chief, Deputy Civil Engineer or Contracting Officer. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure corrective measures have been implemented by the responsible party. (Annually by 31 December of each year)

6.2 CON-2 PROVIDE CONSTRUCTION SITE STORMWATER MANAGEMENT TRAINING TO CONSTRUCTION OVERSIGHT PERSONNEL

Implementation Details

Construction project oversight is a team effort at JBSA-LAK. The Water Quality Program Manager provides training and guidance, while responsibility for executing effective construction site BMPs resides with construction contractors. JBSA uses Construction QAEs to oversee construction project execution, including compliance with applicable codes such as the National Electric Code and Uniform Plumbing Code. Given their existing construction project oversight role, QAEs assist with overseeing stormwater compliance at construction sites. Primary responsibility for implementing the construction stormwater management program remains with the JBSA-LAK Water Quality Program Manager and MS4 Field Staff.

Oversight of stormwater compliance at these sites requires periodic training on stormwater compliance requirements. The Water Quality Program Manager will facilitate (provide training resources and other support) construction site stormwater training for construction QAEs. Construction site stormwater awareness training will be provided at least annually to QAEs overseeing construction projects on JBSA-LAK. Training will include permitting and compliance requirements for construction sites disturbing more than 1 acre (CGP permitted projects) and MS4 Permit requirements.

Measurable Goal

- Ensure all construction QAEs receive annual stormwater management training. Maintain training materials and attendance roster. (Annually by 31 December of each year)

6.3 CON-3 REVIEW JBSA ENVIRONMENTAL SPECIFICATIONS

Implementation Details

Water quality protection and construction stormwater management goals must be considered at every step of the development and redevelopment process, so solutions can be fully integrated into the finished product. The JBSA-LAK Water Quality Program Manager will perform an annual review of the standard design and construction specifications applicable to JBSA to ensure construction site stormwater management language is current.

Measurable Goal

- Perform annual review of standard design and construction specifications. Maintain documentation of annual review and 100% of comments provided to contracting agents. (Annually by 31 December of each year)
- Confirm completion of document review in a statement on the MS4 Annual Review. (Annually by 31 December of each year)

6.4 CON-4 MAINTAIN EXISTING ENVIRONMENTAL REVIEW PROCESS FOR PROPOSED FEDERAL ACTIONS

Implementation Details

As a federal facility, JBSA complies with National Environmental Policy Act (NEPA) requirements to review proposed actions for environmental impacts. Impacts, such as those related to post-construction stormwater discharge, are mitigated with the use of BMPs as necessary. The Air Force implements NEPA through the Environmental Impact Analysis Program (EIAP) as codified in 32 CFR Part 989. JBSA-LAK will maintain the existing NEPA review process to review proposed federal actions. With guidance from the Water Quality Program Manager, the NEPA Program Manager will incorporate post-construction stormwater mitigation discussion into appropriate NEPA documents.

Measurable Goal

- The NEPA Program Manager will maintain 100% of completed Air Force Forms 813 and 1391, Categorical Exclusions (CATEXs), Environmental Assessments, and Environmental Impact Statements with project/NEPA folders. (Annually by 31 December of each year)

6.5 CON-5 MAINTAIN DESIGN REVIEW PROCESS AND PROVIDE GUIDANCE FOR STORMWATER MANAGEMENT ACTIVITIES

Implementation Details

The design review process at JBSA involves multiple levels of review. Design reviews allow JBSA personnel the opportunity to identify and address construction stormwater management issues prior to construction initiation. The installation design review process will be followed, and design review comments will be maintained with the project folder. The Civil Engineer Squadron Program Flight is responsible for the design review process which includes maintaining design review comments and disposition.

Measurable Goal

- The Civil Engineer Squadron Engineering Flight will continue to maintain 100% of design review comments with project folders. (Annually by 31 December of each year)

6.6 CON-6 REVIEW CONSTRUCTION SITE STORMWATER POLLUTION PREVENTION PLANS

Implementation Details

JBSA will establish procedures to review construction site SWPPP for projects requiring coverage under the TCEQ CGP. The review process will be followed, and the JBSA Water Quality Program Manager will document SWPPP comments provided.

Measurable Goal

- The JBSA Water Quality Program Manager will report 100% of SWPPPs reviewed on the MS4 Annual Report. (Annually by 31 December of each year)

6.7 CON-7 ENSURE THE USE AND MAINTAINENCE OF CONTROLS TO PREVENT EROSION AND SEDIMENT RUNOFF

Implementation Details

JBSA requires erosion and sediment control for all construction sites larger than 1 acre, or smaller than one acre that are part of a larger development plan. The construction sites are required to install and maintain controls to prevent erosion and sediment runoff. Controls are required to be in place prior to beginning of construction. Construction contractor is required to ensure controls are installed and maintained in accordance with the CGP and site specific SWPPP.

Measureable Goal

- The JBSA Water Quality Program Manager will visit 100% of the construction sites at least quarterly to ensure the construction contractor installs and maintains controls to prevent erosion and sediment runoff. (Annually by 31 December of each year)

Table 3
Construction Site Runoff Control BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
CON-1	Implement construction oversight program.	Perform inspection of all active CGP permitted construction sites on JBSA-LAK at least once or twice per year, as required.	JBSA Water Quality Program Manager	Annually by 31 December of each year
CON-2	Provide construction stormwater management training to Construction QAEs.	Ensure annual training of all Construction QAEs and maintain training materials and attendance roster.	JBSA Water Quality Program Manager	Annually by 31 December of each year
CON-3	Review JBSA environmental specifications.	Perform annual review of standard design and construction specifications. Maintain documentation of annual review and 100% of comments provided to contracting agents.	JBSA Water Quality Program Manager	Annually by 31 December of each year
CON-4	Maintain existing environmental review process for proposed Federal Actions to identify projects requiring construction permit coverage.	Maintain 100% of completed Air Force Form 332, 813, 1391 and Environmental Assessments/Environmental Impact Statements with project folders.	NEPA Program Manager	Annually by 31 December of each year
CON-5	Maintain existing design review process and provide guidance for stormwater management activities.	Maintain 100% of design review comments with project folders.	Engineering Flight Chief	Annually by 31 December of each year
CON-6	Maintain existing SWPPP review and comment procedures.	Document 100% of SWPPP reviews and comments.	JBSA Water Quality Program Manager	Annually by 31 December of each year
CON-7	Ensure the use and maintenance of controls to prevent erosion and sediment runoff.	Visually inspect 100% of the construction sites to ensure installation and maintenance of controls.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 3, Page 1 of 1

7.0 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

One of the best opportunities to eliminate or reduce potential impacts to stormwater quality is through informed project planning, design, and construction for development and redevelopment projects. Once construction is complete, rectifying stormwater quality problems can become significantly more complex, and costly, to correct. The Post-Construction (PC) Stormwater Management MCM focuses on site and design considerations related to stormwater quality, which are most effective when addressed during the planning and design stages of project development.

Through the design review process managed by the Civil Engineer Engineering Flight, JBSA-LAK evaluates opportunities to control stormwater discharge from new development and redeveloped sites that discharge into the MS4. Proposed projects that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale are evaluated for the inclusion of structural and non-structural post-construction BMPs. Specifically, the addition of impervious surface area can change localized hydrologic conditions, increasing runoff volume and velocity, which can promote erosion and sedimentation unless properly controlled. Post-construction stormwater BMPs must be inspected, maintained and replaced periodically to ensure proper function.

The following BMPs will be implemented by JBSA to meet the MS4 Permit requirements for the PC MCM. Post-Construction BMPs are presented in the following subsections and summarized in Table 4.

7.1 PC-1 MAINTAIN EXISTING ENVIRONMENTAL REVIEW PROCESS FOR PROPOSED FEDERAL ACTIONS

Implementation Details

As a federal facility, JBSA complies with NEPA requirements to review proposed actions for environmental impacts. Impacts, such as those related to PC stormwater discharge, are mitigated with the use of BMPs, as necessary. The Air Force implements NEPA through the EIAP as codified in 32 CFR Part 989. JBSA will follow the existing NEPA review process to review proposed federal actions. With guidance from the Water Quality Program Manager, the NEPA Program Manager will incorporate PC stormwater mitigation discussion into appropriate NEPA document.

Measurable Goal

- Ensure 100% of the number of completed Air Force Forms 813 and 1391, CATEXs, Environmental Assessments, and Environmental Impact Statements is reported on the MS4 Annual Report. (Annually by 31 December of each year)

7.2 PC-2 MAINTAIN EXISTING DESIGN REVIEW PROCESS AND PROVIDE GUIDANCE FOR POST-CONSTRUCTION STORMWATER BMPs

Implementation Details

Proposed construction projects at JBSA are reviewed according to established procedures. This process is maintained by Civil Engineer Squadron Programming Flight (CEP), and the JBSA Water Quality Program Manager participates in design review by evaluating PC BMPs and providing recommendations/comments pertaining to PC BMPs. Upon submittal of the next design for review iteration, previous comments are addressed including PC stormwater management comments provided by the JBSA Water Quality Program Manager. Design review comments are noted on a routing sheet and maintained by CEP in the associated project folder.

Measurable Goal

- Maintain 100% of design review comments with project folders. (Annually by 31 December of each year)

7.3 PC-3 VISUAL INSPECTION OF POST-CONSTRUCTION BMPs AND MAINTENANCE DETERMINATION

Implementation Details

As a non-traditional MS4, JBSA-LAK is the owner of all PC stormwater BMPs and responsible for long-term maintenance of BMPs. Inspection and maintenance of these PC stormwater controls is critical to ensuring long-term operation and the protection of downstream stormwater quality. The MS4 Field Staff will develop a list of major PC BMPs on JBSA-LAK that includes retention and detection facilities, infiltration facilities, and stormwater treatment facilities. The MS4 Field Staff will perform an annual inspection of each major PC BMP. BMP maintenance will be schedule based on results from visual inspection activities.

Measurable Goal

- Perform annual review and update of the structural PC BMPs inventory. (Annually by 31 December of each year)
- Perform and document visual inspections of 100% of PC BMPs at least annually. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure corrective measures have been implemented by the responsible party. (Annually by 31 December of each year)
- Initiate BMP maintenance activities based on inspection results and document dates when maintenance is accomplished. (Annually by 31 December of each year)

7.4 PC-4 UPDATE DESIGN AND ENVIRONMENTAL SPECIFICATIONS LANGUAGE FOR POST-CONSTRUCTION STORMWATER BMPs

Implementation Details

The JBSA Water Quality Program Manager will annually review standard design and construction specification applicable to JBSA and ensure appropriate PC stormwater BMP language is incorporated.

Measurable Goal

- Perform annual review of standard design and construction specifications. Maintain documentation of annual review and 100% of comments provided to contracting agents. (Annually by 31 December of each year)

7.5 PC-5 INCLUDE BY REFERENCE AIR FORCE CIVIL ENGINEER CENTER ENGINEERING TECHNICAL LETTER 14-1 AND UNIFIED FACILITIES CRITERIA 3-210-10 IN DESIGN AND CONSTRUCTION CONTRACTS

Implementation Details

JBSA references the Air Force Civil Engineer Center Engineering Technical Letter (ETL) 14-1: Construction and Operation and Maintenance Guidance for Storm Water Systems and Unified Facilities Criteria (UFC) 3-210-10 Low Impact Development in design and construction contracts.

This ETL provides procedures and practices for minimizing storm water pollution from Air Force construction activities, guidance for construction inspectors regarding temporary sediment and erosion controls, operations and maintenance (O&M) guidance for storm water infrastructure (i.e., separate storm sewers, associated appurtenances, and drainage areas), and permanent storm water BMP.

The UFC provides guidance for integrating Low Impact Development (LID) planning and design into a facility's regulatory and resource protection programs. It provides a basic understanding of the technical and administrative concepts associated with the design, construction, and maintenance of LID features. CEP will conduct reviews of design and construction specifications to ensure Air Force PC BMP guidance is considered.

Measurable Goal

- Perform annual review of standard design and construction specifications to ensure DoD and Air Force guidelines for post-construction stormwater controls are met, including ETL and UFC guidelines. Maintain documentation of annual review and 100% of comments provided to contracting agents. Report the number of designs reviewed on MS4 Annual Report. (Annually by 31 December of each year)

7.6 PC-6 REVIEW CURRENT AND FUTURE CONSTRUCTION PROJECTS TO EVALUATE COMPLIANCE WITH POST-CONSTRUCTION BMP GUIDANCE

Implementation Details

For planning purposes, it is imperative that current and future construction projects at JBSA be reviewed for integration of PC stormwater BMPs. The Civil Engineer Squadron Engineering Flight will provide the Water Quality Program Manager with periodic updates to projects under design, proposed for design, construction, including fiscal year projects (Straddle A and B) and future out-year projects. This update is a list of projects identifying whether they have been funded or could be funded in out-years. With these updates, the JBSA Water Quality Program Manager can assist Design and Construction Managers with evaluating the need for PC BMPs.

Measurable Goal

- The Civil Engineer Engineering Flight and the JBSA Water Quality Program Manager will meet at least annually to discuss upcoming development and redevelopment projects scheduled for JBSA and implementation of PC stormwater BMPs. Minutes will be developed to document the project review meeting. (Annually by 31 December of each year)

7.7 PC-7 REVIEW INSTALLATION DESIGN GUIDE AND ANNUALLY REVIEW

Implementation Details

JBSA maintains an Installation Design Guide which provides guidance and standards for new and redevelopment projects. By including PC stormwater management goals in the Design Guide, engineers and architects can incorporate selected PC stormwater BMPs into early planning and design stages. The CEP is responsible for maintaining the JBSA Design Guide. The JBSA Water Quality Program Manager will review the Design Guide and recommend appropriate PC stormwater BMP language for incorporation into the Design Guide.

Measurable Goal

- Review and update, as necessary, municipal stormwater management control goals in the JBSA Design Guide. Maintain copy of updated Design Guide. (Annually by 31 December of each year)

7.8 PC-8 MAINTAIN AND OPERATE STRUCTURAL BMPs FOR NEW DEVELOPMENT AND REDEVELOPMENT

Implementation Details

JBSA requires all new developments and redevelopment projects larger than 1 acre (or smaller than 1 acre that are part to a larger development plan) to maintain and operate structural BMPs. The construction sites are required to ensure long-term soil stabilization for two years after construction is complete.

Measurable Goal

- The JBSA Water Quality Program Manager will visit construction site at least annually to ensure structural BMPs for post-construction BMPs for development and redevelopment projects are controlling erosion and sediment runoff and to ensure adequate long-term soil stabilization. (Annually by 31 December of each year)

7.9 PC-9 DOCUMENT AND MAINTAIN RECORDS

Implementation Details

JBSA will document and maintain records of for a minimum period of 3 years from the date that the operator terminates coverage. The Water Quality Manager will retain a copy of the SWPPP, all reports and actions required to include a copy of the site notice, a copy of the NOI, if applicable.

Measurable Goal

- The JBSA Water Quality Program Manager will ensure 100% of records pertaining to the construction site are maintained for at least 3 years.
  (Annually by 31 December of each year)

Table 4
Post-Construction Stormwater Management BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
PC-1	Maintain existing environmental review process for proposed Federal Actions and incorporate post-construction stormwater BMP guidance in initial project stages.	Maintain 100% of completed Air Force Form 332, 813, 1391 and Environmental Assessments/Environmental Impact Statements with project folders.	NEPA Program Manager	Annually by 31 December of each year
PC-2	Maintain existing design review process and provide guidance for post-construction stormwater BMPs.	Maintain 100% of design review comments with project folders.	Engineering Flight Chief	Annually by 31 December of each year
PC-3	Visual inspection of post-construction BMPs and maintenance determination.	Perform annual review and update of the structural post-construction BMP inventory.	MS4 Field Staff	Annually by 31 December of each year
		Perform visual inspection of 100% of post-construction BMPs at least annually.	MS4 Field Staff	Annually by 31 December of each year
		Initiate BMP maintenance based on inspection results and document dates when maintenance is accomplished.	MS4 Field Staff	Annually by 31 December of each year
PC-4	Maintain and update design and environmental specifications and recommend language for post-construction stormwater BMPs.	Perform annual review of standard design and construction specifications. Maintain documentation of annual review and 100% of comments provided to contracting agents.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PC-5	Include by Reference Air Force Civil Engineer Center Engineering Technical Letter 14-1 and Unified Facilities Criteria (UFC) 3-210-10 Low Impact Development in Design and Construction Contracts.	Perform annual review of standard design and construction specifications to ensure DoD and Air Force guidelines for post-construction stormwater controls are met, including ETL and UFC guidelines. Maintain documentation of annual review and 100% of comments provided to contracting agents.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 4 (Continued)
Post-Construction Stormwater Management BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
PC-6	Review current and future programmed projects to evaluate compliance with post- construction BMP guidance.	The Water Quality Program Manager and Program Flight Chief will meet at least annually to discuss upcoming development and redevelopment projects to identify post-construction stormwater BMP implementation.	JBSA Water Quality Program Manager/ Engineering Flight Chief	Annually by 31 December of each year
PC-7	Review Installation Design Guide.	Review municipal stormwater management control goals in the JBSA Design Guide. Maintain copy of updated Design Guide.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PC-8	Maintain and operate structural BMPs for development and redevelopment projects.	Conduct visual inspections at 100% of development and redevelopment construction sites to ensure effectiveness of structural BMPs.	JBSA Water Quality Program Manager	Annually by 31 December of each year
PC-9	Document and maintain records.	The Water Quality Manager will conduct records review to ensure all documentation is available for at least 3 years after the termination of coverage.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 4, Page 2 of 2

8.0 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The purpose of this MCM is to implement Pollution Prevention (P2) and Good Housekeeping practices to prevent or reduce pollutant runoff from JBSA-LAK municipal operations. P2 and good housekeeping practices cover a broad spectrum of BMPs related to various municipal activities and personal habits.

Good housekeeping is similar to pollution prevention regarding everyday personal habits but is directly implemented by various mission support BMPs. For example, JBSA personnel implement a wide-variety of good housekeeping BMPs including proper materials storage, secondary containment, and minimizing vehicle and equipment maintenance outdoors. Other environmental regulatory and DoD requirements support implementation of this MCM at JBSA, including TPDES Industrial General Permit TXR050000's and 40 CFR Regulation Part 112 related to oil pollution control.

The MSGP regulates JBSA industrial stormwater discharges and requires the implementation of a SWPPP. The SWPPP identifies BMPs to prevent releases of industrial stormwater pollutants to receiving waterways. The MSGP requires personnel training, BMP implementation, inspections and monitoring. Quarterly visual monitoring from qualifying precipitation events are required and include the following parameters: color, clarity, odor, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. Analytical monitoring is also accomplished and reported to TCEQ. As stormwater discharges from industrial areas on JBSA-LAK enter the MS4, implementation of the SWPPP and compliance with the MSGP supports the overall SWMP on JBSA-LAK.

A Spill Prevention Control and Countermeasure Plan (SPCC Plan) is required by the CWA when a facility exceeds certain storage thresholds for petroleum, oil and lubricants. The rule regulates containers 55-gallon or greater. JBSA-LAK is subject to SPCC requirements due to the amount of regulated substances stored onsite. A SPCC Plan has been developed and implemented at JBSA-LAK. This plan must be updated and modified when significant changes are made in storage and response operations. The SPCC rule and JBSA-LAK SPCC Plan require personnel training, BMP implementation, and inspection to prevent releases of oil into the environment which supports this MCM.

As a DoD installation, JBSA-LAK implements several DoD specific plans and procedures that support P2 and good housekeeping practices. BMPs supporting the P2 and Good Housekeeping MCM are described in the following subsections and summarized in Table 5.

8.1 P2-1 CONDUCT EVALUATION OF INDUSTRIAL SITES FOR COMPLIANCE WITH INDUSTRIAL GENERAL PERMIT AND SWPPP

Implementation Details

As a regulated industrial facility, JBSA-LAK is required to accomplish a Comprehensive Site Compliance Inspection. This annual evaluation will serve as the primary industrial operations oversight program. The JBSA Water Quality Program Manager is responsible for ensuring this annual evaluation is accomplished. The JBSA Water Quality Program Manager is also responsible for tracking discrepancies and implementing corrective actions.

Measurable Goal

- Document annual evaluation of 100% of industrial areas. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure correctivemeasures have been implemented by the responsible party. (Annually by 31 December of each year)

8.2 P2-2 MS4 FIELD STAFF TRAINING

Implementation Details

The MS4 Field Staff will receive annual stormwater training. The training will cover illicit discharge detection, construction stormwater management, BMP inspection and maintenance, pollution prevention and documentation requirements. The Water Quality Program Manager is responsible for developing the MS4 Field Staff Training program

Measurable Goal

- Conduct training for 100% of MS4 Field Staff once per year and maintain attendance roster. (Annually by 31 December of each year)

8.3 P2-3 STREET SWEEPING

Implementation Details

Street sweeping is used to remove floatables, debris, and sediment deposited on streets before these materials enter the stormwater conveyance system. The street sweeping program will focus on areas of floatables, sediment, and debris accumulation rather than a set route. The Civil Engineer Operations Flight is responsible for performing and documenting street sweeping activities.

Measurable Goal

- Perform 10 hours of street sweeping per month. Maintain log of hours spent street sweeping. (Annually by 31 December of each year)

8.4 P2-4 AIRFIELD SEDIMENT AND DEBRIS REMOVAL

Implementation Details

Sediment and debris are removed from airfield surfaces at JBSA-LAK to support safe flying operations. These practices include sweeping sediment and magnetic pickup of ferrous objects. The Civil Engineer Operations Flight and/or Airfield Management will oversee this existing operation.

Measurable Goal

- Document 100% of airfield cleaning operations within the Civil Engineer Squadron automated work management system. (Annually by 31 December of each year)

8.5 P2-5 ANNUAL INSPECTION OF MUNICIPAL STORAGE AREAS

Implementation Details

The JBSA Water Quality Program Manager will conduct an annual inspection of municipal/public works related storage areas, including material stockpile areas. The purpose of this inspection is to identify any stormwater quality impacts associated with municipal storage areas. The JBSA Water Quality Program Manager is responsible for performing and documenting the annual inspection.

Measurable Goal

- Document 100% of annual inspection, areas of improvement, and corrective actions taken. In response to complaints, 100% of the complaints will be followed up with inspections to

ensure corrective actions implemented by the responsible party. (Annually by 31 December of each year)

8.6 P2-6 DISTRIBUTE INFORMATION REGARDING INSTALLATION RECYCLING PROGRAM

Implementation Details

JBSA implements a proactive recycling program on the installation. One of the critical factors to a successful recycling program is an effective education and outreach campaign. To maintain the success of the recycling program, the Recycling Program Manager will distribute recycling program information to installation residents, commercial facilities, and industrial areas that describes recycling collection areas, items to recycle, and proper management techniques.

Measurable Goal

- Maintain copies of 100% of the information provided to installation populace. 100% of installation residents, commercial facilities, and industrial areas will receive information materials about recycling. All waste in the MS4 will be properly disposed of. (Annually by 31 December of each year)

8.7 P2-7 MAINTAIN JBSA INTEGRATED SOLID WASTE MANAGEMENT PLAN

Implementation Details

JBSA's Integrated Solid Waste Management Plan (ISWMP) details waste and recycling management practices on the installation, including compliance with 30 TAC Chapters 330 or 335, as applicable. Proper waste management practices protect stormwater by minimizing or eliminating improper disposal practices. The Solid Waste Program Manager will maintain this document and update as necessary.

Measurable Goal

- Maintain copy of current ISWMP and update as necessary. (Annually by 31 December of each year)

8.8 P2-8 MAINTAIN JBSA INTEGRATED PEST MANAGEMENT PLAN

Implementation Details

JBSA's Integrated Pest Management Plan (IPMP) details and limits pest management practices, including the application of chemical pest controls on the installation. The Pest Management Program Manager will maintain an updated IPMP.

Measurable Goal

- Maintain copy of current IPMP and update as necessary. Maintain records of chemical usage on installation. (Annually by 31 December of each year)

8.9 P2-9 CONDUCT TARGETED TRAINING OF GOLF COURSE MAINTENANCE AND GROUNDS MAINTENANCE PERSONNEL

Implementation Details

Stormwater P2 training, including pesticide application, will be provided to golf course maintenance and grounds maintenance personnel. The JBSA Water Quality Program Manager is responsible for developing and providing this training.

Measurable Goal

- Conduct annual Golf Course Maintenance and Grounds Maintenance specific training for 100% of Golf Course Maintenance and Grounds Maintenance staff and maintain attendance roster. (Annually by 31 December of each year)

8.10 P2-10 MAINTAIN THE JBSA-LAK SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

Implementation Details

The JBSA-LAK SPCC Plan details oil storage locations and response procedures to prevent and/or respond to spills that could enter the stormwater drainage system. The Spill Program Manager is responsible for updating this plan as required.

Measurable Goal

- Maintain copy of current SPCC Plan and update as necessary. (Annually by 31 December of each year)

8.11 P2-11 HORSE STABLE INSPECTION

Implementation Details

Horse stables are present on JBSA-LAK and will be specifically targeted for manure management activities in support of the bacteria impairments associated with MS4 receiving waters. Under this BMP, the JBSA-LAK Water Quality Program Manager will inspect the horse stable areas at least once per year to review manure management practices as well as identify obvious signs of manure and bacteria migration and discharge to receiving waters. Obvious signs of migration and discharge may include, but not limited to, vegetation indicators and manure deposition. The JBSA-LAK Water Quality Program Manager will inspect the horse stable areas at least once per year and document the results of the inspection and interviews with horse stable manager

This proposed BMP specifically addresses bacteria impairment.

Measurable Goal

- Document 100% of annual inspection, areas of improvement, and corrective actions taken. Inspections will be conducted in response to complaints and follow-up inspections will be conducted to ensure corrective measures have been implemented by the responsible party. (Annually by 31 December of each year)

8.12 P2-12 ANNUAL BACTERIA TMDL PROGRESS ASSESSMENT

Implementation Details

In accordance with Part II, D.6 of the MS4 Permit, JBSA-LAK will annually review progress in achieving benchmarks and effectiveness of the BMPs implemented to address water quality impairments of receiving waters. This SWMP includes BMPs and measurable goals specifically targeting bacteria.

This includes an evaluation of the targeted BMPs outlined in the SWMP, including reductions in sanitary sewer overflows, resident education program, and horse stable inspections. The JBSA Water Quality Program Manager will evaluate the implementation and effectiveness of the BMPs outlined in this SWMP and perform an annual progress assessment. The assessment will be summarized in the MS4 Annual Report.

This proposed BMP specifically addresses bacteria impairment.

Measurable Goal

- Document 100% of the annual assessment, data evaluation, recommendations, and progress. (Annually by 31 December of each year)

8.13 P2-13 PERMITTEE-OWNED FACILITIES AND CONTROL INVENTORY

Implementation Details

In accordance with Part III.B.5.(b)(1) of the MS4 Permit, JBSA-LAK must develop a Permittee-Owned Facility and Control Inventory as defined in the MS4 Permit. The JBSA Water Quality Manager and MS4 Field Staff will jointly develop the initial inventory. At least once per year following the initial inventory development, the JBSA Water Quality Manager and MS4 Field Staff will review and update the inventory based on operational changes on JBSA-LAK.

Measurable Goal

- Document annual review and 100% of updates to the Permittee-Owned Facility and Control Inventory. (Annually by 31 December of each year)

8.14 P2-14 EVALUATE O&M ACTIVITIES FOR POTENTIAL TO DISCHARGE POLLUTANTS

Implementation Details

All contractors will be required to comply with operating procedures. The Water Quality Manager will visit all sites at least once quarterly, and evaluate O&M activities to identify pollutants of concern that has potential to discharge from O&M activities into stormwater. This includes 100% of roads and parking lots, bridge maintenance, cold weather operations, and right-of-way maintenance. JBSA will maintain 100% of structural BMPs for stormwater management.

Measurable Goal

- Perform annual review of standard design and construction specifications and update, if necessary. Maintain documentation of annual review and 100% of comments provided to contracting agents. (Annually by 31 December of each year).

Table 5
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
P2-1	Conduct evaluation of industrial sites for compliance with Industrial Permit and SWPPP.	Document annual evaluation of 100% of industrial areas.	JBSA Water Quality Program Manager	Annually by 31 December of each year
P2-2	MS4 Field Staff Training.	Conduct training at least once per year for 100% of MS4 Field Staff and maintain attendance roster.	JBSA Water Quality Program Manager	Annually by 31 December of each year
P2-3	Street sweeping.	Perform at least 10 hours of street sweeping per month. Maintain log of hours spent street sweeping.	Civil Engineer Squadron Operations Flight	Annually by 31 December of each year
P2-4	Airfield sediment and debris removal practices	Document 100% of airfield cleaning operations.	Civil Engineer Squadron Operations Flight	Annually by 31 December of each year
P2-5	Annual inspection of municipal storage areas.	Document 100% of annual inspection, areas of improvement, and corrective actions.	JBSA Water Quality Program Manager	Annually by 31 December of each year
P2-6	Distribute information regarding base recycling program.	Maintain copies of 100% of information provided to base populace. 100% of installation residents, commercial facilities, and industrial areas will receive information materials about recycling. All waste in the MS4 will be properly disposed of.	Recycling Program Manager	Annually by 31 December of each year
P2-7	Maintain Integrated Solid Waste Management Plan.	Maintain copy of Integrated Solid Waste Management Plan and update as necessary.	Solid Waste Program Manager	Annually by 31 December of each year
P2-8	Maintain Integrated Pest Management Plan.	Maintain copy of Integrated Pest Management Plan and update as necessary. Maintain records of chemical usage on installation.	Pest Management Program Manager	Annually by 31 December of each year

Table 5, Page 1 of 2

Table 5 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	Description	Measurable Goals	Responsible Party	Implementation Schedule
P2-9	Conduct targeted training of golf course maintenance and grounds maintenance personnel.	Conduct annual training for 100% of Golf Course Maintenance and Grounds Maintenance staff and maintain attendance roster.	JBSA Water Quality Program Manager	Annually by 31 December of each year
P2-10	Maintain Spill Prevention, Control, and Countermeasure Plan.	Maintain copy of current Spill Prevention, Control, and Countermeasure Plan and update as necessary.	Spill Program Manager	Annually by 31 December of each year
P2-11	Horse stable inspection.	Document 100% of annual inspection, areas of improvement, and corrective actions taken.	JBSA Water Quality Program	Annually by 31 December of each year
P2-12	Annual bacteria TMDL progress assessment.	Perform and document 100% of annual TMDL progress assessment.	JBSA Water Quality Program Manager	Annually by 31 December of each year
P2-13	Permittee-Owned Facilities and Control Inventory.	Document annual review and 100% of updates to the Permittee-Owned Facility and Control Inventory.	JBSA Water Quality Program Manager	Annually by 31 December of each year
P2-14	Evaluate O&M Activities for potential to Discharge Pollutants	Perform annual review of standard design and construction specifications and update, if necessary. Maintain documentation of annual review and 100% of comments provided to contracting agents.	JBSA Water Quality Program Manager	Annually by 31 December of each year

Table 5, Page 2 of 2

9.0 RECORDKEEPING AND REPORTING

JBSA will retain a copy of the TPDES General Permit No. TXR040000, records of all data used to complete the NOI, and documentation of public participation requirements for a period of at least three (3) years, or for the remainder of the term of the MS4 Permit, whichever is longer. The JBSA Water Quality Program Manager maintains the SWMP and will obtain supporting SWMP documentation from other JBSA organizations and responsible parties, as outlined in this SWMP, for recordkeeping and reporting purposes.

If JBSA becomes aware that any relevant facts or information provided in the NOI was incorrect, the correct information must be provided to the TCEQ Executive Director in a Notice of Change (NOC) within 30 days after discovery. If any information provided in the NOI changes, an NOC must be submitted within 30 days from the time JBSA becomes aware of the change. Changes that are made to the SWMP following TCEQ approval must be made using an NOC form, in accordance with Part II.E.3. of the MS4 Permit.

All NOI, NOC, Notice of Termination (NOT), and Waiver forms must be signed and certified consistent with 30 TAC Section 305.44. 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). For JBSA, the principal executive officer responsible for overall operations of the installation is the Commander, 502nd Air Base Wing. In accordance with the MS Permit and 30 TAC Section 305.44, all reports required by this permit, including the annual report, must be signed by the principle executive officer or duly authorized representative in accordance with 30 TAC Section 305.44.

All NOI, NOC, NOT, Waivers, and reports must contain the following certification statement:

I,_____*Typed or printed name, Title,* 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 this document and can provide documentation in proof of such authorization upon request.

9.1 ANNUAL REPORT

JBSA is required to submit a concise Annual Report to TCEQ Executive Director and TCEQ Regional Office serving JBSA within 90 days of the end of each reporting year and address the previous reporting year. JBSA indicated on the NOI for permit coverage that reporting will be based on calendar year, so all annual reports from JBSA-LAK must be submitted to the TCEQ by 31 March of each year. The Annual Report will include appropriate TCEQ reporting forms as applicable, or as otherwise approved by TCEQ.

The Annual Report must include:

- Verification of annual review of SWMP in conjunction with preparation of Annual Report;
- The status of the compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of

pollutants to the MEP, the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals;

- A summary of the results of information collected and analyzed, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;
- Verification of all receiving waters are checked annually against the latest EPA approved Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d) lists for Category 4 and Category 5 water bodies;
- If applicable, a summary of any activities taken to address the discharge to impaired water bodies, including any sampling results and a summary of the small MS4 BMPs used to address the pollutant of concern;
- A summary of the stormwater activities that JBSA-LAK plans to undertake during the next reporting year;
- Proposed changes to the SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements; and
- Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementations plans.

The annual report must be submitted to the following address for JBSA-LAK:

Texas Commission on Environmental Quality
Stormwater & Pretreatment Team Leader (MC–148)
P.O. Box 13087
Austin, Texas 78711-3087

And

TCEQ Regional Director
14250 Judson Rd.
San Antonio, TX 78233-4480

9.2 ADDITIONAL REPORTING REQUIREMENTS

Noncompliance Notification

According to 30 TAC § 305.125(9), any noncompliance which may endanger human health or safety, or the environment, must be reported by JBSA to the TCEQ. Report of such information must be provided orally or by electronic facsimile transmission (FAX) to the TCEQ regional office (San Antonio) within 24 hours of becoming aware of the noncompliance. A written report must be provided by JBSA to the appropriate TCEQ regional office and to the TCEQ Enforcement Division (MC-224) within five working days of becoming aware of the noncompliance. The written report must contain:

- A description of the noncompliance and its cause;
- The potential danger to human health or safety, or the environment;

- The period of noncompliance, including exact dates and times;
- If the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

When JBSA becomes aware that it either submitted incorrect information or failed to submit complete and accurate information requested in an NOI, NOT, or NOC, or any other report required by the MS4 Permit, JBSA shall promptly submit the facts or information to the executive director.

9.3 FEES

An application fee of $100.00 must be submitted with the NOI application package. Additionally, under the MS4 Permit, JBSA must pay an annual Water Quality fee of $100.00.

APPENDIX A JBSA-LAK OVERVIEW, RECEIVING WATERS, AND OUTFALL LOCATION MAP

APPENDIX B TPDES PERMIT NO. TXR04000 GENERAL PERMIT FOR SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

APPENDIX C JBSA-LAK NOTICE OF INTENT AND PUBLIC NOTIFICATION DOCUMENTATION

APPENDIX D JBSA-LAK ANNUAL REPORTS