



DYESS AIR FORCE BASE

STORMWATER MANAGEMENT PROGRAM



7TH CIVIL ENGINEER SQUADRON
DYESS AFB TX 79607
OPR: 7 CES/CEIE (Environmental Element)
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List of Acronyms and Abbreviations

AFB	Air Force Base
BBC	Balfour Beatty Communities
BMP	Best Management Practice
CGP	Construction General Permit
CO	Contracting Officer
COR	Contracting Officer's Representative
CWA	Clean Water Act
EPA	Environmental Protection Agency
ESOH	Environmental Safety and Occupational Health
HHW	Household Hazardous Waste
IDDE	Illicit Discharge Detection and Elimination (IDDE)
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MFH	Military Family Housing
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OWS	Oil Water Separator
PEOI	Public Education, Outreach, and Involvement
QAE	Quality Assurance Evaluator
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
TMDL	Total Maximum Daily Load
TPDES	Texas Pollutant Discharge Elimination System
UA	Urbanized Area
US	United States

1.0 INTRODUCTION

Dyess Air Force Base (Dyess) personnel must comply with federal and state regulations related to environmental protection while ensuring mission accomplishment. One of the primary environmental laws impacting Dyess 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 contributes pollutants of concern such as sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons, trash, and pesticides 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.

Dyess owns and operates a stormwater conveyance system that is partially located within an Urbanized Area (UA) as defined by the United States Census Bureau. In accordance with the CWA and implementing regulations, Dyess is a regulated small municipal separate storm sewer system (MS4). As such, Dyess is required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) for stormwater runoff associated with municipal discharges. The State of Texas has been delegated authority from the Federal Environmental Protection Agency (EPA) for implementing and enforcing the CWA and NPDES permit program within the State. The Texas Commission on Environmental Quality (TCEQ) issued Texas Pollutant Discharge Elimination System (TPDES) General Permit No. TXR040000 for stormwater discharges from small MS4s. As a small MS4 within the State of Texas, Dyess is eligible for coverage under General Permit No. TXR040000 (MS4 Permit).

In accordance with the MS4 Permit, Dyess must develop and implement a Stormwater Management Program (SWMP) designed to reduce the discharge of pollutants to the maximum extent practicable (MEP) to protect water quality. The SWMP must identify best management practices (BMPs) and measureable goals to address five Minimum Control Measures (MCMs), which are:

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

This document outlines the Dyess SWMP and identifies specific BMPs and measureable goals for each MCM. The SWMP contained herein details actions that will be implemented over the 5-year MS4 Permit term and will assist Dyess personnel with implementing, tracking, and documenting SWMP activities.

1.1 DYESS OVERVIEW

Dyess is located in the northeast corner of Taylor County, Texas and occupies just over 6,000 acres immediately west of the City of Abilene. Dyess has approximately 2,100 permanent residents with potential for 3,000 non-residents that commute on a daily basis. There are 674 housing units within the MS4 permitted area. Dyess shall operate as a non-traditional small MS4 Level 2 Operator serving as a military installation regardless of population served within the UA.

Stormwater from Dyess discharges into Little Elm Creek which eventually flows into Elm Creek. Elm Creek, which is designated as an ephemeral creek, is dammed approximately 10 miles from Dyess and forms Fort Phantom Hill Lake. The City of Abilene uses water from Fort Phantom Hill Lake for a portion of its drinking water supply. Dyess uses purchased water from the City of Abilene for its entire drinking water supply.

- **Outfall Description**

There is one stormwater outfall as defined by the MS4 Permit discharging stormwater from the Dyess MS4 area.

Outfall 001 discharges to an unnamed branch that empties into Little Elm Creek and is comprised of stormwater from an unnamed ephemeral creek that runs through the MS4 area into Lake Totten, which then empties back into the unnamed ephemeral creek before leaving Dyess to enter Little Elm Creek. Dyess MS4 stormwater discharges into the City of Abilene's MS4.

On the eastern boundary of Dyess, the City of Abilene's MS4 discharges stormwater via a roadside culvert onto Dyess property; however, this stormwater does not comingle with Dyess stormwater until the point of discharge from Dyess. Thus, the City of Abilene stormwater does not have any effect on the water quality leaving Dyess.

1.2 PERMIT REQUIREMENTS

The TCEQ has issued an MS4 TPDES Permit to Dyess to discharge directly to surface waters of the state (TXR040235). The MS4 Permit specifies that areas included within the UA, as designated by the US Census Bureau, are required to obtain coverage under the Phase II regulations. The UA that includes Dyess is shown on Figure 1-1, while Figure 1-2 shows the MS4-permitted area on Dyess. This area includes:

- Balfour Beatty Communities Housing Maintenance – Buildings 11912 & 11913
- Community Center – Building 14402
- Mesquite Grove Golf Course (Golf Course, Clubhouse, and Maintenance Shop) – Buildings 11958, 11959, 11960, & 11966
- Military Family Housing (MFH)
- Neighborhood Center – Building 13301

- Youth Activities Center (YAC) – Building 11902

Conditions established within the permit are based on §402(p)(3)(B) of the CWA that states MS4 discharges must effectively prohibit the discharge of non-stormwater to the MS4 and requires controls to reduce pollutant discharges to the MEP. The minimization of pollutants in stormwater discharges is achieved through implementation of BMPs as outlined in the SWMP.

The Installation Commander at Dyess is responsible for managing environmental compliance programs and enforcing compliance with environmental regulations. The Installation Commander has identified the Environmental Element Chief and Stormwater Program Manager at Dyess as the field representatives for managing and ensuring compliance with all stormwater-related issues within the small MS4 area of the base. Monitoring of compliance with BMPs as outlined in the SWMP shall be performed by Dyess Environmental Element and Balfour Beatty Communities Housing Maintenance.

- **Legal Authority and Enforcement Measures**

Instances of non-compliance by persons or entities shall be investigated and enforced upon through existing Dyess chain of command structuring measures. Any identification of an illicit discharge or instance of non-compliance requiring notification shall immediately be reported to the Installation Commander through existing chain of command procedures for appropriate enforcement considerations.

- **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. Dyess stormwater discharges to Little Elm Creek and is not expected to cause or contribute to a violation of water quality standards.

- **Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements**

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. Discharges to impaired water bodies without an approved TMDL must comply with Part II. D. 4(b) of the MS4 Permit.

Stormwater discharges from Dyess to Little Elm Creek, which is not designated as an impaired water body by the State of Texas.

- **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 Dyess does not discharge to the Edwards Aquifer recharge or contributing zones. As such, Dyess is not required to prepare

a Water Pollution Abatement Plan or obtain additional approvals related to discharges from the Dyess MS4.

- **Discharges to Specific Watersheds and Water Quality Areas**

Stormwater from Dyess does not discharge to a Watershed Protection area.

- **Protection of Streams and Watersheds by Home Rule Municipalities**

Stormwater from Dyess does not discharge to a home rule municipality designed area.

- **Indian Country Lands**

Stormwater from Dyess does not discharge to Indian Country Lands.

- **Endangered Species Act**

Discharges that would adversely affect listed endangered or threatened species or its critical habitat are not authorized by the MS4 Permit. Biological surveys conducted at Dyess have not identified any listed endangered or threatened species or a critical habitat. Stormwater discharges from Dyess are not expected to impact threatened and/or endangered species or critical habitat.

- **Allowable Non-Stormwater Discharges**

The following allowable non-stormwater sources may be discharged from the Dyess MS4 and are not required to be addressed in the Illicit Discharge Detection and Elimination program or other minimum control measures, unless determined by Dyess or the TCEQ, to be significant contributors of pollutants.

1. Water line flushing (excluding discharges of hyperchlorinated 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 that do not violate Texas Surface Water Quality Standards;
14. Street wash water excluding street sweeper wastewater;
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. Non-storm water discharges that are specifically listed in the TPDES Multi-Sector General Permit (MSGP) TXR050000 or the TPDES Construction General Permit (CGP) TXR150000;
17. Discharges that are authorized by a TPDES or NPDES permit or that are not required to be permitted; and
18. Other similar occasional incidental non-stormwater discharges such as spray park water, unless the TCEQ develops permits or regulations addressing these discharges.

- **Spill Prevention and Response Measures**

7 CES/CEIE maintains Dyess' Spill Prevention and Response Plan, found in the Dyess EPA One Plan. A copy of the Dyess EPA One Plan is located in the 7 CES/CEIE office. The Spill Prevention and Response Plan contains spill response procedures and a list of facilities with container storage capacities of 55 gallons or greater. Base-wide spill prevention and response BMPs include:

- Maintain a record of reportable spills
- Identify areas where spills could contribute pollutants to stormwater discharges
- Provide secondary containment structures around liquid storage tanks/drums as necessary
- Routinely inspect outdoor parking and storage areas, including equipment and vehicles for evidence of spills or leaks
- Divert spills from stormwater drains/inlets
- Make necessary materials and equipment available for spill clean up

- **Public Notice Requirements**

Following 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. Dyess will be required to place a notice in a local newspaper(s) 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;
- Brief summary of the information included in the NOI such as the general location of the small 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 the TCEQ;
- 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 Part II, Section E.12.(e-j).

1.3 STORMWATER MANAGEMENT PROGRAM

Minimum Control Measure or MCM is the term used by TCEQ for the five MS4 program elements aimed at achieving improved water quality. The SWMP is comprised of five MCMs that collectively are expected to reduce pollutants discharged into receiving water bodies to the MEP. The Dyess Stormwater Program Manager is responsible for implementing the SWMP. All records required by the SWMP will be maintained and stored in the Stormwater Program Manager's office.

Each MCM requires the development and implementation of BMPs and achievement of measurable goals to effectively reduce the potential for pollution in stormwater discharges. The five MCM's applicable to Dyess are:

- Public Education, Outreach and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention and Good Housekeeping for Municipal Operations

Sections 2.0 through 6.0 below present the BMPs, measureable goals, and implementation schedule for Dyess 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. Dyess has initiated many of the BMPs listed in Sections 2.0 through 6.0. This SWMP includes BMPs for each of the MCMs that have been implemented and continue to be implemented from the previous MS4 Permit.

Figure 1-1a
2010 Census Abilene Texas Urbanized Area Map
With Dyess AFB Urbanized Area

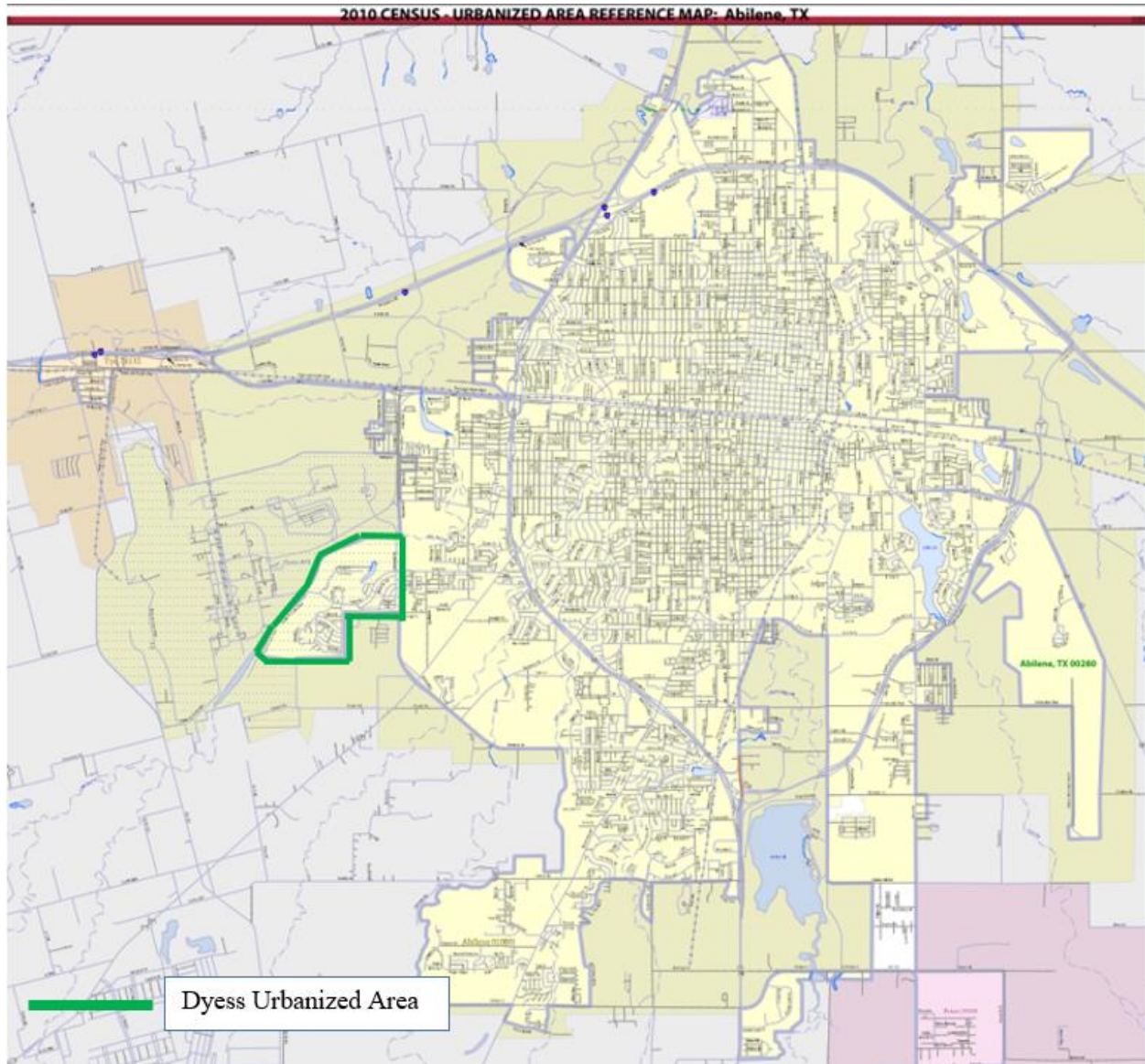
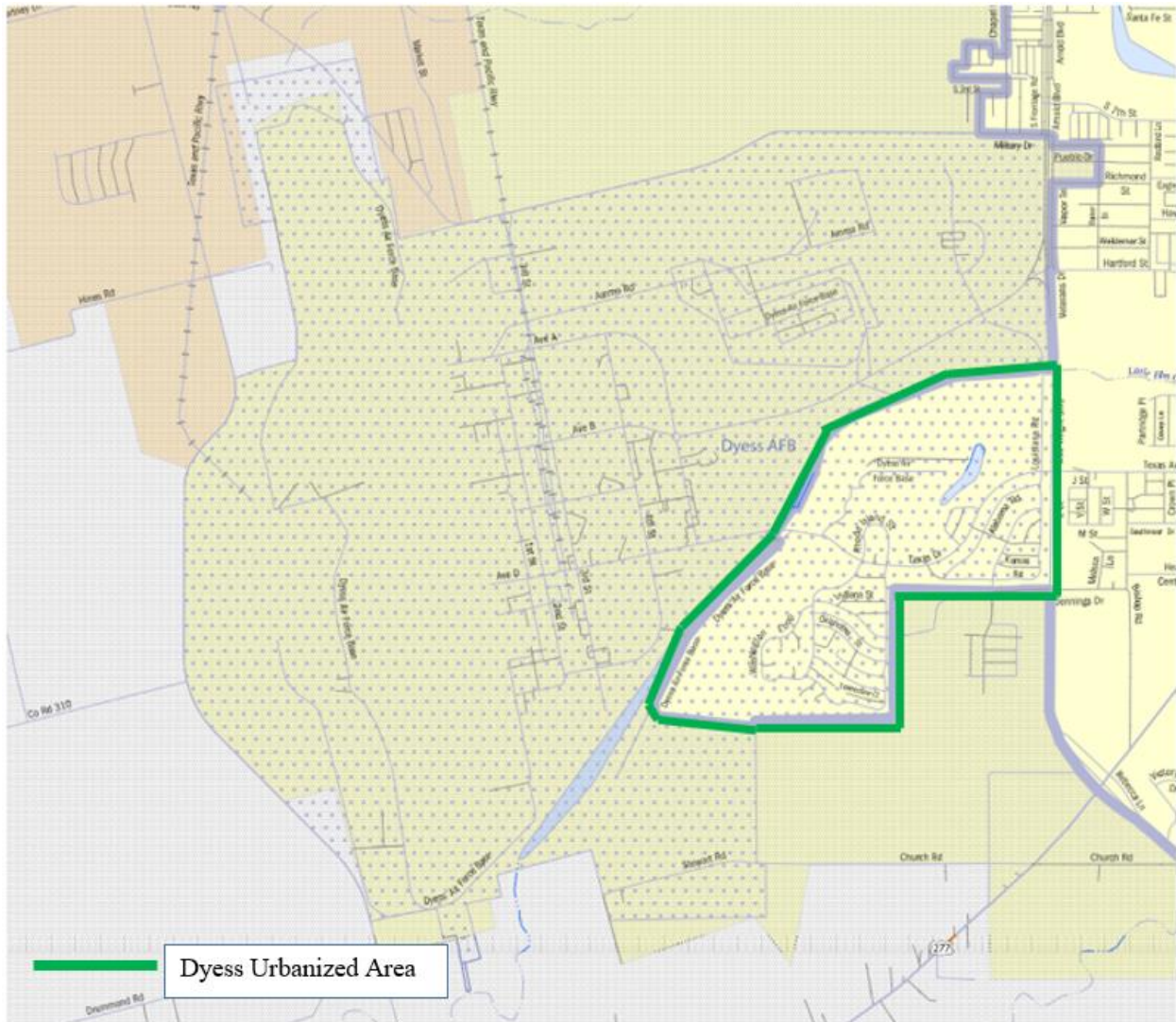


Figure 1-1b
2010 Census Abilene Texas Urbanized Area Map
With Dyess AFB Urbanized Area



2.0 PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT

The first of the five MCMs described in this SWMP is Public Education, Outreach, and Involvement (PEOI). 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 Dyess community (hereafter referred to as "the public") about the importance of protecting stormwater quality for the benefit of the environment and human health. The MS4 Permit requires Dyess to implement a public education program to distribute educational materials to the public, or conduct equivalent outreach to inform the public about potential consequences of impacted stormwater discharges to receiving surface water use, and the steps they can take to reduce pollutants in stormwater runoff.

Public education, outreach, and involvement are necessary to foster interest and support for Dyess' stormwater program. A Dyess 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-base.

Dyess PEOI 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
- Change specific behaviors that adversely affect stormwater quality
- Increase community awareness and understanding of the individuals

The Dyess target audiences for the PEOI MCM includes:

- Residents living on Dyess
- Civilian and military personnel assigned to Dyess
- Visitors
- Business/Public service employees

Industrial facilities at Dyess are located outside the MS4-permitted area and are not addressed by the public education program. Stormwater discharges from these facilities are regulated by the TPDES MSGP. Construction site personnel are required to comply with Construction SWPPPs developed in accordance with TPDES Construction General Permit requirements by the construction contractor. Construction activity within the MS4-permitted area is anticipated to be minimal.

The following BMPs will be implemented by Dyess to satisfy the PEOI MCM. Where appropriate, the selected BMPs will specifically address potential water quality challenges (i.e., pollutants of concern). Dyess will utilize existing federal, state, and Air Force-developed stormwater education

and outreach materials whenever possible. When necessary, new PEOI materials will be created and distributed. When required, all federal, state, and local public notices requirements will be followed during implementation of this MCM. PEOI information will be placed at the following locations:

- The BBC Housing Maintenance facility for employees and Military Family Housing (MFH) residents
- The front gate Visitor's Center, where all visitors must register prior to entering Dyess
- The Mesquite Grove Golf Course clubhouse for customers and Dyess personnel who work at the golf course
- The Youth Activity Center

PEOI BMPs are presented in the following subsections.

2.1 LOCAL PROCEDURES AND STORMWATER BROCHURES FOR HOUSING MAINTENANCE EMPLOYEES AND MILITARY FAMILY HOUSING (MFH) RESIDENTS

Balfour Beatty Communities, LLC (BBC) provides new MFH residents with an information packet upon arrival. This packet contains the local procedures for MFH residents. The procedures outline BBC Housing Maintenance, Air Force, and individual responsibilities towards homes in MFH. Through preventative practices and/or established requirements, individual impacts on stormwater discharge is minimized.

The Environmental Staff has provided BBC with various stormwater brochures in .PDF format for them to **send out in their monthly mass e-mail to all MFH residents**. This will allow all the stormwater brochures to reach every resident in MFH annually. **Providing this information digitally allows for greater circulation and also cuts down on the use of natural resources and reduction of refuse to the landfill by not using paper products to distribute the information.**

Several of the stormwater brochures are available at the BBC Housing Maintenance facility for distribution to employees and any residents that may visit that facility.

A summary of the stormwater brochures that are **sent via e-mail** and available at the facility are summarized below.

- **Household Hazardous Waste**

Dyess has implemented and continues to develop a program to educate MFH residents and BBC employees about Household Hazardous Waste (HHW). In addition, BBC Housing Maintenance provides general supplies for MFH residents that can be picked up at the Housing Maintenance facility (building 11913). Local procedures for MFH residents prohibit the disposal of HHW into the trash. Designated special wastes include engine oils, coolants, car grease, and similar products.

Residents are instructed to dispose of paint products or other HHW at the City of Abilene Recycling Center.

Dyess has created a Hazardous Substances Fact Sheet that informs MFH residents and BBC employees of potential impacts to stormwater caused by improper disposal of HHW. Locations for proper disposal of HHW are listed on the fact sheet as well as In BBC's Residential Guide.

The fact sheet is made available to MFH residents and BBC employees in hard copy format at the BBC Housing Maintenance facility.

The HHW fact sheet will be disseminated to MFH residences via e-mail. All residents (674 homes) will receive an annual e-mail from BBC with the Hazardous Substances Fact Sheet attached in .PDF format.

The Stormwater Program Manager will annually track and record the number of residences receiving the Hazardous Substances Fact Sheet via e-mail and the number distributed at the BBC Maintenance facility. The annual measurable goals are summarized in **Table 2-1** below.

- **Pet Waste Management**

Dyess has implemented and continues to develop a program to educate MFH residents and BBC employees about Pet Waste Management. Residents are required to pick up pet feces daily, and pet waste stands are located throughout MFH in parks and open spaces, at playgrounds, and along walking paths.

Dyess has created a Pet Waste Management brochure that informs MFH residents and BBC employees of potential impacts to stormwater caused by pet wastes and what they can do to mitigate the introduction of this pollutant into our waterways. The brochure is made available to MFH residents and BBC employees in hard copy format at the BBC Housing Maintenance facility.

The Pet Waste Management brochure will be disseminated to MFH residences via e-mail. All residents (674 homes) will receive an annual e-mail from BBC with the Pet Waste Management brochure attached in .PDF format.

The Stormwater Program Manager will annually track and record the number of residences receiving the Pet Waste Management brochure via e-mail and the number distributed at the BBC Maintenance facility. The annual measurable goals are summarized in **Table 2-1** below.

- **Pollution Prevention**

Dyess is not only concerned about stormwater contamination, but with many forms of pollution in our community. The Pollution Prevention trifold contains information regarding numerous environmental education-related topics, but covers stormwater pollution prevention as well.

The trifold is made available to MFH residents and BBC employees in hard copy format at the BBC Housing Maintenance facility.

The Pollution Prevention trifold material will be disseminated to MFH residences via e-mail. All residents (674 homes) will receive an annual e-mail from BBC with the Pollution Prevention brochure attached in .PDF format.

The Stormwater Program Manager will annually track and record the number of residences receiving the Pollution Prevention trifold via e-mail and the number distributed at the BBC Maintenance facility. The annual measurable goals are summarized in **Table 2-1** below.

- **Proper Lawn Care**

Dyess has implemented and continues to develop a program to educate MFH residents and BBC employees about proper lawn care. Grass mowing is required as necessary to maintain a neat appearance, and the mulching of grass clippings is recommended. Lawns must be free of debris (paper, cans, candy wrappers, etc.), and residents are expected to control pests in and around their residence. These pests can be prevented or controlled through good housekeeping, proper food storage, and minimal use of pesticides.

Dyess has adopted an Earth-wise Guide to Lawn Care brochure that informs MFH residents and BBC employees of proper methods for starting a new lawn, caring for an established lawn, irrigation, fertilization, and pesticide toxicity information.

The Guide will be disseminated to the residences of the MFH via digital mailings. All residences (674 homes) will receive an annual e-mail from BBC with the Earth-wise Guide to Lawn Care brochure material attached in .PDF format.

The Stormwater Program Manager will annually track and record the number of residences receiving the Earth-wise Guide to Lawn Care brochure via e-mail. The annual measurable goals are summarized in **Table 2-1** below.

- **Stormwater Pollution Prevention Door Hangers/Flyer**

Dyess has created Stormwater Pollution Prevention Door Hanger/Flyer to educate MFH residents and BBC employees about Stormwater Pollution Prevention measures; however, these door hangers were converted to digital format for more efficient distribution (see below). The flyer contains general stormwater awareness material as well as guidelines each resident/employee can follow to prevent the contamination of stormwater in the MS4. These measures include:

- Lawn Care
- Trash/Floatables
- Washing of Vehicles
- Pet Waste
- Household Chemicals
- Automotive Maintenance

The flyer is made available to MFH residents and BBC employees in hard copy format at the BBC Housing Maintenance facility.

The flyer will be disseminated to MFH residences via e-mail. All residences (674 homes) will receive an annual e-mail from BBC with the Stormwater Pollution Prevention Door Hanger/Flyer information attached in a PDF format.

The Stormwater Program Manager will annually track and record the number of residences receiving the Stormwater Pollution Prevention Door Hanger/Flyer via digital distribution and the number distributed at the BBC Maintenance facility. The annual measurable goals are summarized in **Table 2-1** below.

- **Water Conservation Practices**

Dyess has partnered with the City of Abilene in all water conservation initiatives and has adopted a policy of year-round water use management that limits watering to specified days and times throughout the entire year. Water running in the streets is considered waste, and abuse is subject to disciplinary action.

Dyess has created a Water Conservation pamphlet that informs MFH residents and BBC employees of methods to save water inside and outside a residence.

The pamphlet is made available to MFH residents and BBC employees in hard copy format at the BBC Housing Maintenance facility.

The pamphlet will be disseminated to MFH residences via e-mail. All residences (674 homes) will receive an annual e-mail from BBC with Water Conservation material attached in .PDF format.

The Stormwater Program Manager will annually track and record the number of residences receiving the Water Conservation pamphlet via digital distribution and the number distributed at the BBC Maintenance facility. The annual measurable goals are summarized in the **Table 2-1** below.

TABLE 2-1

Year	Annual Measurable Goals
1	Track and record the number of MFH residences receiving the six stormwater brochures (HHW, Pet Waste, Lawn Care, Pollution Prevention, SW Pollution Prevention, Water Conservation) annually via e-mail. Track and record the circulation of the five stormwater brochures (HHW, Pet Waste, Pollution Prevention, SW Pollution Prevention, Water Conservation) distributed from the BBC Housing Maintenance facility. Update brochures as needed.
2	Track and record the number of MFH residences receiving the six stormwater brochures (HHW, Pet Waste, Lawn Care, Pollution Prevention, SW Pollution Prevention, Water Conservation) annually via e-mail.

	<p>Track and record the circulation of the five stormwater brochures (HHW, Pet Waste, Pollution Prevention, SW Pollution Prevention, Water Conservation) distributed from the BBC Housing Maintenance facility.</p> <p>Update brochures as needed.</p>
3	<p>Track and record the number of MFH residences receiving the six stormwater brochures (HHW, Pet Waste, Lawn Care, Pollution Prevention, SW Pollution Prevention, Water Conservation) annually via e-mail.</p> <p>Track and record the circulation of the five stormwater brochures (HHW, Pet Waste, Pollution Prevention, SW Pollution Prevention, Water Conservation) distributed from the BBC Housing Maintenance facility.</p> <p>Update brochures as needed.</p>
4	<p>Track and record the number of MFH residences receiving the six stormwater brochures (HHW, Pet Waste, Lawn Care, Pollution Prevention, SW Pollution Prevention, Water Conservation) annually via e-mail.</p> <p>Track and record the circulation of the five stormwater brochures (HHW, Pet Waste, Pollution Prevention, SW Pollution Prevention, Water Conservation) distributed from the BBC Housing Maintenance facility.</p> <p>Update brochures as needed.</p>
5	<p>Track and record the number of MFH residences receiving the six stormwater brochures (HHW, Pet Waste, Lawn Care, Pollution Prevention, SW Pollution Prevention, Water Conservation) annually via e-mail.</p> <p>Track and record the circulation of the five stormwater brochures (HHW, Pet Waste, Pollution Prevention, SW Pollution Prevention, Water Conservation) distributed from the BBC Housing Maintenance facility.</p> <p>Update brochures as needed.</p>

2.2 STORMWATER BROCHURE FOR VISITORS, MESQUITE GROVE GOLF COURSE CUSTOMERS AND EMPLOYEES, AND THE YOUTH ACTIVITY CENTER.

Dyess has created a Stormwater Pollution Prevention Informational Brochure that contains material concerning stormwater pollution and its deleterious effects on the environment. Stormwater pollution prevention practices incorporated in the brochure include proper handling of Household Chemicals, environmentally friendly Lawn Care practices, managing Pet Waste, sensible Vehicle Washing measures, proper Automotive Maintenance techniques, and appropriate ways to dispose of Trash.

Stormwater brochures will be made available for distribution at the following locations:

- The front gate Visitor’s Center, where all visitors must register prior to entering Dyess AFB
- The Mesquite Grove Golf Course (located in the MS4) clubhouse for customers and Dyess personnel who work at the Golf Course
- The Youth Activity Center (located in the MS4).

The Stormwater Program Manager will annually track and record the number of Stormwater Pollution Prevention Informational Brochures distributed at the Front Gate Visitor’s Center, Mesquite Grove Golf Course clubhouse, and Youth Activity Center. The annual measurable goals are summarized in the **Table 2-1** below.

TABLE 2-2

Year	Annual Measurable Goals
1	Supply brochures to the Front Gate Visitor’s Center, Mesquite Grove Golf Course clubhouse, and Youth Activity Center. Track the number of brochures distributed.
2	Supply brochures to the Front Gate Visitor’s Center, Mesquite Grove Golf Course clubhouse, and Youth Activity Center. Track the number of brochures distributed.
3	Supply brochures to the Front Gate Visitor’s Center, Mesquite Grove Golf Course clubhouse, and Youth Activity Center. Track the number of brochures distributed.
4	Supply brochures to the Front Gate Visitor’s Center, Mesquite Grove Golf Course clubhouse, and Youth Activity Center. Track the number of brochures distributed.
5	Supply brochures to the Front Gate Visitor’s Center, Mesquite Grove Golf Course clubhouse, and Youth Activity Center. Track the number of brochures distributed.

2.3 STORM DRAIN DECALS

During past MS4 permit years, storm drain decals have been installed on or nearby all stormwater drain inlets to educate base personnel that storm drains lead directly to receiving water bodies.

Storm drains located in the MS4-permitted area are marked with decals that state “*No Dumping Drains to Creek.*” The majority of storm drains in the MS4-permitted area are located within MFH where 100 percent of the storm drains are designated with storm drain decals.

There are 82 storm drains with decals in the MS4-permitted area; for this permit term environmental staff will inspect 20% of the storm drains per year. If decals are missing, MFH residents and/or children from the Youth Activity Center will be asked to assist in re-installing new decals. The implementation schedule and annual goals are summarized in **Table 2-3** below.

TABLE 2-3

Year	Annual Measurable Goals
1	Track 20% (16 storm drains) of the installed decals to determine maintenance or replacement needs. If replacement needed, involve MS4 citizens to assist.
2	Track 20% (16 storm drains) of the installed decals to determine maintenance or replacement needs. If replacement needed involve MS4 citizens to assist.
3	Track 20% (16 storm drains) of the installed decals to determine maintenance or replacement needs. If replacement needed, involve MS4 citizens to assist.
4	Track 20% (17 storm drains) of the installed decals to determine maintenance or replacement needs. If replacement needed, involve MS4 citizens to assist.
5	Track 20% (17 storm drains) of the installed decals to determine maintenance or replacement needs. If replacement needed, involve MS4 citizens to assist.

2.4 SWMP AND ANNUAL REPORT ON DYESS AFB WEBSITE

Dyess provides a website (www.dyess.af.mil) that is available to the public. On this site, there is an area for environmental information and announcements to be posted. Within 180 days of approval of the SWMP by the TCEQ, an e-mail notification will be sent to residents of the MFH area of the approval and that the SWMP can be viewed at the above web address.

In addition, 7 CES/CEIE Environmental maintains an environmental intranet (SharePoint/eDASH) website, which provides base personnel with access to environmental programs and related announcements.

Once TCEQ approves the SWMP, the plan will be posted on the Dyess public website and the environmental intranet. If any updates to the SWMP occur during the five-year permit term, the websites will be revised accordingly. All MS4 Annual Reports will also be posted to the public website and environmental intranet as well. The implementation schedule and annual goals are summarized in **Table 2-4** below.

TABLE 2-4

Year	Annual Measurable Goals
1	<p>Post renewed SWMP to the Dyess public website and environmental intranet once approved by the TCEQ.</p> <p>Within 180 days of SWMP approval, send e-mail notice to MFH residents of its location at www.dyess.af.mil</p> <p>Post 1st Annual Report to the Dyess public website and environmental intranet.</p>
2	<p>If updates to the SWMP occur, replace previous SWMP with updated version to the Dyess public website and environmental intranet.</p> <p>Post 2nd Annual Report to the Dyess public website and environmental intranet.</p>
3	<p>If updates to the SWMP occur, replace previous SWMP with updated version to the Dyess public website and environmental intranet.</p> <p>Post 3rd Annual Report to the Dyess public website and environmental intranet.</p>
4	<p>If updates to the SWMP occur, replace previous SWMP with updated version to the Dyess public website and environmental intranet.</p> <p>Post 4th Annual Report to the Dyess public website and environmental intranet.</p>
5	<p>If updates to the SWMP occur, replace previous SWMP with updated version to the Dyess public website and environmental intranet.</p> <p>Post 5th Annual Report to the Dyess public website and environmental intranet.</p>

2.5 STORMWATER HOTLINE

Establish and maintain a stormwater hotline through which the public can ask questions or identify/report stormwater issues. The hotline will be the office phone number of the Dyess Stormwater Program Manager. The hotline phone number will be advertised on stormwater-related outreach materials. The Stormwater 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. Information received from the public will be utilized as input for the development and/or implementation of the current and future program.

In addition, one staff member of the Environmental Element is on call 24-hours/day each week of the year to respond to spills (IDDE events) that occur across the base. The base Fire Department and the Environmental staff member are both called for all spills. Spill response is based on Dyess' EPA One Plan/SPCC program. The implementation schedule and annual goals are summarized in **Table 2-5** below.

TABLE 2-5

Year	Annual Measurable Goals
1	Maintain hotline phone number, document hotline calls received from the public and actions taken.
2	Maintain hotline phone number, document hotline calls received from the public and actions taken.
3	Maintain hotline phone number, document hotline calls received from the public and actions taken.
4	Maintain hotline phone number, document hotline calls received from the public and actions taken.
5	Maintain hotline phone number, document hotline calls received from the public and actions taken.

2.6 COMMUNITY CLEANUPS/ADOPT-A-STORM DRAIN PROGRAM

In the past, Dyess conducted community cleanup events and an Adopt-A-Storm Drain program that involved residents of the MFH area (neighborhood streets, parks, and open spaces); however, the MFH, which is fully located in the MS4-Permitted area, is now privatized and managed by BBC. Part of the contract with BBC is for their maintenance department to maintain the MFH area via street sweeping, litter control, storm drain cleaning/repairs, pet waste management stations, and overall cleanliness of the MFH area. For this reason, community cleanup events and the Adopt-A-Storm Drain program will no longer be held in the MFH due to possible contract ramifications and the lack of trash/floatables in the MS4 permitted area.

3.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

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 Illicit Discharge Detection and Elimination (IDDE) MCM is to prevent the discharge of pollutants (heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria) to receiving waters by eliminating illicit discharges to Dyess' 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. Typical sources of illicit discharges include sanitary wastewater, effluent from septic tanks, car wash wastewaters, improper used oil disposal, radiator flushing disposal, roadway spills, and improper disposal of auto and household chemicals. Dyess has investigated, by dry weather screening and other survey means and determined that no cross-connections are known to exist in which sanitary wastewater is entering the stormwater collection system.

Development, implementation, and enforcement of an IDDE program is required by the MS4 Permit; therefore, a program has been established that serves to detect and eliminate illicit discharges to the MS4.

The Installation Commander at Dyess is responsible for managing environmental compliance programs and enforcing compliance with environmental regulations. Monitoring of compliance with BMPs as outlined in the SWMP shall be performed by Dyess Environmental Element and/or BBC Housing Maintenance personnel. Instances of non-compliance by persons or entities shall be investigated and enforced upon through existing Dyess chain of command structuring and/or security force protection measures. Any identification of an illicit discharge or instance of non-compliance requiring notification shall immediately be reported to the Installation Commander through existing chain of command procedures for appropriate enforcement considerations.

3.1 UPDATE AND MAINTAIN EXISTING STORM SEWER SYSTEM MAP

The MS4 Permit requires all permitted entities to maintain an updated MS4 map. AT a minimum, the map must include location of all small MS4 outfalls that are operated by the permittee and that discharge into waters of the U.S., the location and name of all surface waters receiving discharges from the small MS4 outfalls, and priority areas, if applicable. Dyess has developed a comprehensive map of the base's stormwater conveyance system that identifies storm drain inlets, manholes, culverts, pipes, outfalls, and receiving waters. The storm sewer map will be reviewed annually, and as needed, updated to account for modifications of the system. The implementation schedule and annual goals are summarized in **Table 3-1** below.

TABLE 3-1

Year	Annual Measurable Goals
1	Review the storm sewer map annually and update as needed.
2	Review the storm sewer map annually and update as needed.

SECTION THREE

Illicit Discharge Detection and Elimination

3	Review the storm sewer map annually and update as needed.
4	Review the storm sewer map annually and update as needed.
5	Review the storm sewer map annually and update as needed.

3.2 EDUCATING AND TRAINING MS4 FIELD STAFF

The MS4 Permit requires education and training for MS4 Field Staff concerning the identification and corrective actions for illicit discharges. The Dyess MS4 Field Staff includes all members of the 7 CES/CEIE Environmental Element, Mesquite Grove Golf Course maintenance personnel, and BBC Housing Maintenance personnel. Training will be provided at least annually and will include the following topics:

- Good Housekeeping and Spill Prevention
- Vehicle & Equipment Maintenance
- Vehicle & Equipment Washing
- Parking Lots and Streets
- Landscape & Grounds Maintenance
- Spill Control and Response
- Vehicle Fueling
- Materials Management
- Waste Management
- Storm Drain System Cleaning

Training materials and attendance rosters must be maintained in accordance with the MS4 Permit. The implementation schedule and annual goals are summarized in **Table 3-2** below.

TABLE 3-2

Year	Annual Measurable Goals
1	Educate and train MS4 field staff annually.
2	Educate and train MS4 field staff annually.
3	Educate and train MS4 field staff annually.
4	Educate and train MS4 field staff annually.
5	Educate and train MS4 field staff annually.

3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROCEDURES, PUBLIC REPORTING, INVESTIGATION, ELIMINATION, AND DOCUMENTATION

- **Procedures**

The Dyess MS4 Field Staff are committed to detecting, investigating, and eliminating illicit discharges to the storm sewer system. Dyess 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 dry weather screening described in 3.3 above. If an illicit discharge is identified through this screening, or other method, Dyess will investigate using similar procedures outlined in the Dyess EPA One Plan/SPCC program and the Spill Response Checklist (Dyess EPA One Plan, Appendix A).

- **Public Reporting**

Establish and maintain a stormwater hotline through which the public can identify/report stormwater issues. The hotline will be the office phone number of the Dyess Stormwater Program Manager and/or the on-call Environmental Staff member. The hotline phone number will be advertised on stormwater-related outreach materials. One staff member of the Environmental Element is on call 24-hours/day each week of the year to respond to spills (IDDE events) that occur across the base. The base Fire Department and the Environmental Staff member are both called for all spills. Spill response is based on Dyess' EPA One Plan/SPCC program.

- **Source Investigation, Elimination, and Documentation**

Upon becoming aware of an illicit discharge, Dyess will conduct an investigation to identify and locate the source of such illicit discharge as soon as practicable. Within 48-hours of observation, Dyess will notify an adjacent MS4 operator of an illegal connection/discharge to the neighboring MS4. Likewise, if Dyess is notified by another MS4 operator of an illegal connection/discharge to the Dyess MS4, Dyess will comply with the requirements specified in Part III.B.2 of the MS4 Permit.

If and when the source of the illicit discharge has been determined, Dyess will require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge resulting from the investigation. Dyess will prioritize the investigation of discharges based on their relative risk of pollution. An example of a high priority is a sanitary wastewater discharge to the MS4. Dyess 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 and/or the environment. Dyess 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. Dyess will conduct inspections, as determined appropriate, in response to complaints, and shall conduct follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party generating the illicit discharge. The implementation schedule and annual goals are summarized in **Table 3-3** below.

TABLE 3-3

Year	Annual Measurable Goals
1	Document all illicit discharges/connections reported, investigated and eliminated. Use criteria detailed in section 3.4 of the SWMP and Part III.B.2 of the MS4 Permit.
2	Document all illicit discharges/connections reported, investigated and eliminated. Use criteria detailed in section 3.4 of the SWMP and Part III.B.2 of the MS4 Permit.
3	Document all illicit discharges/connections reported, investigated and eliminated. Use criteria detailed in section 3.4 of the SWMP and Part III.B.2 of the MS4 Permit.

SECTION THREE

Illicit Discharge Detection and Elimination

4	Document all illicit discharges/connections reported, investigated and eliminated. Use criteria detailed in section 3.4 of the SWMP and Part III.B.2 of the MS4 Permit.
5	Document all illicit discharges/connections reported, investigated and eliminated. Use criteria detailed in section 3.4 of the SWMP and Part III.B.2 of the MS4 Permit.

4.0 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The purpose of the Construction Site Stormwater Runoff Control MCM is to prevent soil/sediment, construction materials, and wastes from leaving the construction site and entering the storm sewer collection system or as otherwise discharge to Waters of the U.S. Polluted runoff from construction sites often flows to MS4s and is discharged into local creeks. Sediment is usually the main pollutant of concern, and construction sites can contribute more sediment to streams than would be deposited naturally over decades.

Dyess will require the implementation of proper controls and enforce a program to reduce pollutants in stormwater runoff related to construction activities at sites that are one acre and greater and stormwater runoff from construction activities at sites that are part of a larger common plan of development. Authorization for stormwater discharges from construction activities located within the MS4-permitted area requires a TPDES Construction General Permit and development of a site-specific Stormwater Pollution Prevention Plan (SWPPP). Dyess will review Construction SWPPPs to ensure sediment and erosion controls are established and will conduct regular site inspections to ensure compliance. Generally, the Stormwater Program Manager monitors construction sites for illicit discharges at a minimum of once every seven days. All construction site inspection sheets are stored in the Stormwater Program Manager's office. All inspections of construction sites will at a minimum include:

- Determine whether the site has appropriate coverage under the TPDES CGP, TXR150000;
- Conduct a site inspection to determine if proper control measures have been correctly selected, installed, implemented, and maintained according to small MS4 permit requirements;
- Access compliance with the Permittee's ordinances and other regulations; and
- Provide a written or electronic inspection report.

Dyess 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 Construction General Permit (CGP) TXR150000. Prior to filing an NOI for CGP coverage, the construction operator is required to develop a CGP compliant SWPPP. As the day to day operator, the construction contractor is required to maintain a compliant field SWPPP documenting required CGP modifications. Therefore, the need to develop written procedures for implementing this MS4 MCM is not proposed, as compliance with the CGP is required. Dyess adopts Part III, Section B.3.(b)d. of the MS4 Permit.

Contractors performing construction activities within the Dyess MS4-permitted area are required to comply with the environmental specifications identified in contract documents, which includes the requirements of this SWMP, as referenced. The Installation Commander at Dyess is responsible for managing environmental compliance programs and enforcing compliance with environmental regulations. Instances of non-compliances by contracting entities shall be

investigated and enforced upon through existing Dyess chain of command structuring, BBC Housing Maintenance, and authority of the Base Contracting Officer (CO).

In addition, complaints received by the public regarding illicit discharges from sites with construction activities shall be investigated within 24 hours of receipt. Instances of non-compliance by persons or entities shall be investigated and enforced upon through existing Dyess chain of command structuring and/or security force protection measures. Any identification of an illicit discharge or instance of non-compliance requiring notification shall immediately be reported to the Installation Commander through existing chain of command procedures for appropriate enforcement considerations.

In addition to sediment, other pollutants commonly discharged from construction sites include:

- Solid and sanitary wastes
- Oil and grease
- Pesticides
- Construction chemicals
- Construction debris

Construction activity within the MS4-permitted area is anticipated to be minimal and less than 5 acres for any single project or larger plan of development.

4.1 CONSTRUCTION SITE ENTRANCES/EXITS

Sediment tracking controls will reduce the amount of sediment tracked onto streets. All construction site entrances or exits will have sediment tracking control devices installed. Typically this includes matting or filter cloth and rocks. Designated construction site entrances and exits will remain the primary access point for all vehicles. Any new entrances or exits developed during construction activities will be equipped with required sediment tracking control devices installed. The Stormwater Program Manager will monitor construction site entrances and exits during regular construction site inspections. Any observed deficiencies will be discussed with the Contracting Officer's Representative (COR) to convey to the construction site manager.

4.2 VEHICLE WASHING AREAS

Vehicle washing areas reduce the amount of sediment tracked onto streets. Construction contractors will have designated vehicle washing areas for rinsing vehicles, as necessary. Vehicle washing areas will be located in an area sloped away from storm drain inlets. Matting or filter cloth and rocks will be placed in the vehicle washing area. The Stormwater Program Manager will inspect all vehicle washing areas during regular construction site inspections. Any deficiencies will be discussed with the COR to convey to the construction site manager.

4.3 LINEAR SEDIMENT CONTROLS

Linear sediment controls can be an effective barrier to sediment leaving construction sites in stormwater runoff. Linear sediment controls include silt fence, storm wattles, or berms. Straw bale barriers and sand bags are not appropriate linear controls, and will not be used at construction sites within the MS4-permitted area. However, straw bales may be used at smaller point source discharge points as a water dissipater and silt filter. Silt fences will be supported by metal stakes and dug into the ground. The Stormwater Program Manager will inspect all linear sediment controls during regular construction site inspections. Any deficiencies will be discussed with the COR to convey to the construction site manager.

4.4 STORM DRAIN INLET PROTECTION

Storm drain inlet protection measures are controls that help prevent soil and debris from site erosion from entering storm drain inlets. Fabric barriers will be used to protect storm drain inlets at construction sites on Dyess. Fabric barriers are efficient at preventing sediment and floatable debris from entering the stormwater inlets. Accumulated sediment will be removed from stormwater inlets after rainfall events, or as needed. The Stormwater Program Manager will inspect all storm drain inlet protection controls during regular construction site inspections. Any deficiencies will be discussed with the COR to convey to the construction site manager.

4.5 MS4 CONSTRUCTION SITE TRAINING FOR DYESS PERSONNEL

Construction project oversight is a team effort at Dyess. The Stormwater Program Manager provides training and guidance, while responsibility for executing effective construction site BMPs resides with construction contractors. Dyess uses Construction QAEs (Quality Assurance Evaluator) 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.

Oversight of stormwater compliance at these sites requires periodic training on stormwater compliance requirements. The Stormwater 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 Dyess. Training will include permitting and compliance requirements for construction sites disturbing more than one acre (permitted projects) and MS4 Permit requirements.

If no construction sites are being conducted in a given year, training will not be conducted; however, if a construction site does become active stormwater training will be presented.

The implementation schedule and annual goals are summarized in **Table 4-1** below.

TABLE 4-1

Year	Annual Measurable Goals
1	<p>Respond to 100% of construction complaints received by the public regarding issues related to stormwater discharges from sites with construction activities.</p> <p>Complete weekly inspection of construction sites within the MS4 for illicit discharge detection and BMP compliance.</p> <p>Provide QAE Construction Site Inspection Training; if applicable.</p>
2	<p>Respond to 100% of construction complaints received by the public regarding issues related to stormwater discharges from sites with construction activities.</p> <p>Complete weekly inspection of construction sites within the MS4 for illicit discharge detection and BMP compliance.</p> <p>Provide QAE Construction Site Inspection Training; if applicable.</p>
3	<p>Respond to 100% of construction complaints received by the public regarding issues related to stormwater discharges from sites with construction activities.</p> <p>Complete weekly inspection of construction sites within the MS4 for illicit discharge detection and BMP compliance.</p> <p>Provide QAE Construction Site Inspection Training; if applicable.</p>
4	<p>Respond to 100% of construction complaints received by the public regarding issues related to stormwater discharges from sites with construction activities.</p> <p>Complete weekly inspection of construction sites within the MS4 for illicit discharge detection and BMP compliance.</p> <p>Provide QAE Construction Site Inspection Training; if applicable.</p>
5	<p>Respond to 100% of construction complaints received by the public regarding issues related to stormwater discharges from sites with construction activities.</p> <p>Complete weekly inspection of construction sites within the MS4 for illicit discharge detection and BMP compliance.</p> <p>Provide QAE Construction Site Inspection Training; if applicable.</p>

5.0 POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Dyess will develop and continue to enforce a program to address stormwater runoff from new and/or redevelopment projects. Contractors performing construction activities within the Dyess MS4-permitted area are required to comply with the environmental specifications identified in contract documents, which include the requirements of this SWMP as referenced. The Installation Commander at Dyess is responsible for managing environmental compliance programs and enforcing compliance with environmental regulations. Instances of non-compliances by contracting entities shall be investigated and enforced upon through existing Dyess chain of command structuring, security force protection measures, BBC Housing Maintenance, and authority of the Base CO.

Prior planning and design for stormwater management in areas of new development and redevelopment is a cost-effective approach to minimizing pollutants in stormwater discharges. Runoff that flows over areas altered by development can pick up harmful sediment and chemicals and deposit them in receiving waters. Areas of development have the potential to increase the amount of impervious surface and, consequently, the amount of stormwater runoff. Dyess Civil Engineer and Design Flight, in partnership with the U.S. Army Corps of Engineers and BBC Housing Maintenance have incorporated “green zones” into the development of new MFH construction to reduce impervious surfaces and pollutant discharge within the MS4.

Planning and design for stormwater management in areas of new development and redevelopment are included as part of front-end specifications for all construction projects within the MS4. Dyess will enforce a program to reduce pollutants in stormwater runoff from new/redevelopment activities at sites that are one acre and greater and stormwater runoff from new/redevelopment activities at sites that are part of a larger common plan of development. The Installation Commander at Dyess is responsible for managing environmental compliance programs and enforcing compliance with environmental regulations. Instances of non-compliances by contracting entities shall be investigated and enforced upon through existing Dyess chain of command structuring and with the authority of the Base CO.

5.1 OPEN SPACE DESIGN

Open spaces are incorporated into the design of new MFH areas within the Dyess MS4. Open spaces will reduce the amount of impervious cover in MFH and also reduce pollutant loads to the storm sewer. New development projects within the Dyess MS4 will continue to be reviewed to ensure inclusion of open space designs.

The implementation schedule and annual goals are summarized in **Table 5-1** below.

SECTION FIVE **Post Construction SW Mgmt. in New Development/Redevelopment**

TABLE 5-1

Year	Annual Measurable Goals
1	Review all site plans submitted for new development projects within Dyess MS4 to ensure inclusion of open spaces designs.
2	Review all site plans submitted for new development projects within Dyess MS4 to ensure inclusion of open spaces designs.
3	Review all site plans submitted for new development projects within Dyess MS4 to ensure inclusion of open space designs.
4	Review all site plans submitted for new development projects within Dyess MS4 to ensure inclusion of open space designs.
5	Review all site plans submitted for new development projects within Dyess MS4 to ensure inclusion of open spaces designs.

BMP INSPECTION AND MAINTENANCE

Stormwater drainage channels and outfalls at Dyess receive industrial stormwater discharge as well as discharge from the MS4-permitted area. Per existing SWPPP requirements, regular inspections are completed of the drainage channels and outfalls. Maintenance is also completed as necessary. The Stormwater Program Manager will continue to regularly inspect the drainage channels and outfalls per the SWPPP. Record keeping of these inspections will be captured in the SWPPP.

6.0 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The purpose of this MCM is to develop and implement Pollution Prevention and Good Housekeeping practices to prevent or reduce pollutant runoff from Dyess municipal operations. Pollution prevention 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 supported BMPs. For example, Dyess personnel implement a wide-variety of good housekeeping BMPs including proper materials storage and use, secondary containment, and limiting, or in some cases, eliminating outdoor vehicle and equipment maintenance.

The intent of the pollution prevention and good housekeeping control measure is to ensure that existing municipal operations are performed in ways that will minimize contamination of stormwater discharges. Dyess and BBC Housing Maintenance will examine current practices and alter them when necessary to effectively reduce pollution in stormwater discharges. At a minimum, Dyess will look at practices including:

- Municipal operations (proper waste removal, street sweeping/cleaning, storm drain inlet cleaning, etc.)
- Employee Training
- Good housekeeping and best management practices
- Maintain Dyess' Integrated Solid Waste Management Plan
- Maintain Dyess' Integrated Pest Management Plan
- Maintain Dyess' EPA One Plan (SPCC)

6.1 PERMITTEE-OWNED FACILITIES AND STORMWATER CONTROLS

There are no TPDES-permitted industrial facilities or regulated activities that take place within the MS4 permitted area on Dyess. Dyess owns and operates the following facilities and stormwater structures located in the MS4 urbanized area:

- Youth Activity Center
- Mesquite Grove Golf Course & Golf Course Maintenance Facility
- Vegetated and concrete-lined drainage ditches and associated headwalls at ditch outfalls
- Outfall structure where MS4 stormwater leaves Dyess AFB.

BBC is the owner and/or operator of all other facilities and the streets located in the MS4 area. Therefore, many municipal operations and/or maintenance activities fall under their purview per the lease contract with Dyess.

6.2 TRAINING PROGRAM FOR EMPLOYEES

Dyess understands the importance of an educated staff that recognizes and understands the consequences of stormwater pollution. Dyess will develop and implement a training program for employees working within the MS4-permitted area. This training will target the Dyess golf course maintenance employees and the BBC Housing Maintenance employees. Training topics will include pollution prevention, illicit discharge detection, and good housekeeping measures that minimize pollutants in stormwater discharge. The Stormwater Program Manager will track the number of employees who Complete the training each year. The implementation schedule and annual goals are summarized in **Table 6-1** below.

TABLE 6-1

Year	Annual Measurable Goals
1	Perform annual stormwater pollution prevention training and record attendance.
2	Perform annual stormwater pollution prevention training and record attendance.
3	Perform annual stormwater pollution prevention training and record attendance.
4	Perform annual stormwater pollution prevention training and record attendance.
5	Perform annual stormwater pollution prevention training and record attendance.

6.3 DISPOSAL OF WASTE MATERIAL

Municipal waste management operations within the MS4 are the responsibility of BBC and the City of Abilene. Household and municipal waste is managed in curbside covered containers at residences and non-industrial facilities and is collected bi-weekly by the City of Abilene. Collected waste is transported in covered trucks off-base to a local permitted landfill for disposal.

Collection of accumulated contaminated sediment and floatable debris removed from the permitted MS4 system shall be managed in covered containers/trucks and disposed of off-base at a permitted landfill.

6.4 CONTRACTOR REQUIREMENTS AND OVERSIGHT

All contractors hired to perform duties at Dyess must agree via contract to adhere to a wide-range of environmental specifications as provided by the 7 CES/CEIE Environmental Element. Stormwater regulations and controls are part of these environmental specifications. A copy of the Environmental Specifications is available in 7 CES/CEIE for review upon request by a regulating entity. These Environmental Specifications are reviewed annually for accuracy and required regulatory updates by the entire Environmental Staff.

The implementation schedule and annual goals are summarized in **Table 6-2** below.

TABLE 6-2

Year	Annual Measurable Goals
1	Annually review the Stormwater portion in the Environmental Specifications for contractors.
2	Annually review the Stormwater portion in the Environmental Specifications for contractors.
3	Annually review the Stormwater portion in the Environmental Specifications for contractors.
4	Annually review the Stormwater portion in the Environmental Specifications for contractors.
5	Annually review the Stormwater portion in the Environmental Specifications for contractors.

6.5 MUNICIPAL OPERATIONS, MAINTENANCE ACTIVITIES, AND STRUCTURAL CONTROL MAINTENANCE

BBC Housing Maintenance conducts all municipal operations and maintenance activities in the MS4 area that have potential to discharge pollutants in stormwater. Below are a list of operations, activities, and structural controls that BBC has implemented to mitigate the exposure of pollutants to stormwater.

- **Street Sweeping/Cleaning**

Street sweeping and collection of “blowing wastes” is performed by BBC Housing Maintenance on a set schedule to reduce the potential of floatable debris within the MS4 storm sewer system. Street sweeping, a typical pavement cleaning practice, will be used to minimize pollutants being transported to storm sewers and drainage channels. Street sweeping can remove sediment buildup, large debris, and possible vehicle heavy metals from curb gutters.

Three major streets in MFH are Texas, Maryland, and Washington Streets. These streets will be swept at least semi-annually while all other streets in MFH will be swept at least annually. The Stormwater Program Manager will verify street sweeping activities with BBC/Housing Maintenance and record the activity.

The implementation schedule and annual goals are summarized in **Table 6-3** below.

TABLE 6-3

Year	Annual Measurable Goals
1	Verify annual and semi-annual street sweeping activities with BBC Housing Maintenance and record the activity.
2	Verify annual and semi-annual street sweeping activities with BBC Housing Maintenance and record the activity.
3	Verify annual and semi-annual street sweeping activities with BBC Housing Maintenance and record the activity.

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4	Verify annual and semi-annual street sweeping activities with BBC Housing Maintenance and record the activity.
5	Verify annual and semi-annual street sweeping activities with BBC Housing Maintenance and record the activity.

- **Stormwater Inlet Protection Management**

Storm drain inlet protection will be used to minimize pollutant export to storm sewers and drainage channels. Street sweeping can remove sediment buildup and large debris from curb gutters; however, small amounts of sediment and debris are more difficult to collect by means of street sweeping. Stormwater inlet protection units will capture the smaller debris and sediment in stormwater runoff. The Stormwater Program Manager will purchase additional storm drain inlet protection units to be installed within the MS4 as identified.

The implementation schedule and annual goals are summarized in **Table 6-4** below.

TABLE 6-4

Year	Annual Measurable Goals
1	Install storm drain inlet protection units where feasible. Remove sediment and other pollutants that have collected in the storm drain inlet protection units.
2	Install storm drain inlet protection units where feasible. Remove sediment and other pollutants that have collected in the storm drain inlet protection units.
3	Install storm drain inlet protection units where feasible. Remove sediment and other pollutants that have collected in the storm drain inlet protection units.
4	Install storm drain inlet protection units where feasible. Remove sediment and other pollutants that have collected in the storm drain inlet protection units.
5	Install storm drain inlet protection units where feasible. Remove sediment and other pollutants that have collected in the storm drain inlet protection units.

- **Pet Waste Management Stations**

Pet waste management stations will be placed near playground areas and along walking/bike trails within the MS4 housing area. Encouraging proper pet waste management through the availability of pet waste management stations will reduce the potential for bacteria and nutrient runoff during storm events. Information regarding the availability and use of the pet waste management stations will be provided as part of the existing public education program.

The implementation schedule and annual goals are summarized in **Table 6-5** below.

TABLE 6-5

Year	Annual Measurable Goals
1	Pet waste management stations are installed near playground areas and along walking/bike trails within the MS4 housing area. Maintain stations and record frequency of use.
2	Pet waste management stations are installed near playground areas and along walking/bike trails within the MS4 housing area. Maintain stations and record frequency of use.
3	Pet waste management stations are installed near playground areas and along walking/bike trails within the MS4 housing area. Maintain stations and record frequency of use.
4	Pet waste management stations are installed near playground areas and along walking/bike trails within the MS4 housing area. Maintain stations and record frequency of use.
5	Pet waste management stations are installed near playground areas and along walking/bike trails within the MS4 housing area. Maintain stations and record frequency of use.

- **Mesquite Grove Golf Course Maintenance Facility**

Mesquite Grove Golf Course maintenance building is the only facility in the MS4 operated by the Permittee with the potential to discharge pollutants in stormwater. The potential pollutants at this location are hydrocarbons from gasoline/diesel fuels, oils and greases from maintenance equipment, and sediment/debris. Fortunately, the entire maintenance area drains to an oil water separator (OWS) that discharges into the local sanitary sewer system. Inspection of the maintenance facility and the OWS will occur at a minimum of once a year. The implementation schedule and annual goals are summarized in **Table 6-6** below.

TABLE 6-6

Year	Annual Measurable Goals
1	The Golf Course maintenance facility and the OWS will be inspected at a minimum of once per year.
2	The Golf Course maintenance facility and the OWS will be inspected at a minimum of once per year.
3	The Golf Course maintenance facility and the OWS will be inspected at a minimum of once per year.
4	The Golf Course maintenance facility and the OWS will be inspected at a minimum of once per year.
5	The Golf Course maintenance facility and the OWS will be inspected at a minimum of once per year.

