

PREPARED FOR:

**U.S. ARMY INSTALLATION MANAGEMENT COMMAND AND  
FORT LEONARD WOOD**



**2010**

**Municipal Separate Storm Sewer System  
Storm Water Annual Report  
Permit MO-R040088  
U.S. Army Installation Management Command and  
Fort Leonard Wood, Missouri**



PREPARED BY:  
U.S. ARMY CORPS OF ENGINEERS  
KANSAS CITY DISTRICT



Municipal Separate Storm Sewer System Storm Water Annual Report

Permit MO-R040088

U.S. Army Maneuver Support Center of Excellence and

Fort Leonard Wood, Missouri

Prepared by:

U.S. Army Corps of Engineers

Kansas City District

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## Table of Contents

LIST OF ACRONYMS AND ABBREVIATIONS .....	iii
INTRODUCTION .....	1
1.0 PUBLIC EDUCATION AND OUTREACH .....	2
2.0 PUBLIC INVOLVEMENT/PARTICIPATION .....	5
3.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION .....	8
4.0 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL .....	11
5.0 POST-CONSTRUCTION RUNOFF CONTROL .....	14
6.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING .....	16

### Tables

Table 1:	Public Education and Outreach Minimum Control Measure
Table 2:	Public Involvement/Participation Minimum Control Measure
Table 3:	Illicit Discharge Detection and Elimination Minimum Control Measure
Table 4:	Construction Site Storm Water Runoff Control Minimum Control Measure
Table 5:	Post-Construction Runoff Control Minimum Control Measure
Table 6:	Pollution Prevention/Good Housekeeping Minimum Control

### Figures

Figure 1	FLW Discharge Reporting Procedure
Figure 2	FLW Continuum of Enforcement

### Attachments

A	Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program
B	MS4 Outreach Activities
C	Publications Inventory
D	Illicit Discharge Reporting Procedure
E	BMP #3B - Continuum of Enforcement Description
F	Garrison Command Policy #200-1
G	Typical DoD Installation Functional Areas and Processes

## LIST OF ACRONYMS AND ABBREVIATIONS

AAFES	Army and Air Force Exchange Service
BMP	Best Management Practice
CFR	Code of Federal Regulations
DPW	Directorate of Public Works
ECO	Environmental Compliance Officer
EMS	Environmental Management System
FLW	Fort Leonard Wood
GIS	Geographic Information System
GPS	Global Positioning System
MCM	Minimum Control Measure
MDNR	Missouri Department of Natural Resources
MS4	Municipal Separate Storm Sewer System
NoN	Notice of Non-Compliance
NPDES	National Pollutant Discharge Elimination System
SIC	Standard Industrial Classification
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan

## INTRODUCTION

This report documents the activities required to fulfill the Phase II National Pollutant Discharge Elimination System (NPDES) Permit MO-R040088 (Permit), issued by the Missouri Department of Natural Resources (MDNR) to the U.S. Army Installation Management Command and Fort Leonard Wood (FLW), Missouri, for the Municipal Separate Storm Sewer System (MS4). This report provides documentation necessary to fulfill the first-year reporting requirements specified in Section 5.3 of the Permit for the period of July 24, 2009, through June 12, 2010. This report was prepared by the U.S. Army Installation Management Command and FLW with assistance from the U.S. Army Corps of Engineers, Kansas City District.

The SWMP documents the commitment by FLW to develop and implement storm water management procedures and practices to comply with each of the six minimum control measures (MCMs) stated in the MS4 Permit, as well as the status of the six MCMs.

## 1.0 PUBLIC EDUCATION AND OUTREACH

(SWMP Section 7.1)

### 1. *Implementation Status*

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- a. General Summary: The goal of this MCM is to develop and distribute educational materials and perform outreach to inform residents, students, contractors, business owners and onsite civilian and military personnel about the impact of polluted storm water runoff discharges, and how their actions impact water quality at FLW.

FLW has successfully implemented 11 of the 26 measurable goals for the Best Management Practices (BMPs) outlined in the SWMP for Public Education and Outreach (Table 1). This includes completion of the five measurable goals scheduled for completion in year one and implementation of six measurable goals scheduled as on-going tasks for years one through five. The remaining 15 measurable goals are scheduled for implementation during later reporting periods.

The framework for the Five-Year Storm Water Education Program has been developed for the following audiences: military and civilian personnel, contractors, residents, businesses, and students. Some elements of the education program have already been implemented at FLW while others are in the planning and development phase. Attachment A provides details on the education program activities, target pollutant sources, distribution materials and methods, and the implementation schedule.

A total of 26 outreach activities have been held between July 2009 and June 2010 with approximately 1,897 participants in attendance. Perhaps the biggest achievement was Earth Day, which had a water quality and stormwater theme. See Attachment B for further details on these activities.

Numerous educational materials have been developed by FLW and collected from other sources for distribution to the public. See Attachment C for more details on publications available for distribution.

- b. Program Element Revisions: No SWMP elements have been changed or refined. This is the first MS4 annual report for FLW.
- c. Status of Measurable Goals: The status of the measurable goals for the Public Education and Outreach MCM is presented in Table 1. Items that are highlighted in green identify goals that have either been completed or implemented during this reporting period. The five measurable goals scheduled for completion in year one were completed. In addition, six measurable goals scheduled as on-going tasks for years one through five were implemented.

d. Completion Dates and Goals Not Completed:

- Completion Dates: The completion dates for any measurable goals completed during this reporting period are included in Table 1.
- Scheduled Goals Not Completed: None.

**2. Overall Compliance With Permit Conditions and SWMP**

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- a. Assessment of BMP Appropriateness: Public education of the FLW community is a critical component in the success of the storm water program at FLW. The FLW community consists of a mixture of residents, students, contractors, business owners, and military personnel. Numerous BMPs have been outlined in the SWMP with the goal of raising community awareness of storm water pollution and the impact of FLW operations on storm water. The BMPs discussed in this section have a high potential for reaching the FLW community due to the approach taken of targeting each audience within the community and developing ideal distribution routes for reaching each audience. A Five-year Storm Water Education Program has been developed by FLW for each targeted audience and is in the process of being implemented. Numerous events have been held to date where educational materials were distributed to the target audiences with more events planned for future reporting periods. The BMPs established for this MCM are appropriate for protecting water quality at FLW.
- b. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable: To date, the various outreach events (puppet shows, training courses, cleanup activities, pre-construction review meetings, etc.) coupled with the educational materials distributed during these events have been effective tools for raising public awareness about water quality and the role they play in affecting water quality at FLW. FLW has numerous permits to protect air and water resources, that all activities at FLW must comply with. In addition to the SWMP, FLW has a Storm Water Pollution Prevention Plan (SWPPP), a Spill Prevention and Response Plan, and a Hazardous Waste Management Plan in place to protect water quality. Additional steps are needed to provide continued education of the public. These include implementation of training courses, development of additional training materials, and continued revision of existing educational materials. These items are goals that will be pursued by FLW during future reporting periods.

### ***3. Results of Information Collected and Analyzed***

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Public education is being implemented in schools, at public meetings and events, and with contractors performing work at FLW. Systems are in place to track information regarding events held, educational materials distributed, participation numbers, and advertising. These tracking systems will be used to evaluate the success of the program and to develop lessons learned for refining future efforts. Between July 2009 and June 2010 there were 26 outreach activities held with a total of approximately 1,897 participants.

### ***4. Storm Water Activities Planned for the Next Reporting Cycle***

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Measurable goals for the Public Education and Outreach MCM that will be undertaken during the next reporting cycle are presented in Table 1. Items that are highlighted in green identify goals that have either been completed or implemented during this reporting cycle. Items that are not highlighted are goals that will be implemented during future reporting cycles.

### ***5. Proposed Changes to the Program Area and Documented SWMP***

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- a. Changes to BMPs: No BMPs are proposed for change.
- b. Changes to Measurable Goals: No Measurable Goals are proposed for change.

## 2.0 PUBLIC INVOLVEMENT/PARTICIPATION

(SWMP Section 7.2)

### 1. Implementation Status

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- a. General Summary: The goal of this MCM is to provide opportunities for residents, students, contractors, and onsite civilian and military personnel to participate in program development and implementation of the SWMP.

FLW has successfully implemented seven of the nine measurable goals for the BMPs outlined in the SWMP for Public Involvement and Participation (Table 2). The seven measurable goals implemented are scheduled as on-going tasks for years one through five. The remaining two measurable goals are scheduled for implementation during later reporting periods.

Public notices for public meetings related to the SWMP, as well as other public outreach events, have been issued through multiple media, such as FLW's website, posters, signage at community centers, and the Missouri Stream Team's website. A system is in place to keep track of participation numbers at SWMP meetings and community outreach events. Five waterway cleanup events were held between April 2009 and June 2010 with approximately 272 people participating. One water quality monitoring class was held that had 18 participants. Several other outreach events were held for community members to participate in as detailed in Attachment B.

- b. Summary of Changes to SWMP Elements: No SWMP elements have been changed or refined. This is the first MS4 annual report for FLW.
- c. Status of Measurable Goals: The status of the measurable goals for the Public Involvement/Participation MCM is presented in Table 2. Items that are highlighted in green identify goals that have either been completed or implemented during this reporting period. There were no goals scheduled for completion during the first reporting cycle. Instead the nine measurable goals outlined for this MCM are scheduled as on-going tasks during from years one through five. Implementation has begun for seven of the nine measurable goals. Implementation is scheduled to begin on the remaining two measurable goals during future reporting cycles.
- d. Completion Dates and Goals Not Completed:
- Completion Dates: The completion dates for any measurable goals completed during this reporting period are included in Table 2.
  - Scheduled Goals Not Completed: None.

## **2. Overall Compliance With Permit Conditions and SWMP**

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- a. Assessment of BMP Appropriateness: Public involvement and participation in events and activities sponsored by FLW are important tools in determining the effective implementation of the Storm Water Management Program implementation at FLW. When the public is actively involved in events such as waterway cleanups and water quality monitoring events it helps instill a sense of ownership and pride in maintaining the integrity of the natural environment. The BMPs outlined in this section were designed to feed into this philosophy by establishing numerous opportunities to get the FLW community involved in protecting the environment. In addition, the BMPs strive to establish an interactive relationship between FLW and the community where the opinions of the community regarding the SWMP, events planned by FLW, and the FLW educational campaign will be taken into account. Public involvement is tracked by keeping a record of participation numbers for various activities held by FLW. The BMPs established for this MCM are appropriate for protecting water quality at FLW.
  
- b. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable: To date, there have been five waterway cleanup events with approximately 272 community members participating and one water quality monitoring class with 18 participants. Other events are planned for future reporting cycles and participation numbers for these events will continue to be tracked. The events held to date have been effective in increasing public awareness regarding water quality and keeping waterways clean. Making the SWMP more accessible to the public and generating feedback tools will strengthen communication channels between the community and FLW. These are items that are actively being worked on and will be implemented during future reporting cycles.

## **3. Results of Information Collected and Analyzed**

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Systems have been implemented at FLW to track participation numbers at events sponsored by FLW. These events include SWMP meetings, waterway cleanups, water quality monitoring classes, nature hikes, and walks/runs. These tracking systems will be used to continually monitor the effectiveness of the events being held by FLW. Between 2009 and 2010 FLW sponsored five waterway cleanups and one water quality monitoring class. There were approximately 290 people who participated in these events. See Attachment B for more details.

## **4. Storm Water Activities Planned for the Next Reporting Cycle**

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Measureable goals for the Public Involvement and Participation MCM that will be undertaken during the next reporting cycle are presented in Table 2. Items that are highlighted in green identify goals that have been implemented during this reporting cycle. Items that are not highlighted are goals that will be implemented during future reporting cycles.

*5. Proposed Changes to the Program Area and Documented SWMP*

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- a. Changes to BMPs: No BMPs are proposed for change.
- b. Changes to Measurable Goals: No Measurable Goals are proposed for change.

### 3.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

(SWMP Section 7.3)

#### 1. Implementation Status

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- a. General Summary: The goal of this MCM is to develop and implement a plan to detect and eliminate non-storm water discharges (illicit discharges) such as process water, wash water, chemical spills, and other non-rain water discharges to the storm drain system. Only clean rainwater should be discharged to the storm drain system.

FLW has successfully implemented nine of 19 measurable goals for the BMPs outlined in the SWMP for Illicit Discharge Detection and Elimination (Table 3). FLW has established and implemented a process for locating and mapping known outfalls, ponds, and structural pollution control devices. Additionally, an illicit discharge reporting procedure was developed for use by military/civilian personnel, contractors, and residents (Figure 1 and Attachment D). FLW also developed a four-level Continuum of Enforcement for illicit discharges (Figure 2 and Attachment E), and a tracking system is being developed to maintain a list of illicit discharges identified, enforcement actions implemented, and corrective actions taken.

- b. Summary of Changes to SWMP Elements: No SWMP elements have been changed or refined. This is the first MS4 annual report for FLW.
- c. Status of Measurable Goals: The status of the measurable goals for the Illicit Discharge Detection and Elimination MCM is presented in Table 3. Items that are highlighted in green identify goals that have either been completed or implemented during the reporting period. Items that are highlighted in orange have not been completed. Items that are not highlighted are goals that will be implemented during future reporting cycles. Six of the eight measurable goals scheduled for completion in year one were completed. In addition, three measurable goals scheduled as on-going tasks for years one through five were implemented. The remaining eight measurable goals are scheduled for implementation during later reporting periods.
- d. Completion Dates and Goals Not Completed:
- Completion Dates: The completion dates for any measurable goals completed during this reporting period are included in Table 3.
  - Scheduled Goals Not Completed: One of the measurable goals scheduled for completion in year one was not completed on schedule, while seven were completed on schedule. There have not been any illicit connection tests performed to date on the storm sewer system; however, FLW is in the process of developing a Scope of Work to conduct smoke testing of the sanitary sewer system which will reveal any illicit connections between the storm and sanitary sewer systems. Additionally, the FLW Directorate of

Public Works (DPW) has been responsible for the installation infrastructure since its inception and the work process at FLW has been in place for decades, which lessens the likelihood of illicit connections within the storm water sewer system.

## **2. Overall Compliance With Permit Conditions and SWMP**

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- a. Assessment of BMP Appropriateness: The development of a Continuum of Enforcement provides FLW with a means of imposing consequences on entities that commit illicit discharges. The reporting procedure for illicit discharges developed by FLW provides an additional method for identifying and controlling illicit discharges. The storm sewer mapping program will provide the foundation for the inspection program through identification and tracking of illicit discharges in databases and on maps. Routine training for inspectors will help to make the inspection program more efficient in detecting and documenting potential illicit discharges; therefore, BMPs developed for this MCM are appropriate.
- b. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable: The implementation of the Continuum of Enforcement and the illicit discharge reporting procedure at FLW will result in improved water quality through a reduction in illicit discharges to the storm water system at FLW. On-going maintenance of the storm sewer system mapping effort will further strengthen the illicit discharge program by providing an additional layer to the tracking system at FLW. Maintaining records of illicit discharges identified, enforcement actions implemented, and corrective actions taken will help to quantify the reduction in illicit discharges. Reductions in illicit discharges will result in improvements to water quality at FLW.

## **3. Results of Information Collected and Analyzed**

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There is nothing to report at this time.

## **4. Storm Water Activities Planned for the Next Reporting Cycle**

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Measureable goals for the Illicit Discharge Detection and Elimination MCM that will be undertaken during the next reporting cycle are presented in Table 3. Items that are highlighted in green indicate goals that have either been completed or implemented during this reporting cycle. Items highlighted in orange are goals that were scheduled for completion in the first reporting cycle but will not be implemented until the second reporting cycle. Items that are not highlighted are goals that will be implemented during future reporting cycles.

*5. Proposed Changes to the Program Area and Documented SWMP*

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- a. Changes to BMPs: No BMPs are proposed for change.
- b. Changes to Measurable Goals: No Measurable Goals are proposed for change.

## 4.0 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

(SWMP Section 7.4)

### 1. Implementation Status

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- a. General Summary: The goal of this MCM is to develop, implement, and enforce an erosion control and sediment control program for construction activities.

FLW has successfully implemented 10 of the 21 measurable goals for the BMPs outlined in the SWMP for Construction Site Storm Water Runoff Control (Table 4). This includes completion of one of the measurable goals scheduled for completion in year one, completion of two of the goals scheduled for completion during years one and two, and implementation of seven goals scheduled as on-going tasks for years one through five. The remaining measurable goals are scheduled for completion during later reporting periods.

Databases have been developed and implemented to track land disturbance permits and inspection and enforcement action records at FLW. These databases are maintained by the DPW Environmental Branch. Some of the information included in these databases consists of permit numbers, compliance status, enforcement actions, and inspection results. Site plan reviews are conducted by the DPW Environmental Branch to ensure compliance with the SWPPP. A procedure has been implemented where a standardized checklist is used during inspections of permitted land disturbance sites.

FLW is in general compliance with permit conditions relating to construction site runoff controls. All construction activities at FLW are required to follow the installation's SWPPP, regardless of project size. The FLW SWPPP addresses erosion and sediment control BMPs, storm water runoff pollution prevention, spill control and countermeasures, and solid waste disposal. In addition the FLW DPW reviews and approves all individual SWPPPs developed for construction sites greater than one acre. The inspection and enforcement of the SWPPP and implemented structural BMPs at each construction site will further ensure that construction site storm water runoff control measures are successful. To date, FLW has created an electronic tracking system to maintain a record of approved permits at construction sites along with a record of site inspections, compliance status, and enforcement actions taken. In addition, all site plans are reviewed by DPW to ensure compliance with the SWPPP. Site inspections are conducted on a routine basis with the results entered into the electronic database and hard copies of the reports maintained by DPW. Finally, a standardized checklist has been developed for site inspectors to use when inspecting permitted land disturbance sites.

- b. Summary of Changes to SWMP Elements: No SWMP elements have been changed or refined. This is the first MS4 annual report for FLW.
- c. Status of Measurable Goals: The status of the measurable goals for the Construction Site Storm Water Runoff Control MCM is presented in Table 4. Items that are highlighted in

green identify goals that have either been completed or implemented during this reporting period. Items that are highlighted in orange have not been completed. Items that are not highlighted are goals that will be implemented during future reporting cycles. One of the two measurable goals scheduled for completion in year one was completed. In addition, seven measurable goals scheduled as on-going tasks for years one through five were implemented.

d. Completion Dates and Goals Not Completed:

- Completion Dates: The completion dates for any measurable goals completed during this reporting period are included in Table 4.
- Scheduled Goals Not Completed: One of the two measurable goals scheduled for completion in year one was not completed. This measurable goal was to create a SWPPP report mechanism (ex: phone line, webpage form) for the public to report construction site complaints. This measurable goal is actively being worked on and is scheduled for completion by the end of 2010.

## ***2. Overall Compliance With Permit Conditions and SWMP***

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- a. Assessment of BMP Appropriateness: While many of the pieces of an effective management plan are already in place, the BMPs outlined for this MCM were designed to strengthen the enforcement procedures regarding sediment and erosion control practices at FLW, and are appropriate for protecting water quality at FLW.
- b. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable: Much progress has been made, and while there are opportunities for improvement, none are practical at this time. It is suspected that the new turbidity law, new Leadership in Energy and Environmental Design (LEED) requirement, and new runoff requirements will result in a reduction of pollutants, but this change will take some time to realize.

## ***3. Results of Information Collected and Analyzed***

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There is nothing to report at this time.

## ***4. Storm Water Activities Planned for the Next Reporting Cycle***

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Measureable goals for the Construction Site Storm Water Runoff Control MCM that will be undertaken during the next reporting cycle are presented in Table 4. Items that are highlighted in green indicate goals that have either been completed or implemented during this reporting cycle. The item highlighted in orange is a goal that was scheduled for completion in the first

reporting cycle but will not be implemented until the second reporting cycle. Items that are not highlighted are goals that will be implemented during future reporting cycles.

**5. *Proposed Changes to the Program Area and Documented SWMP***

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- a. Changes to BMPs: No BMPs are proposed for change.
- b. Changes to Measurable Goals: No Measurable Goals are proposed for change.

## 5.0 POST-CONSTRUCTION RUNOFF CONTROL

(SWMP Section 7.5)

### 1. Implementation Status

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- a. General Summary: The goal of this MCM is to develop, implement, and monitor a program to address discharges of post-construction storm water runoff from new development and redevelopment areas. Post-construction storm water management controls include permanent structural and non-structural BMPs (e.g., conservation of natural and permeable areas, permeable pavers, rooftop runoff infiltration galleries, and mechanical storm drain filters) that remain in place after the project is completed and continue to prevent pollution from the new development.

FLW has successfully implemented two of the 16 measurable goals for the BMPs outlined in the SWMP for Post-Construction Runoff Control (Table 5). This includes completion of the one measurable goal scheduled for completion in year one and completion of one goal scheduled for completion in year two. The remaining 14 measurable goals are scheduled for completion in later reporting periods.

Administrative procedures were developed by FLW to address post construction control requirements. In addition, a review and evaluation of the existing FLW SWPPP was conducted with recommendations that will be considered for implementation during future reporting cycles.

- b. Summary of Changes to SWMP Elements: No SWMP elements have been changed or refined. This is the first MS4 annual report for FLW.
- c. Status of Measurable Goals: The status of the measurable goals for the Post-Construction Runoff Control MCM is presented in Table 5. Items that are highlighted in green identify goals that have been completed during this reporting period. The one measurable goal scheduled for completion during year one was completed. In addition, one measurable goal scheduled for completion during the second reporting cycle was completed.
- d. Completion Dates and Goals Not Completed:
- Completion Dates: The completion dates for any measurable goals completed during this reporting period are included in Table 5.
  - Scheduled Goals Not Completed: None.

## ***2. Overall Compliance With Permit Conditions and SWMP***

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- a. Assessment of BMP Appropriateness: FLW has decided to manage the post-construction runoff control requirements through the installation environmental management system (EMS). Therefore, the BMPs developed for this MCM are quite appropriate.
- b. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable: All new development and redevelopment projects at FLW are planned according to Army Regulation 210-20 'Real Property Master Planning for Army Installations', which specifies responsibilities for development and emphasizes the vital relationship between environmental planning, sustainable design and development, and real property master planning. In addition, FLW will follow Section 438 of the Energy Independence and Security Act of 2007 which requires no net increase in runoff. A review of the existing FLW SWPPP was also completed that included recommendations for changes or additions to the SWPPP along with other technical documents that could be developed for FLW. There are still many items that need to be implemented by FLW in order to achieve the statutory goal of reducing the discharge of pollutants to the maximum extent practicable, however, FLW is committed to making these changes.

## ***3. Results of Information Collected and Analyzed***

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There is nothing to report at this time.

## ***4. Storm Water Activities Planned for the Next Reporting Cycle***

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Measureable goals for the Post-Construction Runoff Control MCM that will be undertaken during the next reporting cycle are presented in Table 5. Items that are highlighted in green indicate goals that have been completed during this reporting cycle. Items that are not highlighted are goals that will be implemented during future reporting cycles.

## ***5. Proposed Changes to the Program Area and Documented SWMP***

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- a. Changes to BMPs: No BMPs are proposed for change.
- b. Changes to Measurable Goals: No Measurable Goals are proposed for change.

## 6.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING

(SWMP Section 7.6)

### 1. Implementation Status

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- a. General Summary: The goal of this MCM is to develop and implement a program to prevent or reduce pollutant runoff from facilities operation and maintenance activities. The program will include training of relevant targeted audiences in pollution prevention measures and techniques.

FLW has successfully implemented three of the 13 measurable goals for the BMPs outlined in the SWMP for Pollution Prevention/Good Housekeeping (Table 6). This includes completion of the three measurable goals scheduled for completion in year one. The remaining 10 measurable goals are scheduled for implementation during later reporting periods.

A review of the FLW SWPPP was conducted with one of the focus points of the review being an evaluation of existing pollution prevention/good housekeeping policies at FLW. The FLW Environmental Management Strategy – Garrison Command Policy # 200-1 was developed and signed by the Garrison Commander. Subsequently, an environmental management system (EMS) was developed for FLW. A listing of operational processes and activities with the potential to impact water quality at FLW was developed as part of the EMS. A listing of those processes is included as Attachment G. Several educational materials were also either identified or developed by FLW for distribution to target audiences. A listing of these materials is included as Attachment C.

- b. Summary of Changes to SWMP Elements: No SWMP elements have been changed or refined. This is the first MS4 annual report for FLW.
- c. Status of Measurable Goals: The status of the measurable goals for the Pollution Prevention/Good Housekeeping MCM is presented in Table 6. Items that are highlighted in green identify goals that have been completed during this reporting period. The three measurable goals scheduled for completion during year one were completed.
- d. Completion Dates and Goals Not Completed:
- Completion Dates: The completion dates for any measurable goals completed during this reporting period are included in Table 6.
  - Scheduled Goals Not Completed: None.

## ***2. Overall Compliance With Permit Conditions and SWMP***

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- a. Assessment of BMP Appropriateness: The BMPs outlined in the SWMP are appropriate and once they have been implemented will be effective for improving storm water quality. FLW conducted a review of the SWPPP and made recommendations for improving the pollution prevention/good housekeeping practices at FLW. Implementation of these recommendations is currently being evaluated by FLW. FLW developed a listing of processes and activities that have the potential to impact water quality as part of their EMS. This will aid in implementing BMPs for those processes where a reduction in or prevention of pollutant runoff could be realized.
- b. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable: FLW is complying with permit conditions by following the existing SWPPP and through the development of the EMS, both of which will aid in reducing and preventing pollutant runoff from municipal operations. Based on the results of FLW's review of the SWPPP, either additional SWPPPs may need to be created or guidance documents may need to be developed for specific activities at FLW. FLW will evaluate these recommendations to determine how best to implement them.

## ***3. Results of Information Collected and Analyzed***

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There is nothing to report at this time.

## ***4. Storm Water Activities Planned for the Next Reporting Cycle***

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Measurable goals for the Pollution Prevention/Good Housekeeping MCM that will be undertaken during the next reporting cycle are presented in Table 6. Items that are highlighted in green indicate goals that have been completed during this reporting cycle. Items that are not highlighted are goals that will be implemented during future reporting cycles.

## ***5. Proposed Changes to the Program Area and Documented SWMP***

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- a. Changes to BMPs: No BMPs are proposed for change.
- b. Changes to Measurable Goals: No Measurable Goals are proposed for change.

## Tables

TABLE 1  
Public Education and Outreach Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Measurable Goal Status	Completion Date
<b>BMP 1A - Implement a Storm Water Education Program (SWMP Section 7.1.1, page 17)</b>				
Initial list developed in Year 1  I. 1.) Identify civilian/ military personnel groups impacted and targeted pollution sources to address II. Resident Education III. Student (School Age) Education IV. Contractor Education V. Business Education	4.2.1.1.1; 4.2.1.1.2; 4.2.2.1.2	1	<b>Complete</b> - Identified groups and targeted pollution sources are: I. Military/Civilian Personnel - Solid Waste, Sediment and Spills; II. Residential - Fertilizers, Solid Waste, Pesticides, Spills, Household hazardous materials; III. Student (School Age) - Solid Waste; IV. Contractors - Solid Waste, Sediment, and Spills; and V. Businesses -Solid Waste and Spills. Target Audiences were identified in August 2009. Target Pollutant sources were identified in April 2010.	Audiences Aug-09  Pollutant Sources Apr-10
I. 2.) Identify and/or develop training materials for Pollution Prevention/Good Housekeeping, in accordance with BMP 6B	4.2.6.1.7	1-2	Planned for completion in second reporting cycle	
I. 3.) Conduct training for impacted personnel regarding storm water pollution prevention	4.2.1.1.3	1-5	Planned to begin in second reporting cycle	
I. 4.) Evaluate and revise educational materials as necessary to ensure compliance with MCM 6	4.2.6.1.7	1-5	Planned to begin in second reporting cycle	
II. 1.) Identify targeted pollutant sources (BMP 1A-1) to focus educational messages for residents	4.2.1.1.1	1-5	<b>Complete</b> - Targeted pollutant sources for residents are: fertilizers, solid waste, spills, household hazardous materials, and pesticides	9/11/2009
II. 2.) Identify and/or develop educational campaigns, brochures, and/or public workshops	4.2.1.1.3	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, participants, and message, etc. (See Attachment B - MS4 Outreach Activities). A listing of brochures and other materials available for distribution is also found in Attachment C - Publications List. In addition, a 5-year storm water education program has been developed for FLW for the following groups: Military/Civilian Personnel, Contractors, Residential, Businesses, and School Groups. See Attachment A for more details.	On-Going
II. 3.) Evaluate effectiveness of campaigns, potentially through resident surveys and participation levels at FLW sponsored storm water pollution prevention events	4.2.1.1.6	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, participants, and message, etc. (See Attachment B - MS4 Outreach Activities). A feedback form is in development and will be used at future events. The feedback form is scheduled to be completed by August 2010.	On-Going
III. 1.) Identify targeted pollutant sources to focus educational messages for students	4.2.1.1.1; 4.2.1.1.3	1-5	<b>Complete</b> - Targeted pollutant sources for students are solid waste	Apr-10
III. 2.) Develop and/or adapt existing classroom curriculum for storm water pollution prevention	4.2.1.1.3*	2-5	Planned to begin in second reporting cycle	

The Permit Section Compliance column identifies required elements of the permit

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TABLE 1  
Public Education and Outreach Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Measurable Goal Status	Completion Date
III. 3.) Potentially develop a rewards program for students and teachers that participate in public storm water pollution prevention activities around FLW	4.2.1.1.4*	2-3	Planned to begin in second reporting cycle	
III. 4.) Evaluate effectiveness of classroom education, potentially through testing and/or student participation levels in storm water pollution prevention activities	4.2.1.1.6	2-5	Planned to begin in second reporting cycle	
IV. 1.) Initial training/review to include erosion and sediment control requirements, impacts to water quality, BMPs, and inspection and enforcement procedures	4.2.1.1.3	1	<b>Complete</b> - Pre-construction meetings are now conducted for all site operators performing work on permitted sites which highlights the enforcement procedures at FLW, permit requirements, termination requirements, and provides an overview of the FLW SWPPP. In addition, a 5-year storm water education program has been developed for FLW for the following groups: Military/Civilian Personnel, Contractors, Residential, Businesses, and School Groups. See Attachment A for more details.	Jul-09
IV. 2.) Erosion and sediment control trainings will be conducted for all audiences as needed (ex. new projects or new personnel, refresher courses)	4.2.1.1.3	1-5	Pre-construction meetings are now conducted for all site operators performing work on permitted sites which highlights the enforcement procedures, permit requirements, termination requirements, and provides an overview of the FLW SWPPP. It is planned that additional materials relating to karst topography, losing/gaining streams, and FLW spill response procedures and contacts will be included in future pre-construction meetings as they are developed. In addition, a 5-year storm water education program has been developed for FLW for the following groups: Military/Civilian Personnel, Contractors, Residential, Businesses, and School Groups. See Attachment A for more details. It is a permit requirement that the permittee have a responsible person named in the site SWPPP and that records are kept by the permittee of training, inspections, or modifications to the SWPPP. These permitted sites are regularly inspected (weekly, bi-weekly, or monthly depending on the sites compliance status) to ensure they are in compliance and are properly maintaining records.	On-Going
IV. 3.) Develop procedure for public reporting of erosion and sediment problems	4.2.1.1.4; 4.2.4.1.3	2-3	Planned to begin in second reporting cycle	
IV. 4.) Annual review of inspection checklists, records, and enforcement action to determine effectiveness of training on specific audiences	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	

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Measurable Goals	Permit Section Compliance	Implement Permit Year	Measurable Goal Status	Completion Date
V. 1.) Identify businesses at FLW impacted for each Minimum Control Measure	4.2.1.1.2	1	<b>Complete</b> - Identified businesses for the Minimum Control Measures are: 1) Army and Air Force Exchange Service (AAFES): Post Exchange, Frame Shop, Furniture Sales, Class Six, and Clothing Sales; 2) Restaurants: Burger King, Church's Chicken, Starbucks, Taco Johns, Baskin Robbins, Blimpies, Seattle's Best, O'Charleys, Pizza Hut, and Manchu Wok; 3) Medical: General Leonard Wood Army Community Hospital, Dental, Optical, and Vet Clinic; 4) Other Services: Mid Missouri Credit Union, Army National Bank, Post Office, Truman Education Center, Laundry Services (2 Facilities), Thrift Shop, Sunrise Communications, Mail Box It, and Forney Airfield; 5) MWR Services: Gas Stations (2 facilities), Auto Crafts/Car Wash, Swimming Pools (2 facilities), Pine Valley Golf Course, Miniature Golf Course, Recycling Center, Horse Stables, Outdoor Adventure Center, Movie Theaters (2 facilities), and Bowling Center.	Apr-10
V. 2.) Develop and/or adapt educational campaigns, brochures, and/or public workshop series for Businesses regarding pollution prevention and storm water management	4.2.1.1.3*	1-5	Planned to begin in second reporting cycle	
V. 3.) Potentially develop a Green Partners program for businesses at FLW to encourage best management practices for storm water and other resource protection activities	4.2.1.1.4; 4.2.2.1.3- 4.2.2.1.4*	2-3	Planned to begin in second reporting cycle	
V. 4.) Conduct trainings and certification workshops for the Green Partners program, if program is implemented	4.2.1.1.4*	3-4	Planned to begin in third reporting cycle	
V. 5.) Evaluate effectiveness of business education through methods such as surveys, participation in FLW sponsored storm water pollution prevention events, and other methods not yet determined	4.2.1.1.6	1-5	Planned to begin in second reporting cycle	
<b>BMP 1B - Distribute Education Materials (SWMP 7.1.2, page 18)</b>				
1.) Complete survey of existing educational materials already developed by federal, state, and local organizations in relation to identified target pollutant sources and compile inventory list for distribution materials	4.2.1.1.5*	1	<b>Complete</b> - see Attachment C - Publications List. Survey of publications will be on-going and updated as new information becomes available.	Feb-10

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Public Education and Outreach Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Measurable Goal Status	Completion Date
2.) Determine the target audiences and best distribution route for each targeted pollution source's educational materials	4.2.1.1.5	1	<b>Complete</b> - Target audiences and distribution routes are: <b>School Age</b> - Flyers, Posters, Signage, and Website (wood.army.mil/dpwenv); <b>Residential</b> - Flyers, Posters, Signage, and Website (wood.army.mil/dpwenv); <b>Businesses</b> - Signage; <b>Military/Civilian Personnel</b> - Environmental Compliance Officer's (ECO) Training Course, Pre-Construction Review Meetings, Website (wood.army.mil/dpwenv), and Signage; <b>Contractors</b> - ECO Training Course, Pre-Construction Review Meetings, Website (wood.army.mil/dpwenv), and Signage.	Apr-10
3.) Distribute selected pollutant source reduction materials to target audiences through identified distribution methods	4.2.1.1.5	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, participants, and materials distributed, etc. (See Attachment B - MS4 Outreach Activities).	On-Going
<b>BMP 1C - Evaluate Success of Storm water Education (SWMP 7.1.3, page 19)</b>				
1.) Conduct post-educational event and/or campaign response mechanism (ex. survey) for each targeted audience intended	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	
2.) Monitor adherence to policies and procedure compliance (ex. pollution prevention/good housekeeping practices within the installation)	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	
3.) Track participation levels at FLW storm water related meetings, events, survey responses, etc to determine whether target audiences are being reached and responding	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	

**Note: The Public Education and Outreach MCM correlates to Sections B & F of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- AAFES - Army and Air Force Exchange Service
- BMP - Best Management Practice
- ECO - Environmental Compliance Officer
- FLW - Fort Leonard Wood
- MCM - Minimum Control Measure
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan
- SWPPP - Storm Water Pollution Prevention Plan

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TABLE 2  
Public Involvement/Participation Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 2A - Comply with Public Notice Requirements (SWMP 7.2.1, page 20)</b>				
1.) Issue public notices for all public meetings related to the SWMP	4.2.2.1	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, and how the event was advertised, etc. (See Attachment B - MS4 Outreach Activities). No public meetings held, to date.	On-going
2.) Notify targeted audiences through various distribution methods to increase participation for public meetings, storm water activities and events	4.2.2.1.2	1-5	For Earth Day, targeted audiences notified through websites, radio, marquees, newspaper, and Garrison Commander's opening remarks. No public meetings held, to date.	On-going
3.) Placement of SWMP in a location that has public access (ex: website, local library)	4.2.2.1*	1-5	In progress - SWMP will be placed on FLW's website and was available at the Earth Day event held 6/12/2010 along with comment cards for public feedback.	On-going
<b>BMP 2B - Solicit Public Input and Opinion on the SWMP (SWMP 7.2.2, page 20)</b>				
1.) Participation numbers from SWMP related meetings and events	4.2.2.1.5*	1-5	Five copies of the SWMP were provided for public review in a booth at the Earth Day event. A box for public comments was also provided; however, none were received. The booth also provided information on non-point source pollution and water quality.	On-going
2.) Results from surveys (if appropriate) for effectiveness of educational campaigns to targeted audiences	4.2.2.1.5*	1-5	Planned to begin in second reporting cycle.	
3.) Accessibility of SWMP information, including the use of FLW Website, newsletter articles, and events	4.2.2.1.2*	1-5	In progress - SWMP was available at the Earth Day event held 6/12/2010 along with comment cards for public feedback, MS4 fact sheets, and copies of the FLW permit. The SWMP is also available on the Environmental Division website ( <a href="http://www.wood.army.mil/dpwenv">http://www.wood.army.mil/dpwenv</a> ).	On-going
<b>BMP 2C - Identify and Establish Volunteer Opportunities for SWPP Activities (SWMP 7.2.3, page 21)</b>				
1.) Number of FLW supported opportunities identified and implemented for volunteers; such as community clean-ups, water quality monitoring, citizen watch groups, citizen panels, Missouri Stream Team formation, etc.	4.2.2.1.3 - 4.2.2.1.4	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, and participant numbers, etc. (See Attachment B - MS4 Outreach Activities). Four waterway cleanup events, one nature hike, one 5k walk/run, one teacher workshop, and one water quality monitoring class were held between 2009 and 2010.	On-going
2.) Number of volunteers participating in FLW supported Storm Water Pollution Prevention activities	4.2.2.1.5*	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, and participant numbers, etc. (See Attachment B - MS4 Outreach Activities). Five waterway cleanup events were held between April 2009 and April 2010 with approximately 272 people participating. One water quality monitoring class was held that had 18 participants.	On-going

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TABLE 2  
 Public Involvement/Participation Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 2D - Evaluate Success of Public Involvement/Participation Activities (SWMP 7.2.4, page 21)</b>				
1.) Track participation levels at FLW storm water related meetings, events, etc., to determine whether target audiences are being reached and responding	4.2.2.1.5*	1-5	In progress - A system is in place to track participation numbers at storm-water related meetings and events and community outreach events.	On-going

**Note: The Public Involvement/Participation MCM correlates to Section B of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- FLW - Fort Leonard Wood
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan

TABLE 3  
 Illicit Discharge Detection and Elimination Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 3A - Storm Sewer System Map (SWMP 7.3.1, page 23)</b>				
1.) Complete storm sewer system inventory and inspection map.	4.2.3.1.1*	1	<b>Complete</b>	6/10/2010
2.) Establish process (i.e., Illicit Discharge Detection and Elimination Plan) to locate and map known outfalls	4.2.3.1.1*	1	<b>Complete</b> <ul style="list-style-type: none"> <li>• The existing process for mapping outfalls at FLW will be used. GIS specialists are employed by the Engineering Design Branch to keep utility data current.</li> <li>• GIS database, aerial photographs, and installation maps and records will be reviewed to identify known or potential outfalls. Reservoir pipes will be included as outfall locations. Mapping of boundary outfalls and outlets is complete.</li> </ul>	
3.) Establish process to locate and map known ponds and structural pollution control devices	4.2.3.1.1*	1	<b>Complete</b> <ul style="list-style-type: none"> <li>• The existing process for mapping ponds and structural pollution control devices at FLW will be used.</li> <li>• Speak with senior facility members regarding institutional knowledge of known locations of ponds and structural pollution control devices.</li> <li>• GIS database aerial photographs, and installation maps and records will be reviewed to identify known or potential locations.</li> </ul>	
4.) Establish and document a protocol for screenings, training for inspectors, and procedures for further investigation of illicit discharges such as monitoring, clean up, and enforcement	4.2.3.1.1*	1	<b>Complete</b> <ul style="list-style-type: none"> <li>• Visual screening will be prioritized on problem areas as identified by smoke testing results, historical information, and public complaints.</li> <li>• Visual screenings will be documented through photographs of discharge along with written documentation regarding odor, appearance, and vegetation observations. GPS coordinates will be taken for the discharge site and added to a GIS database.</li> <li>• Inspectors will be trained on how to identify a potential illicit discharge and how to document the discharge.</li> <li>• Procedures for further investigation will involve the following: water sampling (if necessary); visual screening and/or sampling of known problem areas as staffing time allows or on a continual basis; continued smoke or dye testing; data review of land/building use, outfall locations, and smoke or dye testing results; and follow-up/periodic site visits to ensure discharge has been eliminated.</li> <li>• A complete list of illicit connection tests will be maintained along with a GIS database of discharge sites.</li> </ul>	
5.) Conduct training for appropriate personnel for locating structural pollution control devices, outfalls, and other system parameters	4.2.3.1.1*	2	Planned to begin in second reporting cycle	

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TABLE 3  
 Illicit Discharge Detection and Elimination Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
6.) Visual screening at all outfalls over the life of the permit, with minimum of 25% of total area under MS4 screened annually to meet 100% screening requirement by end of 5-year permit cycle	4.2.3.1.1*	2-5	Planned to begin in second reporting cycle	
7.) Update storm sewer system map	4.2.3.1.1*	2-5	Planned to begin in second reporting cycle	
<b>BMP 3B - Regulatory Control and Enforcement Program (SWMP 7.3.2, page 24)</b>				
1.) Creation of illicit discharge reporting procedure (ex. contact flow chart)	4.2.3.1.2*	1	<b>Complete</b> - Identification and Reporting process was outlined in the SWMP and the Spill Prevention and Response Plan. See Attachment D for more details. Flow charts were also created outlining the reporting procedure for two scenarios: non-hazardous discharges and discharges involving oil, hazardous waste, or hazardous substances (See Figures 1 and 2). Reports of illicit discharges can be initiated telephonically, on the Environmental Division website ( <a href="http://www.wood.army.mil/dpwenv">http://www.wood.army.mil/dpwenv</a> ) . A reporting form showing needed information can also be found at the web address.	Aug-07
2.) Identification and reporting process established for enforcement actions	4.2.3.1.2*	1	<b>Complete</b> - As outlined in the SWMP, a four-level Continuum of Enforcement consisting of a Verbal Warning, a Letter of Warning, a Notice of Non-Compliance, and Regulatory Notification will be used. See Attachment E - SWMP BMP #3B for greater detail regarding each level in the Continuum of Enforcement for storm water quality.	9/11/2009
3.) Implementation of illicit discharge reporting procedure	4.2.3.1.2*	1-5	Planned to begin in second reporting cycle	
<b>BMP 3C - Illicit Discharge Detection and Elimination Plan (SWMP 7.3.3, page 26)</b>				
1.) Complete list of existing information on illicit connection tests performed to date	4.2.3.1.3*	1	The FLW Directorate of Public Works (DPW) has been responsible for the installation infrastructure since its inception and the work process, which DPW is responsible for reviewing and executing, has been in place for decades. FLW is currently developing a Scope of Work to conduct smoke testing of the sanitary sewer system. The results of this testing should reveal illicit storm water connections to the sanitary sewer system and also reveal possible leaks/breaks in the sanitary collection system.	In Progress
2.) Maintain records of illicit discharges identified, enforcement, and corrective actions	4.2.3.1.3*	1-5	Spreadsheet under development.	In Progress

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TABLE 3  
 Illicit Discharge Detection and Elimination Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
3.) Development of a reporting procedure (ex. contacts flow chart) and continuum of enforcement	4.2.3.1.3*	1	<b>Complete</b> - The Continuum of Enforcement is outlined in Section 7.3.2 - BMP #3B of the SWMP (Attachment E). The MS4 Program Manager will ensure the appropriate enforcement action is taken in accordance with the SWMP. The proponent for each of the established enforcement actions is established in the SWMP and is as follows: Verbal Warning - Chief, Energy, Environment, and Natural Resources Division; Letter of Warning - Director of Public Works; Notice of Non-Compliance - Deputy Garrison Commander; and Regulatory Notification - Appropriate Regulatory Agency. A flow chart was also created outlining the reporting procedure for the continuum of enforcement (see Figure 3).	9/11/2009
4.) Trainings for staff/targeted audiences for illicit discharge detection	4.2.3.1.3.1 - 4.2.3.1.3.5	2-3	Planned to begin in second reporting cycle	
5.) Conduct field tests for illicit discharge and connections for existing storm system	4.2.3.1.3*	2-3	Planned to begin in second reporting cycle	
6.) Maintain records of illicit discharges identified, enforcement and corrective actions.	4.2.3.1.3*	1-5	Planned to begin in second reporting cycle	
<b>BMP 3D - Identification of Non-storm Water Discharges and Flows (SWMP 7.3.4, page 27)</b>				
1.) Conduct investigation and evaluation of non-storm water discharges and flows	4.2.3.1.4- 4.2.3.1.6	1-2	Planned to begin in second reporting cycle	
2.) Develop a standard operating procedure to address the impact any non-storm water discharges or flows identified as significant contributors of pollutants to the system	4.2.3.1.4- 4.2.3.1.6	1-2	Planned to begin in second reporting cycle	
3.) Implement the standard operating procedure for significant non-storm water discharges and flows	4.2.3.1.4- 4.2.3.1.6	3-5	Planned to begin in third reporting cycle	

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TABLE 3  
 Illicit Discharge Detection and Elimination Minimum Control Measure  
 MS4 Annual Report  
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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 3E - Evaluate the Illicit Discharge Detection and Elimination Program (SWMP 7.3.5, page 27)</b>				
1.) Monitor completion of measurable goals outlined in BMP #'s 3A-3D	4.2.3.1.3.6	1-5	BMP #3A - a storm sewer system inventory and inspection has been completed; BMP #3B - an illicit discharge reporting procedure has been developed (see Figures 1 and 2) and an identification and reporting process has been established for enforcement actions [see Attachment E]; BMP #3C - a Continuum of Enforcement flowchart has been developed (see Figure 3); and BMP #3D - planned to begin in second reporting cycle	BMP #3A - 6/10/10 BMP #3B - Aug-07 BMP #3C - 9/11/09 BMP #3D - on-going
2.) Decrease in the number of illicit discharges into the installation's storm water system	4.2.3.1.3.6*	1-5	On-going effort. There has been no smoke testing to date so there is no data regarding decreases in the number of illicit discharges; however, two illicit discharges were found by contractors in January 2010 and were corrected by the base maintenance contractor. The FLW DPW has been responsible for the installation infrastructure since its inception and the work process, which DPW is responsible for reviewing and executing, has been in place for decades. FLW is currently developing a Scope of Work to conduct smoke testing of the sanitary sewer system. The results of this testing should reveal illicit storm water connections to the sanitary sewer system and also reveal possible leaks/breaks in the sanitary collection system.	On-going

**Note: The Illicit Discharge Detection and Elimination MCM correlates to Section D of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

Orange shading indicates goal that was scheduled for completion this reporting cycle but not completed

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- DPW - Directorate of Public Works
- FLW - Fort Leonard Wood
- GIS - Geographic Information System
- GPS - Global Positioning System
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan

TABLE 4  
Construction Site Storm Water Runoff Control Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 4A - Regulatory Mechanism and Enforcement Procedures (SWMP 7.4.1, page 28)</b>				
1.) Complete evaluation of existing SWPPP in relation to the six minimum control measures.	4.2.4.1.1*	2	Planned for completion in second reporting cycle	
2.) Amend SWPPP, if necessary, to comply with MS4 permit conditions	4.2.4.1.1*	2-3	Planned to begin in second reporting cycle	
3.) Implement administrative procedures/policies regarding the SWPPP, document inspections and enforcement procedures	4.2.4.1.1.1 - 4.2.4.1.1.3	2-5	Planned to begin in second reporting cycle	
<b>BMP 4B - Construction Site Implementation of Erosion and Sediment Control BMPs (SWMP 7.4.2, page 31)</b>				
1.) Create a tracking system (ex. database) that maintains records of all construction site operators' approved permits and BMPs implemented onsite	4.2.4.1.6*	1	<p><b>Complete</b> - Two electronic databases have been implemented for tracking land disturbance activities at FLW. The first database maintains a record of construction site operators' approved permits. Within this database is all critical information such as permit number, project location, and project POC.</p> <p>The second electronic database tracks the compliance status of each permit and stage of enforcement being taken. This tracking system includes results of inspections, which includes adherence to BMPs and legal requirements.</p> <p>From July 2009 to June 2010 there were 22 permits submitted, with 19 approved and three pending approval.</p>	May-10
2.) Complete site plan reviews to ensure compliance with SWPPP	4.2.4.1.3	1-5	On-going. All submitted work plans are reviewed by DPW Environmental Branch to ensure compliance with the SWPPP.	On-going
3.) Maintain records of on-going site inspections and enforcement actions for sediment and erosion control practices implemented onsite	4.2.4.1.5*	1-5	<p>On-going. Records of site inspections and inspection reports are maintained in electronic and hardcopy formats. Compliance issues noted during inspections are recorded on the inspection report and compliance tracking database.</p> <p>There were 731 inspections performed between July 2009 and June 2010.</p> <p>There were three enforcement actions identified between July 2009 and June 2010. The three enforcement actions consisted of a warning letter from the DPW Environmental Branch Chief. The warning letters were issued due to an untimely response in addressing deficiencies observed during inspections for non-conformances with BMPs (i.e., silt fencing, ground cover).</p>	On-going

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TABLE 4  
 Construction Site Storm Water Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 4C - Waste Controls for Construction Site Operators (SWMP 7.4.3, page 31)</b>				
1.) Maintain records of all construction site operator's approved permits and BMPs	4.2.4.1.7*	1-5	On-going. Records of permits, permit applications, and SWPPPs (identifying BMPs to be implemented) are maintained at the DPW Environmental Office.	On-going
2.) Evaluate existing SWPPP in relation to the six minimum control measures and make necessary amendments for compliance with increased construction waste controls, if appropriate	4.2.4.1.2*	1-2	The SWPPP has been evaluated, however, it has not yet been revised. Planned for completion in second reporting cycle.	
3.) Inspect projects on FLW for construction waste control BMPs on a routinely scheduled basis, potentially integrated with erosion and sediment control inspection process	4.2.4.1.2*	2-5	Planned to begin in second reporting cycle	
<b>BMP 4D -Procedure for Site Plan Reviews (SWMP 7.4.4, page 32)</b>				
1.) Continue site reviews for projects >1 acre of land disturbance	4.2.4.1.3	1-5	On-going. All projects >1 acre of land disturbance are reviewed. Between July 2009 and June 2010 there were 46 construction sites > 1 acre that required land disturbance permits and were inspected while the land disturbance permit was active.	On-going
2.)Review of current site review process and identification of policy changes, if needed	4.2.4.1.3	1-2	Planned for completion in second reporting cycle	
3.) If determined appropriate, develop storm water project submittal checklist for storm water management and compliance with MS4 permit conditions for use during site review	4.2.4.1.3	2-3	Planned to begin in second reporting cycle	
<b>BMP 4E - Establishment of Procedures for Receipt and Consideration of Noncompliance (SWMP 7.4.5, page 33)</b>				
1.) Create a SWPPP report mechanism (ex: phone line, webpage form) for public to report construction site complaints.	4.2.4.1.4	1	Not yet complete. Alternatives are being evaluated. The installation does have a system for public comments and it is still being determined if this system is appropriate for FLW.	In progress
2.) Create policy and procedures to track complaint reports from all installation construction site SWPPP non-compliance	4.2.4.1.4*	1-2	Planned for completion in second reporting cycle	
3.) Create procedures to track information from construction site inspections and enforcement actions	4.2.4.1.7*	1-2	<b>Complete</b> - A procedure has been developed to utilize a standardized checklist when inspecting permitted land-disturbance sites. Inspection reports are generated for each site, and compliance information is added to the tracking database. Copies of site inspection checklists and inspection reports are retained for future reference.	Jun-10

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\*This is a proposed tool to assist with compliance with permit requirements

TABLE 4  
 Construction Site Storm Water Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
4.) Maintain records for all inspections and enforcement actions for sediment and erosion control practices	4.2.4.1.6*	1-5	On-going. Records of site inspections and inspection reports are maintained in electronic and hardcopy formats. Compliance issues noted during inspections are recorded on the inspection report and compliance tracking database. There were 731 inspections performed between June 2009 and June 2010.	On-going
<b>BMP 4F - Establishment of Procedures for Site Inspection and Enforcement (SWMP 7.4.6, page 33)</b>				
1.) Maintain copies of all construction site operator's permits and BMPs within the installation	4.2.4.1.6*	1-5	On-going. Records of permits, permit applications, and SWPPPs (identifying BMPs to be implemented) are maintained at the DPW Environmental Branch.	On-going
2.) Develop tracking mechanism (ex. database) for inspection and enforcement action records	4.2.4.1.6*	1-2	<b>Complete</b> - An electronic database has been developed which tracks new and repeated non-conformances identified at permitted sites along with the status of enforcement action, if any, that has been taken for each site.	May-10
3.) Ensure inspectors for runoff control SWPPP and BMP evaluations have appropriate training	4.2.4.1.6*	1-5	Planned to begin in second reporting cycle	
4.) Development of administrative procedure for internal review, enforcement mechanisms and sanctions	4.2.4.1.6*	1-3	Planned for completion in Year 2 (Spring 2011)	
<b>BMP 4G - Evaluate the Success of Construction Site Storm Water Runoff Control (SWMP 7.4.7, page 34)</b>				
1.) Adherence to the SWPPP at each construction site, which is tracked through the inspection and enforcement reporting procedures	4.2.4.1.7*	1-5	On-going. Records of site inspections and inspection reports are maintained in electronic and hardcopy formats. Compliance issues noted during inspections are recorded on the inspection report and compliance tracking database. In addition, it is a permit requirement that the permittee have a responsible person named in the site SWPPP and that records are kept by the permittee of training, inspections, or modifications to the SWPPP. These permitted sites are regularly inspected (weekly, bi-weekly, or monthly depending on the sites compliance status) to ensure they are in compliance and are maintaining records.	On-going

**Note: The Construction Site Storm Water Runoff Control MCM correlates to Sections C & F of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

Orange shading indicates goal that was scheduled for completion this reporting cycle but not completed

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

BMP - Best Management Practice

DPW - Directorate of Public Works

FLW - Fort Leonard Wood

MDNR - Missouri Department of Natural Resources

MS4 - Municipal Separate Storm Sewer System

POC - Point of Contact

SWMP - Storm Water Management Plan

SWPP - Storm Water Pollution Prevention Plan

The Permit Section Compliance column identifies required elements of the permit

\*This is a proposed tool to assist with compliance with permit requirements

TABLE 5  
 Post-Construction Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 5A - Regulatory Mechanism for Addressing Post-Construction Runoff (SWMP 7.5.1, page 35)</b>				
1.) Develop command policy statement addressing post construction control requirements	4.2.5.1 - 4.2.5.1.2	2	<b>Complete</b> - Garrison Command Policy No. 200-1, Fort Leonard Wood Environmental Management Strategy. See Attachment F for more details about this policy.	6/9/2009
2.) Review existing mechanisms for inspection and enforcement of post construction controls	4.2.5.1 - 4.2.5.1.2	1-2	Planned for completion in second reporting cycle	
3.) Implement inspection and enforcement policy addressing post construction controls	4.2.5.1 - 4.2.5.1.2	2-4	Planned to begin in second reporting cycle	
4.) Train personnel/contractors on policies and procedure related to post construction controls	4.2.5.1 - 4.2.5.1.2*	2-4	Planned to begin in second reporting cycle	
<b>BMP 5B - Development and Implementation of Structural and/or Nonstructural BMPs (SWMP 7.5.2, page 38)</b>				
1.) Review and evaluate structural and non-structural BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
2.) Develop/Identify standard specifications for selected structural BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
3.) Develop/Identify standard specifications for selected non-structural BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
4.) Ensure adequate training for impacted audiences (See 1A) on long-term BMP site planning, design, and implementation/construction	4.2.5.1.4* - 4.2.5.1.6.2*	2-3	Planned to begin in second reporting cycle	
5.) Incorporate post-construction structural and non-structural BMP requirements into site planning and review process	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
6.) Develop inspection and operations and maintenance programs for long-term site BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	2	Planned for completion in second reporting cycle	
7.) Implement inspection and operations and maintenance programs for long-term site BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	3-5	Planned to begin in third reporting cycle	
<b>BMP 5C - Long-term Operation and Maintenance of BMPs (SWMP 7.5.3, page 40)</b>				
1.) Evaluate existing FLW SWPPP and make revisions as necessary to provide for long-term operation and maintenance of BMPs and compliance with the FLW command policy statement for post-construction controls	4.2.5.1.3	1	<b>Complete</b> - Completed a review of the FLW SWPPP evaluating it against the permit requirements of the Land Disturbance Permit, the MS4 Permit, minimum control measures in the SWMP, and the Industrial Permit (SIC code 9711). The review and evaluation included recommendations for changes to the SWPPP.	Apr-10
2.) Develop tracking mechanism (ex. database) for all implemented long-term structural and nonstructural BMPs, and inspection and enforcement actions on the installation	4.2.5.1.3	1-2	Planned for completion in second reporting cycle	
3.) Develop and implement program for inspection and maintenance of long-term control BMPs	4.2.5.1.3	2-5	Planned to begin in second reporting cycle	

The Permit Section Compliance column identifies required elements of the permit  
 \*This is a proposed tool to assist with compliance with permit requirements

TABLE 5  
 Post-Construction Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 5D - Evaluate the Success of Post-Construction Runoff Controls (SWMP 7.5.4, page 40)</b>				
1.) Adherence to the Post Construction Runoff Control Regulatory Mechanisms established and implemented on the installation (identified in BMP 5A)	4.2.5.1.7	1-5	Planned to begin in second reporting cycle	
2.) Successful long-term operation and maintenance of structural and nonstructural BMPs, as identified in BMPs 5B and 5C	4.2.5.1.7	1-5	Planned to begin in second reporting cycle	

**Note: The Post-Construction Runoff Control MCM correlates to Section F of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

Orange shading indicates goal that was scheduled for completion this reporting cycle but not completed

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- FLW - Fort Leonard Wood
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SIC - Standard Industrial Classification
- SWMP - Storm water Management Plan
- SWPPP - Storm water Pollution Prevention Plan

TABLE 6  
Pollution Prevention/Good Housekeeping Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 6A - Municipal Operations and Maintenance Program (SWMP 7.6.1, page 41)</b>				
1.) Review existing Pollution Prevention/Good Housekeeping policies on FLW and identify opportunities for incorporating storm water pollution prevention practices	4.2.6.1.1*	1	<b>Complete</b> - Completed a review of the FLW SWPPP evaluating it against the permit requirements of the Land Disturbance Permit, the MS4 Permit, minimum control measures in the SWMP, and the Industrial Permit (SIC code 9711). The review and evaluation included recommendations to create additional SWPPPs or develop Pollution Prevention and Good Housekeeping Guidance document for specific activities at FLW. In addition, the FLW Environmental Management Strategy, Garrison Command Policy #200-1 was signed by the Garrison Commander on June 9, 2009. See Attachment F for more details on Garrison Command Policy #200-1.	Apr-10
2.) Identify and create inventory of municipal operations and industrial facilities impacted by the operation and maintenance program BMP	4.2.6.1.1	1	<b>Complete</b> - An Environmental Management System (EMS) was developed for FLW. The EMS is the part of the Installation's overall management system that integrates environmental concerns and issues in the organization's management processes. The EMS addresses organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining environmental policy.  In developing the Installation's EMS, all operational activities on the Installation were reviewed to determine the risk of each for adverse environmental impacts, including impacts to water quality. A listing of the aspects and impact of those activities determined to have an associated environmental risk was then developed and incorporated into the EMS. An extract of those activities having a potential risk to water quality is included in this report as Attachment G.	Dec-09
3.) Develop and implement controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, fleet or maintenance shops and other operational areas operated by FLW	4.2.6.1.2 - 4.2.6.1.4	2-3	Planned to begin in second reporting cycle	
4.) Develop and implement procedure for treatment and/or proper disposal of waste removed from the storm sewer system	4.2.6.1.5	2-4	Planned to begin in second reporting cycle	

The Permit Section Compliance column identifies required elements of the permit  
\*This is a proposed tool to assist with compliance with permit requirements

TABLE 6  
Pollution Prevention/Good Housekeeping Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
5.) Develop and implement procedures to ensure that new and existing flood management projects are assessed for impacts on water quality or incorporation of water quality protection practices	4.2.6.1.6	2	Planned for completion in second reporting cycle	
6.) Continue compliance with FLW Spill Prevention and Response Plan	4.2.6.1.1*	1-5	Planned to begin in second reporting cycle	
<b>BMP 6B - Pollution Prevention/Good Housekeeping Training Program (SWMP 7.6.2, page 42)</b>				
1.) Identify existing and available pollution prevention/good housekeeping materials from federal, state, and local sources	4.2.6.1.1*	1	<b>Complete</b> - See Attachment C (Publications List) for a listing of brochures and other materials available for distribution. Survey of publications will be on-going and updated as new information becomes available.	Feb-10
2.) Identify distribution methods to each targeted audiences (ex: workshops, posters, etc.)	4.2.6.1.*	1-2	Planned for completion in second reporting cycle	
3.) Conduct trainings for pollution prevention/good housekeeping practices	4.2.6.1.7	2-5	Planned to begin in second reporting cycle	
4.) Evaluate impact of trainings for pollution prevention/good housekeeping practices	4.2.6.1.7*	2-5	Planned to begin in second reporting cycle	
5.) Evaluate and revise educational materials as necessary to ensure target audiences are informed and complying with pollution prevention/good housekeeping practices	4.2.6.1.7*	2-5	Planned to begin in second reporting cycle	
<b>BMP 6C - Evaluate the Success of Pollution Prevention/Good Housekeeping (SWMP 7.6.3, page 42)</b>				
1.) Adherence to the Municipal Operations and Maintenance Program established and implemented on the installation, identified in BMP #6A	4.2.6.1.8*	1-5	Planned to begin in second reporting cycle	
2.) Trainings held and number of attendees for the Pollution Prevention/Good Housekeeping Training Program, identified in BMP #6B	4.2.6.1.8*	1-5	Planned to begin in second reporting cycle	

**Note: The Pollution Prevention/Good Housekeeping MCM correlates to Section E of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

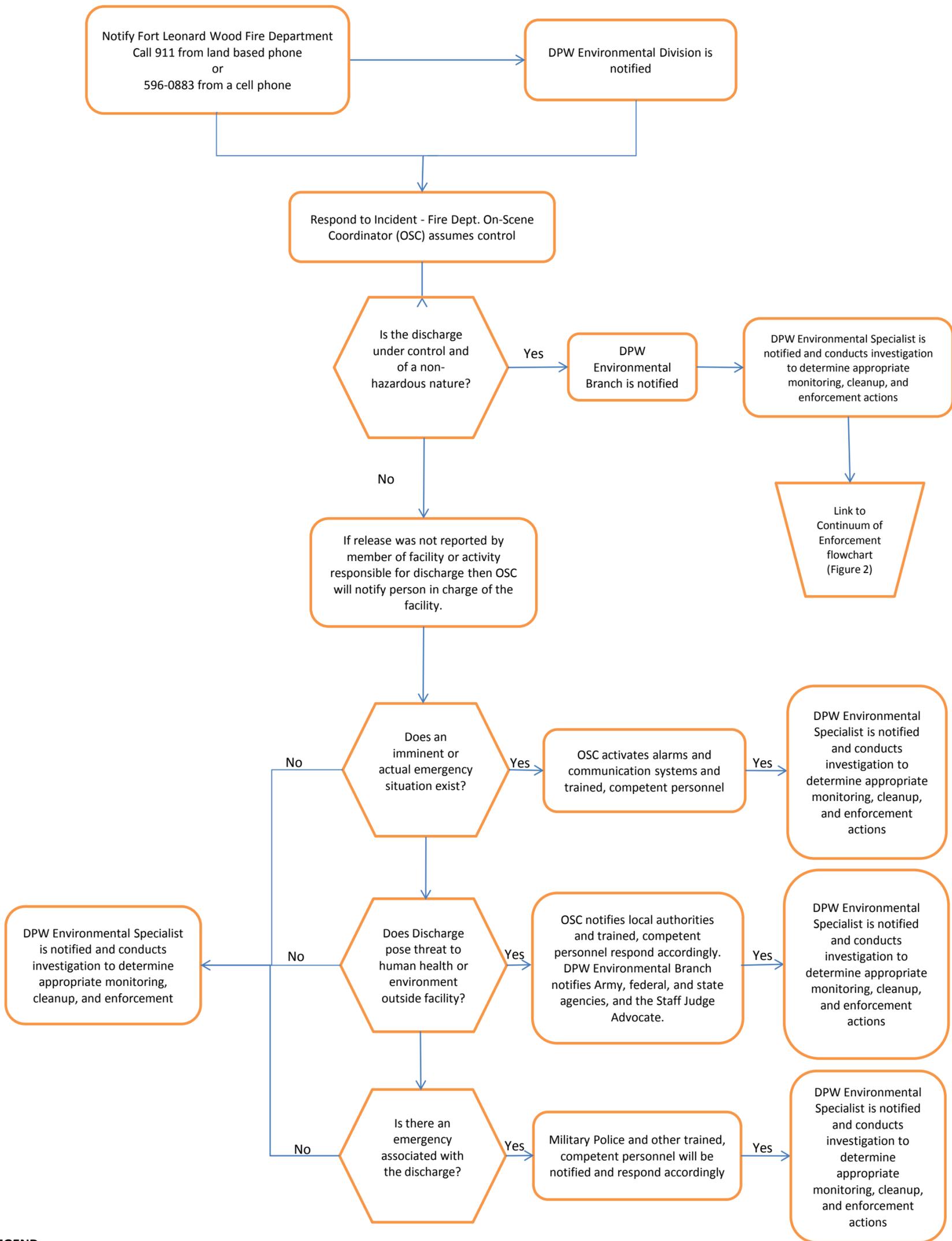
No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- EMS - Environmental Management System
- FLW - Fort Leonard Wood
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SIC - Standard Industrial Classification
- SWMP - Storm water Management Plan
- SWPPP - Storm water Pollution Prevention Plan

## Figures

Figure 1  
 FLW Discharge Reporting Procedure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

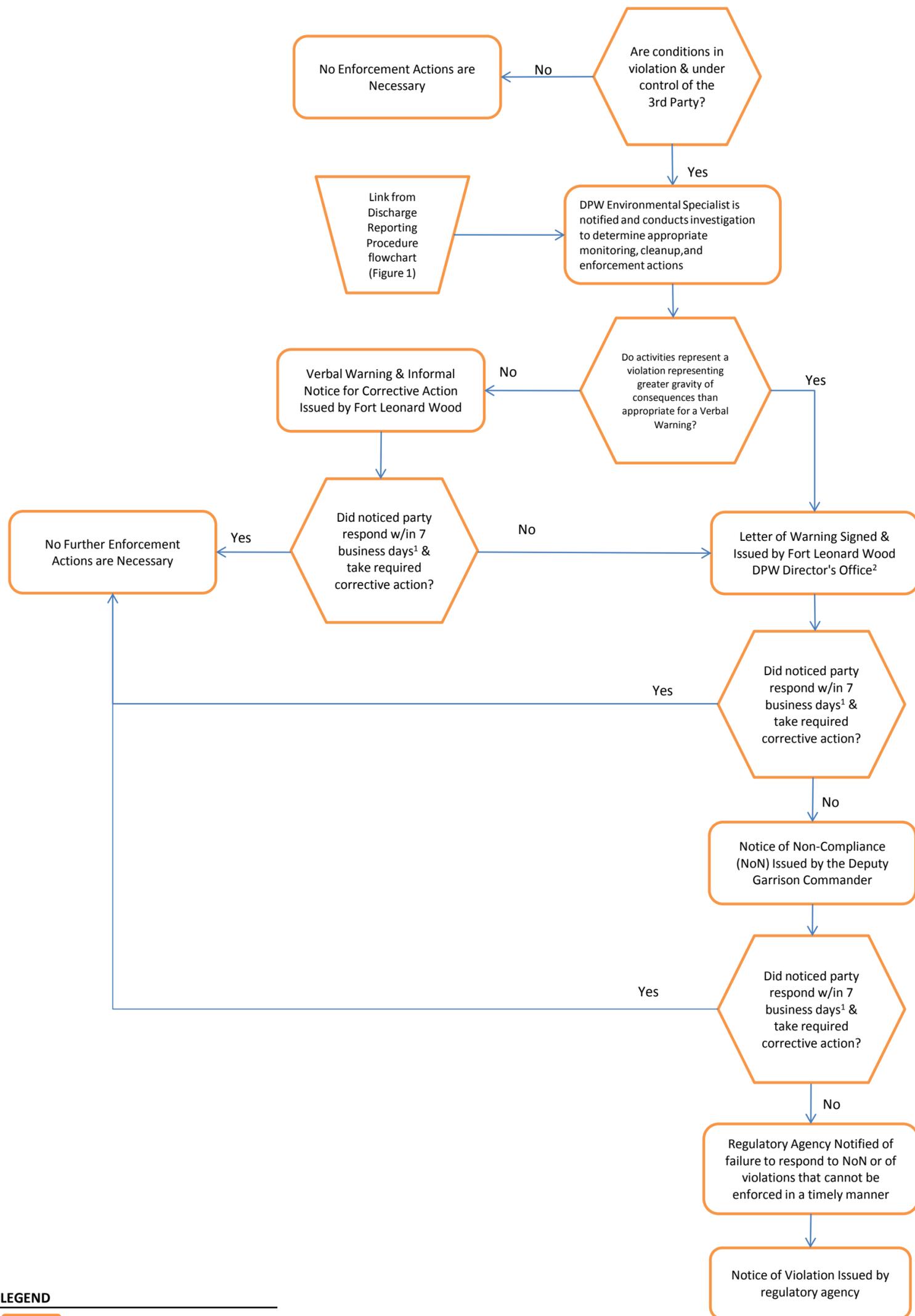


**LEGEND**

 Rectangles denote action items

 Hexagons denote decision points

Figure 2  
 FLW Continuum of Enforcement  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood



**LEGEND**

- Rectangles denote action items
- Hexagons denote decision points

**NOTES**

- <sup>1</sup> - Standard federal government business work days Monday through Friday. Weekends and the 10 federal holidays are not considered business days.
- <sup>2</sup> - Repeated offenses or a pattern of poor compliance can also lead to bypassing the first, informal notice level (Verbal Warning) and moving the issue straight into the second level (Letter of Warning), if the pattern is deemed to be a possible indicator of bad faith or demonstrate an unwilling or defiant approach to inspection, regulation, and compliance.
- <sup>3</sup> - Refer to BMP #3B of the Storm Water Management Plan for more detailed actions to be taken for the different entities operating at FLW (government tenants, government contractors/concessionaires, and privatized entities).

## Attachments

## Attachment A

Fort Leonard Wood Environmental Division 5-Year Storm Water  
Education Program

## Attachment A-1

Fort Leonard Wood Environmental Division 5-Year Storm Water  
Education Program for Military and Civilian Personnel

Attachment A-1:  
Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program for Military and Civilian Personnel

Military/Civilian Storm Water Education Program - Activity	Target Pollutant Sources	Distribution Materials/Methods	Year 1 - (June 2009 - May 2010)				Year 2 - (June 2010 - May 2011)				Year 3 - (June 2011 - May 2012)				Year 4 - (June 2012 - May 2013)				Year 5 - (June 2013 - May 2014)			
			Q1	Q2	Q3	Q4																
<b>Task 1:</b> Environmental Compliance Officer's Training Course	Spills, Sediment and Erosion, Solid Waste	Feedback Form	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Task 2:</b> Preconstruction Review Meetings	Spills, Sediment and Erosion, Solid Waste		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Task 3:</b> Annual Newsletter #1	Solid Waste	Newsletter/email	Planning and Development						X												X	
<b>Task 4:</b> Annual Newsletter #2	Spills	Newsletter/email	Planning and Development										X									
<b>Task 5:</b> Annual Newsletter #3	Sediment and Erosion Control	Newsletter/email	Planning and Development														X					
<b>Task 6:</b> MS4 Website for Military/Civilian	Spills, Erosion Control, and Solid Waste	Brochures, information and forms, website	Planning and Development									X										
<b>Task 7:</b> FLW Area Cleanups	Solid Waste	Newsletter/email				X				X				X				X				X

X - Indicates activity is implemented

\* All tasks are contingent upon funding, staffing, and coordination

## Attachment A-2

Fort Leonard Wood Environmental Division 5-Year Storm Water  
Education Program for Contractors

Attachment A-2:  
Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program for Contractors

Contractor Storm Water Education Program - Activity	Target Pollutant Sources	Distribution Materials/Methods	Year 1 - (June 2009 - May 2010)				Year 2 - (June 2010 - May 2011)				Year 3 - (June 2011 - May 2012)				Year 4 - (June 2012 - May 2013)				Year 5 - (June 2013 - May 2014)			
			Q1	Q2	Q3	Q4																
<b>Task 1:</b> Environmental Compliance Officer's Training Course	Spills, Sediment and Erosion, Solid Waste	Feedback Form	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Task 2:</b> Preconstruction Review Meetings	Spills, Sediment and Erosion, Solid Waste		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Task 3:</b> MS4 Website for Contractors	Spills, Erosion Control, and Solid Waste	Brochures, information and forms, website	<b>Planning and Development</b>								X	X	X	X	X	X	X	X	X	X	X	X

X - Indicates activity is implemented

\* All tasks are contingent upon funding, staffing, and coordination

## Attachment A-3

Fort Leonard Wood Environmental Division 5-Year Storm Water  
Education Program for Businesses

Attachment A-3:  
Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program for Businesses

Business Storm Water Education Program - Activity	Target Pollutant Sources	Distribution Materials/Methods	Year 1 - (June 2009 - May 2010)				Year 2 - (June 2010 - May 2011)				Year 3 - (June 2011 - May 2012)				Year 4 - (June 2012 - May 2013)				Year 5 - (June 2013 - May 2014)			
			Q1	Q2	Q3	Q4																
Task 1: Annual Newsletter #1	Solid Waste	Newsletter/email	Planning and Development					X								X						
Task 2: Annual Newsletter #2	Spills	Newsletter/email	Planning and Development								X										X	
Task 3: MS4 Website	Spills and Solid Waste	Brochures, information and forms, website	Planning and Development								X	X	X	X	X	X	X	X	X	X	X	X
Task 4: Volunteer Water Quality Monitoring Class	Solid Waste, Erosion and Sediment Control, Spills, Pesticides, Water Quality	Classroom Instruction with interactive activities, handbooks, brochures				X				X				X				X				X

X - Indicates activity is implemented

\* All tasks are contingent upon funding, staffing, and coordination

## Attachment A-4

Fort Leonard Wood Environmental Division 5-Year Storm Water  
Education Program for Residents

Attachment A-4:  
Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program for Residents

Residents Storm Water Education Program - Activity	Target Pollutant Sources	Distribution Materials/Methods	Year 1 - (June 2009 - May 2010)				Year 2 - (June 2010 - May 2011)				Year 3 - (June 2011 - May 2012)				Year 4 - (June 2012 - May 2013)				Year 5 - (June 2013 - May 2014)			
			Q1	Q2	Q3	Q4																
<b>Task 1:</b> Annual Newsletter #1	Solid Waste	Newsletter/email	Planning and Development					X								X						
<b>Task 2:</b> Annual Newsletter #2	Spills	Newsletter/email	Planning and Development								X										X	
<b>Task 3:</b> MS4 Website	Spills and Solid Waste	Brochures, information and forms, website	Planning and Development								X	X	X	X	X	X	X	X	X	X	X	X
<b>Task 4:</b> <i>Keep It Green!</i> Workshop Series - Healthy Lawns	Pesticides, Fertilizers, Solid Waste	Brochures, Interactive Activities	Planning and Development							X												
<b>Task 5:</b> <i>Keep It Green!</i> Workshop Series - Greening the Holidays	Solid Waste	Brochures, Interactive Activities	Planning and Development								X											
<b>Task 6:</b> <i>Keep It Green!</i> Workshop Series - Green Cleaning Workshop	Solid Waste, Pesticides, Fertilizers, Household Hazardous Materials	Brochures, Interactive Activities			X					X												
<b>Task 7:</b> Earth Day Celebration Week	Solid Waste, Spills, Erosion and Sediment Control	Exhibits, Kids Activities, Brochures,				X	X		X				X			X					X	
<b>Task 8:</b> FLW Area Cleanups	Solid Waste	Newsletter/email				X			X				X				X				X	
<b>Task 9:</b> Volunteer Water Quality Monitoring Class	Solid Waste, Erosion and Sediment Control, Spills, Pesticides, Water Quality	Classroom Instruction with interactive activities, handbooks, brochures				X			X				X				X					X
<b>Task 10:</b> Newcomer's Briefing	Solid Waste	FLW Recycling Brochure, FLW Recycling Center Magnets, Pollution Prevention Informational Brochures	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X - Indicates activity is implemented

\* All tasks are contingent upon funding, staffing, and coordination

## Attachment A-5

Fort Leonard Wood Environmental Division 5-Year Storm Water  
Education Program for Student Groups

Attachment A-5:  
Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program for Student Groups

Student Groups Storm Water Education Program - Activity	Target Pollutant Sources	Distribution Materials/Methods	Year 1 - (June 2009 - May 2010)				Year 2 - (June 2010 - May 2011)				Year 3 - (June 2011 - May 2012)				Year 4 - (June 2012 - May 2013)				Year 5 - (June 2013 - May 2014)			
			Q1	Q2	Q3	Q4																
<b>Task 1:</b> MS4 Website	Spills and Solid Waste	Brochures, information and forms, website	<b>Planning and Development</b>								X	X	X	X	X	X	X	X	X	X	X	X
<b>Task 2:</b> Earth Day Festivals	Solid Waste, Spills, Erosion and Sediment Control	Exhibits, Kids Activities, Brochures,				X			X				X			X				X		
<b>Task 3:</b> Waynesville Stormwater Education Program	Solid Waste, Erosion and Sediment Control	Exhibits, Interactive Activities, Brochures	<b>Planning and Development</b>				X				X			X					X			
<b>Task 4:</b> School Recycling Program	Solid Waste	Interactive Activities, Brochures		X		X																
<b>Task 5:</b> Month of the Military Child	Solid Waste	Interactive Activities, Coloring Pages, Pencils				X			X				X				X				X	
<b>Task 6:</b> Clarke Library Summer Reading Program	Solid Waste, Water Quality	Interactive Activities, Coloring Pages, Pencils	X				X			X				X					X			
<b>Task 7:</b> Volunteer Water Quality Monitoring Class	Solid Waste, Erosion and Sediment Control, Spills, Pesticides, Water Quality	Classroom Instruction with interactive activities, handbooks, brochures				X			X				X				X				X	

X - Indicates activity is implemented

\* All tasks are contingent upon funding, staffing, and coordination

Attachment A-5:  
Fort Leonard Wood Environmental Division 5-Year Storm Water Education Program for Student Groups

Student Groups Storm Water Education Program - Activity	Target Pollutant Sources	Distribution Materials/Methods	Year 1 - (June 2009 - May 2010)				Year 2 - (June 2010 - May 2011)				Year 3 - (June 2011 - May 2012)				Year 4 - (June 2012 - May 2013)				Year 5 - (June 2013 - May 2014)				
			Q1	Q2	Q3	Q4																	
<b>Task 8: MWR Youth Services Environmental Education Opportunities</b>																							
<b>8a:</b> Child Development Center (CDC) Environmental Education Activities	Solid Waste	Interactive Activities, Coloring Pages, Pencils				X	X			X				X	X					X	X		
<b>8b:</b> School Age Services (SAS) Earth Day Activities	Solid Waste, Water Quality	Interactive Activities, Coloring Pages, Pencils				X	X			X				X	X					X	X		
<b>8c:</b> America Recycles Day (Headstart and CDC)	Solid Waste	Interactive Activities, Coloring Pages, Pencils		X				X					X				X				X		

X - Indicates activity is implemented

\* All tasks are contingent upon funding, staffing, and coordination

## Attachment B-1

### MS4 Outreach Activities

Attachment B-1 - MS4 Outreach Activities

Outreach Activity	Location	Date	Number of Participants	Target Pollutant Source (TPS)	Advertising	Message	Materials Distributed
Clarke Library Beat the Heat Program - Water Quality Puppet Show	Clarke library	15-Aug-09	50 families	Water Quality	Clarke Library Website and Library Calendar	Emphasized the water cycle and water quality	Missouri Stream Team Brochures, Pencils, Bumper Stickers, Water Town USA Book
MWR Youth Services, Teacher Workshop - Environmental Activities/Awareness	3 separate workshops, Audie Murphy Club	9-Oct-09	100 Educators	Stormwater and Environmental Education	Interagency email	Educators workshop on how to teach environmental education	FLW Environmental Educators Packet and Reference Material
ECO Course	MANSCEN, FLW	14-Oct-09	25 Military, 13 Civilian	Spills, Solid waste, Sediment and Erosion Control	Website (wood.army.mil/dpwenv), email distribution	Provide information to military, civilian, and contract personnel concerning FLW environmental regulations and policies	Website for more information (wood.army.mil/dpwenv)
Newcomers Meeting - FLW Recycling Awareness	Bldg 470	21-Oct-09	25 to 30 FLW Soldiers and Spouses	Solid Waste	FLW Community Website (wood.army.mil)	Emphasizes proper FLW Recycling policies, procedures, and the importance of recycling to include clean water ways and reduced waste stream	FLW Recycling Brochure, Magnets, Green Cleaning guides, Guide to Healthy Household
Elementary Recycling Program - EcoMinders	Freedom Elementary in partnership with Missouri S&T	28-Oct-09	1200-1300 (Grades 3-6)	Solid Waste	None	Interactive rally to kick off recycling program. Performed in partnership with Missouri University of Science and Technology	T-shirts supplied by Ozark Rivers
America Recycles Day Exhibit	Bruce Clarke Library, MANSCEN, FLW	16 - 30 Nov- 09	Unmanned booth	Solid Waste	None	Eliminate litter and trash from entering waterways through Reduce, Reuse, Recycle	FLW Recycling Brochure
America Recycles Day Puppet Show	Headstart, Saint Robert, MO	17-Nov-09	2 Groups of approximately 35 children	Solid Waste	None	Keeping litter and trash from entering the waterways by reducing, reusing, and recycling	Earth Day Stickers and MO DNR Coloring Books

Attachment B-1 - MS4 Outreach Activities

Outreach Activity	Location	Date	Number of Participants	Target Pollutant Source (TPS)	Advertising	Message	Materials Distributed
Newcomers Meeting - FLW Recycling Awareness	Bldg 470	18-Nov-09	25 to 30 FLW Soldiers and Spouses	Solid Waste	FLW Community Website (wood.army.mil)	Emphasizes proper FLW Recycling policies, procedures, and the importance of recycling to include clean water ways and reduced waste stream	FLW Recycling Brochure, Magnets, Green Cleaning guides, Guide to Healthy Household
Newcomers Meeting - FLW Recycling Awareness	Bldg 470	8-Dec-09	25 to 30 FLW Soldiers and Spouses	Solid Waste	None	Emphasizes proper FLW Recycling policies, procedures, and the importance of recycling to include clean water ways and reduced waste stream	FLW Recycling Brochure, Magnets, Green Cleaning guides, Guide to Healthy Household
Preconstruction Review Meetings	DPW Environmental Division	17-Dec-09	Military, Civilian, and Contract Personnel	Spills, Solid waste, Sediment and Erosion Control	Email Correspondence	Review of NPDES permits to ensure proponents of construction activities understand permit requirements and FLW SWMP	Site Specific SWPP, Site Specific Permit, FLW SWMP
Preconstruction Review Meetings	DPW Environmental Division	28-Dec-09	Military, Civilian, and Contract Personnel	Spills, Solid waste, Sediment and Erosion Control	Email Correspondence	Review of NPDES permits to ensure proponents of construction activities understand permit requirements and FLW SWMP	Site Specific SWPP, Site Specific Permit, FLW SWMP
ECO Course	MANSCEN, FLW	12-Jan-10	10 Military, 14 Civilian	Spills, Solid waste, Sediment and Erosion Control	Website (wood.army.mil/dpwenv), email distribution	Provide information to military, civilian, and contract personnel concerning FLW environmental regulations and policies	Website for more information (wood.army.mil/dpwenv)
Stormwater Site Assistance Visits	Construction Sites	12-Feb-10	Military, Civilian, and Contract Personnel	Spills, Solid waste, Sediment and Erosion Control	Email Correspondence	Review of permitted construction activities on FLW to ensure compliance with permit and SWMP. Provide recommendations on best management practices	FLW SWMP

Attachment B-1 - MS4 Outreach Activities

Outreach Activity	Location	Date	Number of Participants	Target Pollutant Source (TPS)	Advertising	Message	Materials Distributed
Newcomers Meeting - FLW Recycling Awareness	Bldg 470, FLW	17-Feb-10	25 to 30 FLW Soldiers and Spouses	Solid Waste	FLW Community Website (wood.army.mil)	Emphasizes proper FLW Recycling policies, procedures and the importance of recycling to include clean water ways and reduced waste stream	FLW Recycling Brochure, Magnets, Green Cleaning guides, Guide to Healthy Household
Stormwater Site Assistance Visits	Construction Sites	17-Feb-10	Military, Civilian, and Contract Personnel	Spills, Solid waste, Sediment and Erosion Control	Email Correspondence	Review of permitted construction activities on FLW to ensure compliance with permit and SWMP. Provide recommendations on best management practices	FLW SWMP
Volunteer Water Quality Monitoring Class	MANSCEN, FLW	12-Mar-10	18 Participants	Water Quality, Litter, Spills, Sediment and erosion control	DPW Environmental Division Website, MO Stream Team Website, Signage	In partnership with Missouri Stream Team, volunteers participated in hands on and classroom instruction activities to learn how to sample water and analyze for pollutants	Missouri Stream Team informational brochures and materials, FLW Information Packet-FLW Consumer Confidence Report, FLW Rolling Heath and Miller Cave Brochure, Big Piney Recreation Corridor Map and Information
Newcomers Meeting - FLW Recycling Awareness	Bldg 470, FLW	17-Mar-10	25 to 30 FLW Soldiers and Spouses	Solid Waste	FLW Community Website (wood.army.mil)	Emphasizes proper FLW Recycling policies, procedures and the importance of recycling to include clean water ways and reduced waste stream	FLW Recycling Brochure, Magnets, Green Cleaning guides, Guide to Healthy Household
Child Development Center Fun Fair - Wildlife Pond Cleanup	Child Development Center, FLW	3-Apr-10	75 FLW Families	Water Quality, Solid Waste, Spills	Posters, MWR Website (fortleonardwoodmwr.com)	Cleanup of the Wildlife Pond by removing trash and properly disposing by recycling and the trash bin	Missouri Stream Team Brochures, Pencils, Bumper Stickers, Water Town USA Book
Child Development Center, Month of the Military Child - Critters Against Litter Puppet Show	Child Development Center, FLW	6-Apr-10	30 (3-4 year olds)	Solid Waste	None	Keeping litter and trash from entering the waterways by reducing, reusing, and recycling	Earth Day Stickers

Attachment B-1 - MS4 Outreach Activities

Outreach Activity	Location	Date	Number of Participants	Target Pollutant Source (TPS)	Advertising	Message	Materials Distributed
Preconstruction Review Meetings	DPW Environmental Division	9-Apr-10	Military, Civilian, and Contract Personnel	Spills, Solid waste, Sediment and Erosion Control	Email Correspondence	Review of NPDES permits to ensure proponents of construction activities understand permit requirements and FLW SWMP	Site Specific SWPP, Site Specific Permit, FLW SWMP
ECO Course	MANSCEN, FLW	14-Apr-10	7 Military, 13 Civilian, 1 Contractor	Spills, Solid waste, Sediment and Erosion Control	Website (wood.army.mil/dpwenv), email distribution	Provide information to military, civilian, and contract personnel concerning FLW environmental regulations and policies	Website for more information (wood.army.mil/dpwenv)
Green Cleaning Party - House Next Door	37 Young Street, FLW	19-Apr-10	8 Military Spouses (25-50 ages)	Spills, Solid waste,	DPW Environmental Division and House Next Door Websites, Signage at Community Centers, MANSCEN, Army Community Center, FLW Residential Community Centers	Reducing the hazardous waste stream and waterway pollutants by emphasizing green alternatives to cleaning products	Green Cleaning Recipe cards, Guide to Healthy Households, Poison Prevention Brochures
Miller Cave Cleanup	Miller Cave, FLW	21-Apr-10	10 Civilian Volunteers and 5 Civilian Participants	Solid Waste	Website (wood.army.mil/dpwenv)	Volunteers are able to recognize the effects of litter on waterways and water quality	Miller Cave Brochure
Stormwater Site Assistance Visits	Construction Sites	22-Apr-10	Military, Civilian, and Contract Personnel	Spills, Solid waste, Sediment and Erosion Control	Email Correspondence	Review of permitted construction activities on FLW to ensure compliance with permit and SWMP. Provide recommendations on best management practices	FLW SWMP
Child Development Center, Month of the Military Child - Critters Against Litter Puppet Show	Child Development Center, FLW	27-Apr-10	30 (3-4 year olds)	Solid Waste	None	Keeping litter and trash from entering the waterways by reducing, reusing, and recycling	Earth Day Stickers

Attachment B-1 - MS4 Outreach Activities

Outreach Activity	Location	Date	Number of Participants	Target Pollutant Source (TPS)	Advertising	Message	Materials Distributed
Earth Day Festival - "Water for the People"	Colyer Park, FLW	12-Jun-10	600 soldiers, families and children	Solid Waste, sediment and erosion control, spills response	Website (www.wood.army.mil, wood.army.mil/dpwenv, .waynesville-strobertchamber.com, fortleonardwoodmwr.com), Signage at four (4) Community Centers, MANSCEN, Army Community Center, FLW Residential Community Centers	Emphasizing water quality and conservation through activities and exhibits from local state agencies, nonprofit organizations, and FLW organizations	Bookmarks, Pencils, and Coloring Pages
Waterway Cleanup Activity	Vaious waterways located on FLW	7-12 June-10	150 soldiers	Solid Waste	Website (wood.army.mil/dpwenv)	Volunteers are able to recognize the effects of litter on waterways and water quality	None
Stormwater Site Assistance Visits	Construction Sites	Varies (Monthly and/or Weekly depending on construction site)	Military, Civilian, and Contract Personnel	Spills, Solid Waste, Sediment and Erosion Control	Email Correspondence	Review of permitted construction activities on FLW to ensure compliance with permit and SWMP. Provide recommendations on best management practices	FLW SWMP

## Attachment B-2

### Summary of MS4 Outreach Activities

Attachment B-2 - Summary of MS4 Outreach Activities

Outreach Activity	Number of Events	Date Range	Participation Numbers	Target Audience
Waterway Cleanup Activity	5	4/24/2009 - 6/12/2010	272	Military and Civilian Personnel and Kids
Remarkable Trees	2	6/24/2009 - 7/14/2009	39	School Age (3-5)
Drop Heard Around the World	1	7/15/2009	15	School Age (2-6)
Clarke Library Beat the Heat Program - Water Quality Puppet Show	1	8/15/2009	50	Military & Civilian Personnel and kids
MWR Youth Services, Teacher Workshop - Environmental Activities/Awareness	1	10/9/2009	100	Educators
Newcomers Meeting -FLW Recycling Awareness	5	10/21/2009 - 3/17/2010	125	Military Personnel and spouses
Elementary Recycling Program - EcoMindors	1	10/28/2009	1,200	School Age (Grades 3-6)
America Recycles Day Exhibit	1	11/16 - 11/30/2009	unmanned booth	Military and Civilian Personnel and Residents
America Recycles Day Puppet Show	1	11/17/2009	70	School Age
Preconstruction Review Meetings	3	12/28/2009 - 12/17/2010	unknown	Military, Civilian and Contract Personnel
Stormwater Site Assistance Visits	3	2/12/2010 - 4/22/2010	unknown	Military, Civilian and Contract Personnel
Volunteer Water Quality Monitoring Class	1	3/12/2010	18	Military and Civilian Personnel and Residents
Green Cleaning Party - House Next Door	1	4/19/2010	8	Military Spouses
<b>SUBTOTAL</b>	<b>26</b>		<b>1,897</b>	

## Attachment C

### Publications Inventory

Attachment C - Publications Inventory

Publication Name	Source	No. of Copies	Target Audience
Rolling Heath Brochure	FLW, Environmental Division	250	All
Caves Brochure	FLW, Environmental Division	250	All
Birds Brochure	FLW, Environmental Division	250	All
Mammals Brochure	FLW, Environmental Division	250	All
Wildflowers Brochure	FLW, Environmental Division	250	All
Protect Our Streams (Protect Our Streams)	Clean Water Healthy Life, Mid-West Regional Council	250	All
MO_Yardsbrochure (Show Me Yards & Neighborhoods)	Missouri Department of Natural Resources	250	Residents
The Solution to Pollution	EPA	250	All
Energy Ant Activity Book	Energy Information Administration	250	Student Groups
After the Storm (VHS and DVD) available for checkout	EPA	1	Residents and Student Groups
Poison Prevention Basics	Missouri Regional Poison Center	250	Residents and Student Groups
Stinging, Insects, Spiders, and Snakes	Missouri Regional Poison Center	250	Residents and Student Groups
Toxic and NonToxic Plants	Missouri Regional Poison Center	250	Residents and Student Groups
What is a Watershed?	National Resource Conservation Service	75	All
Springs of Missouri Brochure	FLW, Environmental Division	100	All
Springs activity page for kids	FLW, Environmental Division	100	Student Groups
Read the Label First! Protect Your Garden	EPA	50	Residents and Student Groups
ZAP the Zebra	Clean Water Trust	50	
How to Conduct a Litter Pickup .. Stream Style	Missouri stream Team	50	Residents and Student Groups
Start a Missouri Stream Team	Missouri Stream Team	50	Residents and Student Groups
Healthy Lawn, Healthy Environment	EPA	50	Residents and Student Groups
Trash in Chigger County	National Resource Conservation Service	474	Student Groups
The Little Acorn	National Resource Conservation Service	750	Student Groups

## Attachment D

### Illicit Discharge Reporting Procedure

## **Attachment D**

### **Illicit Discharge Reporting Procedure**

The "U.S. Army Installation Management Command and Fort Leonard Wood Storm Water Management Plan in Support of Municipal Separate Storm Sewer System Requirements" (Plan) was signed on September 11, 2009, and can be found at [http://www.wood.army.mil/wood\\_cms/3191.shtml](http://www.wood.army.mil/wood_cms/3191.shtml). The Storm Water Management Plan (SWMP) describes the procedures and practices Fort Leonard Wood currently uses throughout the installation to limit the discharge of pollutants from its storm drainage systems. The Plan was prepared in accordance with:

- 1) LD: 40 CFR 122, 123, and 124 National Pollution Discharge Elimination System
- 2) Energy Independence and Security Act of 2007, Section 438
- 3) Unified Federal Policy for a Watershed Approach to Federal Land and Resource Management (Federal Register, Vol. 65, No. 202, October 18, 2000)
- 4) Army Regulation 200-1

Illicit discharges are discussed in detail in Section 7.3, "Illicit Discharge Detection and Elimination," of the Plan. The goal of this minimum control measure is to develop and implement a plan to detect and eliminate non-storm water discharges (illicit discharges) such as process water, wash water, chemical spills, and other non-rain water discharges to the storm drain system. Allowable non-storm water discharges include:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water

Illicit discharges will be reported to the MS4 Program Manager, or in the absence thereof, the Storm Water Program Manager followed by the Branch Chief, Environmental Division.

**Attachment D**  
**Illicit Discharge Reporting Procedure**

Reports of illicit discharges can be initiated telephonically, on the Environmental Division website ([http://www.wood.army.mil/wood\\_cms/3116.shtml](http://www.wood.army.mil/wood_cms/3116.shtml)), or by email at [FLW.illicitdischarge.us.army.mil](mailto:FLW.illicitdischarge.us.army.mil). A reporting form showing needed information can also be found at the web address. Contact phone numbers are shown on page 5 of the Plan and are shown in the table below.

<b>Position</b>	<b>Phone</b>
MS4 Program Manager	(573) 596-0882 x68635
Stormwater Program Manager	(573) 596-0882 x68627
Branch Chief, DPW Environmental	(573) 596-0882

## Attachment E

### BMP #3B – Continuum of Enforcement Description

### 7.3.2 BMP # 3B: Regulatory Control and Enforcement Program

**BMP Title:** Regulatory Control and Enforcement Program

**Permit Section(s) Compliance Reference:** 4.2.3.1.2; 4.2.3.1.3.4; 4.2.3.1.6

**BMP Description:**

FLW will develop an illicit discharge reporting procedure, possibly in the form of a flow chart to be used as part of the procedure for controlling illicit discharges. The reporting procedure will provide direction on who to call (and the order to call them) when an illicit discharge is suspected. This procedure will closely follow the installation's 'Spill Prevention and Response Plan' established in August 2007, which outlines reporting responsibilities for petroleum or hazardous waste spills.

Fort Leonard Wood is a Department of Army Federal military installation and must abide by specific requirements not applicable to municipalities. Fort Leonard Wood has three primary types of entities: Government, Contracted, and Privatized, each requiring separate enforcement mechanisms due to differences in the legal relationships. Army environmental regulations require Government entities to comply with Federal and State environmental laws and regulations. Fort Leonard Wood will continue to include language in contracts and privatized agreements requiring compliance with Federal and State environmental laws and regulations. A sample of the standard contract language is available upon request.

A summary of violations and enforcement actions will be submitted with annual reporting requirements of the MS4 Permit.

A four-level Continuum of Enforcement consisting of a Verbal Warning, a Letter of Warning, a Notice of Non-Compliance, and Regulatory Notification. The following provides greater detail regarding the Continuum of Enforcement for storm water quality, with subsections for each entity. This protocol uses the standard Federal Government business work days, Monday through Friday. Weekends and the ten Federal Holidays are not considered business days.

- 1) **Verbal Warning:** For Government tenants, contractors/concessionaires, and privatized activities: Verbal Warnings and informal notice for corrective action from Fort Leonard Wood. A Verbal Warning to be issued for conditions which are in violation and are under the control of the third party. Issuing office will be not lower than the DPW Environmental Office. The noticed party has seven business days from delivery, counting from and including the day of receipt, to take required corrective action and respond to the notice;
- 2) **Letter of Warning:** A Letter of Warning noting the violation, to be signed by Fort Leonard Wood, where the third party's activities represent a violation which are less immediate but represent greater gravity of consequences than would be appropriate for a Verbal Warning, or if the third party has not responded to the Verbal Warning. Issuing office will be not lower than the DPW Director's Office. The noticed party has seven business days from delivery, counting from and including the day of receipt, to take required corrective action and respond to the notice:

Government tenants – Failure to immediately commence corrective actions may result in a prohibition on activities directly contributing to the Violation at that site, except for corrective actions, up to and including a work stoppage at the site. A copy of the Letter of Warning will be provided to the next higher level of the agency or activity involved.

Government contractors/concessionaires - Failure to immediately commence corrective action of the violation may result in sanctions, through the administering Contract Officer. Sanctions may include but not limited to stop work orders, Notice to Cure, and adverse determinations on incentive performance award fees. A copy of the Letter of Warning will be provided to the Contracting Office responsible for award and administration of the contract involved.

Privatized entities - Failure to immediately commence corrective action will result in a Letter of Warning with a copy to the Federal agency responsible for administering the operating agreement with the privatized entity, and may result in initiation of action to bar culpable individuals from entry onto the military installation. A copy of the Letter of Warning will be provided to the next higher level of corporate management off the installation if applicable.

- 3) Notice of Non-Compliance:** A Notice of Non-Compliance will be issued to third parties informing all categories of individuals and organizations listed below of possible civil and/or criminal liability for the violation. The issuing officer will be the Deputy Garrison Commander, The noticed party of any category listed below has seven business days from delivery, counting from and including the day of receipt, to take corrective action and respond to the notice. In addition to the general provisions applicable to all types of parties listed in this paragraph, the additional information and measures below, including if the third party has not responded to the Verbal Warning or Letter of Warning, apply to particular types of parties involved:

Government tenants – Immediate cessation of the non-compliant conduct. Immediate initiation of corrective actions, impose appropriate limitations up to and including immediate prohibition of further non-corrective activities, or work stoppage at the project site until resolved. Formal investigations for misconduct or culpable negligence on the part of responsible individuals from the activity involved, ultimately to develop recommended means to prevent recurrence and to develop evidence supporting adverse administrative personnel actions on responsible military or civilian personnel, and/or Uniform Code of Military Justice disciplinary actions against responsible military personnel.

Government contractors/concessionaires - Immediate cessation of the non-compliant conduct. Immediate initiation of corrective, impose appropriate limitations up to and including immediate prohibition of further non-corrective activities, or work stoppage at the project site until resolved, if indicated. Failure to obey and commence corrective action may result in contractual sanctions through the administering contract officer, including but not limited to stop work orders, Contract Termination for Default, adverse determinations on incentive performance award fees, withholding of progress payments, and possible pursuit of debarment of individuals or entities from eligibility for Government contracts in cases raising fraud, waste, or abuse issues, and any other contractual remedy afforded under the Federal Acquisition Regulations or applicable supplements. A copy of the Notice of Non-Compliance will be provided to the responsible contracting office awarding and administering the contract involved, informing individuals and organizations of possible civil and/or criminal liability for violation. Potential contractual sanctions include but are not limited to pass-through of any monetary assessments by regulators and ineligibility of same for any reimbursement by the Government, as well as notice delivered through the permittee's contract administrator of possible assertion of additional contract claims for consequential damages, costs, sureties, etc. to mitigate and restore the effects of such violations, based on the terms of the contract involved. Time deadlines for contract remedies are those required by the Federal Acquisition Regulations, the particular contract terms involved, and case law of the

contract adjudicative forum (Generally the Armed Services Board of Contract Appeals) as made and provided, and under which the permittee must operate, which are acknowledged to generally be significantly longer than the seven calendar days to be afforded for the purposes of permit compliance.

Privatized entities - Immediate cessation of the non-compliant conduct. Immediate initiation of corrective actions, immediate prohibition of further non-corrective activities, or work stoppage at the specific project site until resolved, if indicated. Notice to the administering agency responsible for administering the operating agreement with the privatized entity. Copies of the notice will also be provided to the next higher level of corporate management of the entity off the installation, if applicable, and at least one step above any level of management apparently implicated in the violation. Further action by the installation may include initiation of action to bar any culpable individuals from entry onto the military reservation.

- 4) Regulatory Notification:** Failure to respond to the Notice of Non-Compliance or violations which cannot be enforced in a timely manner will be promptly reported to the regulatory agencies with civil enforcement powers able to issue a formal Notice of Violation and assess damages, penalties, fines, and other punitive or remedial consequences at the regulator's discretion. A copy of the regulatory notification will be provided the higher level of authority or management, and to the administering office, as applicable. Activities will bear the burden of restitution for any damages, penalties, fines or punitive consequences levied to Fort Leonard Wood regardless whether the regulatory agency issues similar to the third party.

Repeated offenses or a pattern of poor compliance, can also lead to bypassing the first, informal notice level and moving the issue straight into the second level (Letter of Warning) if the pattern is deemed to be a possible indicator of bad faith or demonstrate an unwilling or defiant approach to inspection, regulation, and compliance.

**Measurable Goals/ (Implementation Timeline):**

- 1) Creation of illicit discharge reporting procedure (ex. contact flow chart). *(Year 1)*
- 2) Identification and reporting process established for enforcement actions. *(Year 1)*
- 3) Implementation of illicit discharge reporting procedure. *(Ongoing throughout Years 1-5)*

**Specific Components and Notes:**

Refer to BMP 1A for educational components related to this minimum control measure.

**Responsible Party for this BMP:**

Directorate of Public Works  
Environmental Division, MS4 Program Manager  
Phone: 573-596-0882

**7.3.3 BMP # 3C: Illicit Discharge Detection and Elimination Plan**

**BMP Title:** Illicit Discharge Detection and Elimination Plan

**Permit Section(s) Compliance Reference:** 4.2.3.1.3.1

**BMP Description:**

Develop a program to detect and eliminate illegal and/or improper connections to storm drainage system and receiving waters. Specific illicit discharge connections will be identified by FLW personnel or contractors over the 5 years of the implementation schedule using specific components listed below. After detection of illicit discharge locations, FLW will identify appropriate enforcement procedures and make appropriate contacts to outside agencies as needed.

## Attachment F

Garrison Command Policy # 200-1

## **Attachment F – Garrison Command Policy #200-1**

Garrison Command Policy #200-1, "Fort Leonard Wood Environmental Management Strategy," was signed by the Garrison Commander on June 9, 2009. The strategy serves as the venue through which operational practices are implemented and revised to ensure that the Installation is stellar in the community and the region in the stewardship of environmental resources, including water quality.

The policy stipulates:

*a. All installation personnel, including military and civilian personnel, tenants, and contractors working at the installation are tasked to be better stewards of our environment, resources, and to be involved in the installation-wide Environmental Management System.*

*b. Commanders, directors, and other leaders, it is imperative for you to set the tone and to strive to achieve continual improvements in overall environmental performance towards the current integration and implementation of the sustainment plan.*

*1) Select top performers with the appropriate skills and authority as your environmental representative who understands and who can execute applicable environmental policy, laws, and regulations on your behalf.*

*2) Actively seek opportunities to continually improve the installation's environmental program. Ensure that a commitment to continual improvement is demonstrated through a proactive preventive and corrective action program.*

*3) Make every effort to fully integrate the relevant environmental requirements into your military decision making process and work practices within the organization so that environmental awareness and compliance are normally performed when executing operations, training and services on the installation.*

*4) Foster good public relations with our neighboring communities who also share our most sensitive environmental concerns.*

*5) Identify and address pollution prevention opportunities within the operations and services being conducted at the installation.*

*6) Continually assess installation activities and services to determine their impact on the environment. Identify significant environmental impacts and ensure they are controlled and reduced when appropriate.*

## Attachment G

### Typical DoD Installation Functional Areas and Processes

Attachment G  
Typical DoD Installation Functional Areas and Processes

Functional Area	Typical Installation Processes	Types of Storm Water Permits/Plans Potentially Applicable
Transportation Equipment	Heavy vehicle washing operations	NPDES-SW, NPDES-PRETX
	Light vehicle washing operations	NPDES-SW, NPDES-PRETX
	Motor pools and vehicle maintenance centers	ICP/SPCCP, Emergency Response Plan
	Motor pools and vehicle maintenance centers	NPDES-SW, RCRA-C & RCRA-D Permits, Emergency Response Plan, SWPPP, ICP/SPCCP
Recreation Management Activities	Autocraft shops	NPDES-SW
	Golf courses	NPDES-SW
	Hobby shop	NPDES-SW, NPDES-PRETX
	Horse stables	N/A
	Marinas and recreational boating	NPDES-SW
	Other recreational activities (jogging trails, baseball fields, tennis courts, etc.)	Applicator Permits
	Outdoor recreation centers (rentals), RV parks, campgrounds	Applicator Permits
	Personnel vehicle washing area	NPDES-SW
Swimming pools	Emergency Response Plan	
Natural Resource and Land Management	Agricultural leasing	NPDES-SW
	Vegetation management	NPDES-SW
	Bank or shoreline modification/stabilization	NPDES-SW
	Timber harvesting and forest management	NPDES-SW
	Wildlife management (managed hunts, trapping, poison)	NPDES-SW
Public Works	Construction landfill operations	CWA 404 Permit, RCRA-D Permit
	Domestic wastewater lagoon	SDWA, Source Water Protection Plan
	Dredging operations	Source water protection plan, CWA permit
	Drinking water treatment plant	NPDES Permit, SDWA Permit, Emergency Response Plan
	Groundwater monitoring wells	Source water protection plan
	Groundwater pump and treat facilities	RCRA-C, NPDES
	HW incinerator	RCRA-C, NPDES
	HW storage facilities	NPDES, RCRA-C Permit
	HW treatment facilities	NPDES, RCRA-C Permit
	Land application of sanitary wastewater	NPDES Permit
	Land disposal of sludge	RCRA
	Manmade ponds, reservoirs or lagoons	RCRA, NPDES
	Medical waste Incinerators	RCRA-D, NPDES-SW
	Non-contact cooling water discharges.	RCRA-D, NPDES-SW
	Ore piles, (national reserve stockpiles)	NPDES, RCRA-C
	Recycling collection and processing	RCRA D, NPDES-SW
	Sanitary landfills - active	RCRA-D, NPDES
	Sanitary wastewater treatment plant	NPDES
	Septic systems/onsite treatment systems	NPDES-SW
	Stormwater retention and conveyances (maintenance, retrofitting and construction)	NPDES-point source
	Underground injection wells	UIC
	Wastewater collection systems	NPDES
	Boilers and heating plants (permitted)	N/A
	Central compressed air plants	N/A
	Central steam plants and tunnels.	N/A
	Chillers (permitted)	N/A
	Coal pile storage	NPDES-SW
	Concrete/asphalt plants	N/A
	Construction sites	NPDES-SW
	Contractor lay down area	NPDES-SW
	Cooling towers and ponds	NPDES, Source Water Protection Plan
	Dams or other in stream flow regulations/modification devices	NPDES
	Demolition sites	NPDES-SW, ICP/SPCCP, Source Water Protection Plan
	Dock and pier operations	NPDES-SW
	Electrical Substations	N/A
	Emergency power (backup generators)	NPDES-SW
	Equipment storage	NPDES-SW
	Earth moving	NPDES-SW
	Major landscaping activities	NPDES-SW
	Nondischarging wastewater treatment/disposal lagoons (evaporation ponds)	NPDES-SW
	Oil and wood handling sites at power generation plants	NPDES-SW
	Oil transfer stations (pump stations/pipe lines)	NPDES-SW
	Open anchorage	N/A
	Parking lots	NPDES-SW
	Pipe construction and installation	NPDES-SW
	Power generation using coal	NPDES-SW
	Power generation using fuel oil	NPDES-SW
Railroad access and loading	NPDES-SW	
Remodeling/retrofitting structures	NPDES-SW	
Road maintenance - paved	NPDES-SW, RCRA-C Permit	
Salt/sand storage	NPDES-SW	
Storage and application of fertilizers	NPDES-SW, ICP/SPCCP, Source Water Protection Plan	
Storage and application of pesticides and herbicides	NPDES-SW, ICP/SPCCP, Source Water Protection Plan	
Medical and Laboratory Support	Hospital, pharmacy, and other medical activities	State Med Waste Permits, NPDES, RCRA-C
	Laboratories and research areas	NPDES-PRETX, RCRA-C
	X-ray inspection (film development)	State Med Waste Permits, RCRA-C, NPDES, NPDES-PRETX
Mission Operations and Maintenance	Aircraft maintenance activities	NPDES-SW, RCRA-C Permit, Emergency Response Plans, SWPPP, ICP/SPCCP
	Weapons cleaning and maintenance	N/A
Industrial Operations	Vehicle/aircraft/weapon system rebuild	NPDES-SW, RCRA-C Permit, NPDES-PRETX,

Attachment G  
Typical DoD Installation Functional Areas and Processes

Functional Area	Typical Installation Processes	Types of Storm Water Permits/Plans Potentially Applicable
	Industrial printing	NPDES-PRETX, RCRA-C
	Industrial wastewater treatment plant	NPDES
	Munition/propellant manufacturing	NPDES
	Chemical agent/munition demilitarization	RCRA-C
	Open burning	RCRA, NPDES-SW
	Open detonation	RCRA, NPDES-SW
	Rail tank car loading/unloading racks (EPCRA chemicals, white phosphorus, etc)	Emergency Response Plans, ICP/SPCCP
Logistics	Aboveground storage tanks	NPDES-SW, ICP/SPCCP, Source Water Protection Plan
	Underground storage tanks	NPDES-SW, ICP/SPCCP, Source Water Protection Plan
	Bulk fueling stations and transfer	NPDES-SW, ICP/SPCCP, Source Water Protection Plan
	Storage and warehouse areas	NPDES-SW, ICP/SPCCP, Source Water Protection Plan
	Vehicle fueling stations	NPDES-SW, ICP/SPCCP, Source Water Protection Plan
	Central hazardous material storage facilities (HAZMAT) operation	NPDES-SW, ICP/SPCCP, Source Water Protection Plan, RCRA-C
Community and Troop Support	Dining facilities	Pesticide Applicator Permits
	Housing/billeting operations	NPDES Permit, SDWA Permit, RCRA-C, RCRA-D/Landfill permits, Pesticide Applicator Permits
	Post exchange, commissary, and other shops	NPDES-SW, NPDES-PRETX, RCRA-C
Aircraft and Flight operations	Flight line ground support maintenance center	NPDES-SW, RCRA-C, Emergency Response Plans, SWPPP, ICP/SPCCP
	De-icing material application	NPDES-SW
	Helicopter pad operations	NPDES-SW, ICP/SPCCP, Source Water Protection Plan

**Abbreviations:**

CWA	Clean Water Act
ICP	Integrated Contingency Plan
N/A	not applicable
NPDES	National Pollutant Discharge Elimination System (Permit)
NPDES-PRETX	Pretreatment requirement for permit under NPDES
NPDES-SW	Stormwater requiremetn for permit under NPDES
RCRA	Resource Conservation and Recovery Act
RCRA-C	Part C of RCRA, (Hazardous Wastes)
RCRA-D	Part-D of RCRA (Solid Wastes)
SDWA	Safe Drinking Water Act
SPCCP	Spill Prevention Control and Countermeasure Plan
SWPPP	Stormwater Pollution Prevention Plan

TABLE 1  
Public Education and Outreach Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Measurable Goal Status	Completion Date
<b>BMP 1A - Implement a Storm Water Education Program (SWMP Section 7.1.1, page 17)</b>				
Initial list developed in Year 1  I. 1.) Identify civilian/ military personnel groups impacted and targeted pollution sources to address II. Resident Education III. Student (School Age) Education IV. Contractor Education V. Business Education	4.2.1.1.1; 4.2.1.1.2; 4.2.2.1.2	1	<b>Complete</b> - Identified groups and targeted pollution sources are: I. Military/Civilian Personnel - Solid Waste, Sediment and Spills; II. Residential - Fertilizers, Solid Waste, Pesticides, Spills, Household hazardous materials; III. Student (School Age) - Solid Waste; IV. Contractors - Solid Waste, Sediment, and Spills; and V. Businesses -Solid Waste and Spills. Target Audiences were identified in August 2009. Target Pollutant sources were identified in April 2010.	Audiences Aug-09  Pollutant Sources Apr-10
I. 2.) Identify and/or develop training materials for Pollution Prevention/Good Housekeeping, in accordance with BMP 6B	4.2.6.1.7	1-2	Planned for completion in second reporting cycle	
I. 3.) Conduct training for impacted personnel regarding storm water pollution prevention	4.2.1.1.3	1-5	Planned to begin in second reporting cycle	
I. 4.) Evaluate and revise educational materials as necessary to ensure compliance with MCM 6	4.2.6.1.7	1-5	Planned to begin in second reporting cycle	
II. 1.) Identify targeted pollutant sources (BMP 1A-1) to focus educational messages for residents	4.2.1.1.1	1-5	<b>Complete</b> - Targeted pollutant sources for residents are: fertilizers, solid waste, spills, household hazardous materials, and pesticides	9/11/2009
II. 2.) Identify and/or develop educational campaigns, brochures, and/or public workshops	4.2.1.1.3	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, participants, and message, etc. (See Attachment B - MS4 Outreach Activities). A listing of brochures and other materials available for distribution is also found in Attachment C - Publications List. In addition, a 5-year storm water education program has been developed for FLW for the following groups: Military/Civilian Personnel, Contractors, Residential, Businesses, and School Groups. See Attachment A for more details.	On-Going
II. 3.) Evaluate effectiveness of campaigns, potentially through resident surveys and participation levels at FLW sponsored storm water pollution prevention events	4.2.1.1.6	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, participants, and message, etc. (See Attachment B - MS4 Outreach Activities). A feedback form is in development and will be used at future events. The feedback form is scheduled to be completed by August 2010.	On-Going
III. 1.) Identify targeted pollutant sources to focus educational messages for students	4.2.1.1.1; 4.2.1.1.3	1-5	<b>Complete</b> - Targeted pollutant sources for students are solid waste	Apr-10
III. 2.) Develop and/or adapt existing classroom curriculum for storm water pollution prevention	4.2.1.1.3*	2-5	Planned to begin in second reporting cycle	

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III. 3.) Potentially develop a rewards program for students and teachers that participate in public storm water pollution prevention activities around FLW	4.2.1.1.4*	2-3	Planned to begin in second reporting cycle	
III. 4.) Evaluate effectiveness of classroom education, potentially through testing and/or student participation levels in storm water pollution prevention activities	4.2.1.1.6	2-5	Planned to begin in second reporting cycle	
IV. 1.) Initial training/review to include erosion and sediment control requirements, impacts to water quality, BMPs, and inspection and enforcement procedures	4.2.1.1.3	1	<b>Complete</b> - Pre-construction meetings are now conducted for all site operators performing work on permitted sites which highlights the enforcement procedures at FLW, permit requirements, termination requirements, and provides an overview of the FLW SWPPP. In addition, a 5-year storm water education program has been developed for FLW for the following groups: Military/Civilian Personnel, Contractors, Residential, Businesses, and School Groups. See Attachment A for more details.	Jul-09
IV. 2.) Erosion and sediment control trainings will be conducted for all audiences as needed (ex. new projects or new personnel, refresher courses)	4.2.1.1.3	1-5	Pre-construction meetings are now conducted for all site operators performing work on permitted sites which highlights the enforcement procedures, permit requirements, termination requirements, and provides an overview of the FLW SWPPP. It is planned that additional materials relating to karst topography, losing/gaining streams, and FLW spill response procedures and contacts will be included in future pre-construction meetings as they are developed. In addition, a 5-year storm water education program has been developed for FLW for the following groups: Military/Civilian Personnel, Contractors, Residential, Businesses, and School Groups. See Attachment A for more details. It is a permit requirement that the permittee have a responsible person named in the site SWPPP and that records are kept by the permittee of training, inspections, or modifications to the SWPPP. These permitted sites are regularly inspected (weekly, bi-weekly, or monthly depending on the sites compliance status) to ensure they are in compliance and are properly maintaining records.	On-Going
IV. 3.) Develop procedure for public reporting of erosion and sediment problems	4.2.1.1.4; 4.2.4.1.3	2-3	Planned to begin in second reporting cycle	
IV. 4.) Annual review of inspection checklists, records, and enforcement action to determine effectiveness of training on specific audiences	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	

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V. 1.) Identify businesses at FLW impacted for each Minimum Control Measure	4.2.1.1.2	1	<b>Complete</b> - Identified businesses for the Minimum Control Measures are: 1) Army and Air Force Exchange Service (AAFES): Post Exchange, Frame Shop, Furniture Sales, Class Six, and Clothing Sales; 2) Restaurants: Burger King, Church's Chicken, Starbucks, Taco Johns, Baskin Robbins, Blimpies, Seattle's Best, O'Charleys, Pizza Hut, and Manchu Wok; 3) Medical: General Leonard Wood Army Community Hospital, Dental, Optical, and Vet Clinic; 4) Other Services: Mid Missouri Credit Union, Army National Bank, Post Office, Truman Education Center, Laundry Services (2 Facilities), Thrift Shop, Sunrise Communications, Mail Box It, and Forney Airfield; 5) MWR Services: Gas Stations (2 facilities), Auto Crafts/Car Wash, Swimming Pools (2 facilities), Pine Valley Golf Course, Miniature Golf Course, Recycling Center, Horse Stables, Outdoor Adventure Center, Movie Theaters (2 facilities), and Bowling Center.	Apr-10
V. 2.) Develop and/or adapt educational campaigns, brochures, and/or public workshop series for Businesses regarding pollution prevention and storm water management	4.2.1.1.3*	1-5	Planned to begin in second reporting cycle	
V. 3.) Potentially develop a Green Partners program for businesses at FLW to encourage best management practices for storm water and other resource protection activities	4.2.1.1.4; 4.2.2.1.3- 4.2.2.1.4*	2-3	Planned to begin in second reporting cycle	
V. 4.) Conduct trainings and certification workshops for the Green Partners program, if program is implemented	4.2.1.1.4*	3-4	Planned to begin in third reporting cycle	
V. 5.) Evaluate effectiveness of business education through methods such as surveys, participation in FLW sponsored storm water pollution prevention events, and other methods not yet determined	4.2.1.1.6	1-5	Planned to begin in second reporting cycle	
<b>BMP 1B - Distribute Education Materials (SWMP 7.1.2, page 18)</b>				
1.) Complete survey of existing educational materials already developed by federal, state, and local organizations in relation to identified target pollutant sources and compile inventory list for distribution materials	4.2.1.1.5*	1	<b>Complete</b> - see Attachment C - Publications List. Survey of publications will be on-going and updated as new information becomes available.	Feb-10

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2.) Determine the target audiences and best distribution route for each targeted pollution source's educational materials	4.2.1.1.5	1	<b>Complete</b> - Target audiences and distribution routes are: <b>School Age</b> - Flyers, Posters, Signage, and Website (wood.army.mil/dpwenv); <b>Residential</b> - Flyers, Posters, Signage, and Website (wood.army.mil/dpwenv); <b>Businesses</b> - Signage; <b>Military/Civilian Personnel</b> - Environmental Compliance Officer's (ECO) Training Course, Pre-Construction Review Meetings, Website (wood.army.mil/dpwenv), and Signage; <b>Contractors</b> - ECO Training Course, Pre-Construction Review Meetings, Website (wood.army.mil/dpwenv), and Signage.	Apr-10
3.) Distribute selected pollutant source reduction materials to target audiences through identified distribution methods	4.2.1.1.5	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, participants, and materials distributed, etc. (See Attachment B - MS4 Outreach Activities).	On-Going
<b>BMP 1C - Evaluate Success of Storm water Education (SWMP 7.1.3, page 19)</b>				
1.) Conduct post-educational event and/or campaign response mechanism (ex. survey) for each targeted audience intended	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	
2.) Monitor adherence to policies and procedure compliance (ex. pollution prevention/good housekeeping practices within the installation)	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	
3.) Track participation levels at FLW storm water related meetings, events, survey responses, etc to determine whether target audiences are being reached and responding	4.2.1.1.6*	1-5	Planned to begin in second reporting cycle	

**Note: The Public Education and Outreach MCM correlates to Sections B & F of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- AAFES - Army and Air Force Exchange Service
- BMP - Best Management Practice
- ECO - Environmental Compliance Officer
- FLW - Fort Leonard Wood
- MCM - Minimum Control Measure
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan
- SWPPP - Storm Water Pollution Prevention Plan

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TABLE 2  
Public Involvement/Participation Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 2A - Comply with Public Notice Requirements (SWMP 7.2.1, page 20)</b>				
1.) Issue public notices for all public meetings related to the SWMP	4.2.2.1	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, and how the event was advertised, etc. (See Attachment B - MS4 Outreach Activities). No public meetings held, to date.	On-going
2.) Notify targeted audiences through various distribution methods to increase participation for public meetings, storm water activities and events	4.2.2.1.2	1-5	For Earth Day, targeted audiences notified through websites, radio, marquees, newspaper, and Garrison Commander's opening remarks. No public meetings held, to date.	On-going
3.) Placement of SWMP in a location that has public access (ex: website, local library)	4.2.2.1*	1-5	In progress - SWMP will be placed on FLW's website and was available at the Earth Day event held 6/12/2010 along with comment cards for public feedback.	On-going
<b>BMP 2B - Solicit Public Input and Opinion on the SWMP (SWMP 7.2.2, page 20)</b>				
1.) Participation numbers from SWMP related meetings and events	4.2.2.1.5*	1-5	Five copies of the SWMP were provided for public review in a booth at the Earth Day event. A box for public comments was also provided; however, none were received. The booth also provided information on non-point source pollution and water quality.	On-going
2.) Results from surveys (if appropriate) for effectiveness of educational campaigns to targeted audiences	4.2.2.1.5*	1-5	Planned to begin in second reporting cycle.	
3.) Accessibility of SWMP information, including the use of FLW Website, newsletter articles, and events	4.2.2.1.2*	1-5	In progress - SWMP was available at the Earth Day event held 6/12/2010 along with comment cards for public feedback, MS4 fact sheets, and copies of the FLW permit. The SWMP is also available on the Environmental Division website ( <a href="http://www.wood.army.mil/dpwenv">http://www.wood.army.mil/dpwenv</a> ).	On-going
<b>BMP 2C - Identify and Establish Volunteer Opportunities for SWPP Activities (SWMP 7.2.3, page 21)</b>				
1.) Number of FLW supported opportunities identified and implemented for volunteers; such as community clean-ups, water quality monitoring, citizen watch groups, citizen panels, Missouri Stream Team formation, etc.	4.2.2.1.3 - 4.2.2.1.4	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, and participant numbers, etc. (See Attachment B - MS4 Outreach Activities). Four waterway cleanup events, one nature hike, one 5k walk/run, one teacher workshop, and one water quality monitoring class were held between 2009 and 2010.	On-going
2.) Number of volunteers participating in FLW supported Storm Water Pollution Prevention activities	4.2.2.1.5*	1-5	On-going task being tracked continuously in a spreadsheet that contains information regarding events held, dates, and participant numbers, etc. (See Attachment B - MS4 Outreach Activities). Five waterway cleanup events were held between April 2009 and April 2010 with approximately 272 people participating. One water quality monitoring class was held that had 18 participants.	On-going

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 Public Involvement/Participation Minimum Control Measure  
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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 2D - Evaluate Success of Public Involvement/Participation Activities (SWMP 7.2.4, page 21)</b>				
1.) Track participation levels at FLW storm water related meetings, events, etc., to determine whether target audiences are being reached and responding	4.2.2.1.5*	1-5	In progress - A system is in place to track participation numbers at storm-water related meetings and events and community outreach events.	On-going

**Note: The Public Involvement/Participation MCM correlates to Section B of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- FLW - Fort Leonard Wood
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan

TABLE 3  
 Illicit Discharge Detection and Elimination Minimum Control Measure  
 MS4 Annual Report  
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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 3A - Storm Sewer System Map (SWMP 7.3.1, page 23)</b>				
1.) Complete storm sewer system inventory and inspection map.	4.2.3.1.1*	1	<b>Complete</b>	6/10/2010
2.) Establish process (i.e., Illicit Discharge Detection and Elimination Plan) to locate and map known outfalls	4.2.3.1.1*	1	<b>Complete</b> <ul style="list-style-type: none"> <li>• The existing process for mapping outfalls at FLW will be used. GIS specialists are employed by the Engineering Design Branch to keep utility data current.</li> <li>• GIS database, aerial photographs, and installation maps and records will be reviewed to identify known or potential outfalls. Reservoir pipes will be included as outfall locations. Mapping of boundary outfalls and outlets is complete.</li> </ul>	
3.) Establish process to locate and map known ponds and structural pollution control devices	4.2.3.1.1*	1	<b>Complete</b> <ul style="list-style-type: none"> <li>• The existing process for mapping ponds and structural pollution control devices at FLW will be used.</li> <li>• Speak with senior facility members regarding institutional knowledge of known locations of ponds and structural pollution control devices.</li> <li>• GIS database aerial photographs, and installation maps and records will be reviewed to identify known or potential locations.</li> </ul>	
4.) Establish and document a protocol for screenings, training for inspectors, and procedures for further investigation of illicit discharges such as monitoring, clean up, and enforcement	4.2.3.1.1*	1	<b>Complete</b> <ul style="list-style-type: none"> <li>• Visual screening will be prioritized on problem areas as identified by smoke testing results, historical information, and public complaints.</li> <li>• Visual screenings will be documented through photographs of discharge along with written documentation regarding odor, appearance, and vegetation observations. GPS coordinates will be taken for the discharge site and added to a GIS database.</li> <li>• Inspectors will be trained on how to identify a potential illicit discharge and how to document the discharge.</li> <li>• Procedures for further investigation will involve the following: water sampling (if necessary); visual screening and/or sampling of known problem areas as staffing time allows or on a continual basis; continued smoke or dye testing; data review of land/building use, outfall locations, and smoke or dye testing results; and follow-up/periodic site visits to ensure discharge has been eliminated.</li> <li>• A complete list of illicit connection tests will be maintained along with a GIS database of discharge sites.</li> </ul>	
5.) Conduct training for appropriate personnel for locating structural pollution control devices, outfalls, and other system parameters	4.2.3.1.1*	2	Planned to begin in second reporting cycle	

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TABLE 3  
 Illicit Discharge Detection and Elimination Minimum Control Measure  
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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
6.) Visual screening at all outfalls over the life of the permit, with minimum of 25% of total area under MS4 screened annually to meet 100% screening requirement by end of 5-year permit cycle	4.2.3.1.1*	2-5	Planned to begin in second reporting cycle	
7.) Update storm sewer system map	4.2.3.1.1*	2-5	Planned to begin in second reporting cycle	
<b>BMP 3B - Regulatory Control and Enforcement Program (SWMP 7.3.2, page 24)</b>				
1.) Creation of illicit discharge reporting procedure (ex. contact flow chart)	4.2.3.1.2*	1	<b>Complete</b> - Identification and Reporting process was outlined in the SWMP and the Spill Prevention and Response Plan. See Attachment D for more details. Flow charts were also created outlining the reporting procedure for two scenarios: non-hazardous discharges and discharges involving oil, hazardous waste, or hazardous substances (See Figures 1 and 2). Reports of illicit discharges can be initiated telephonically, on the Environmental Division website ( <a href="http://www.wood.army.mil/dpwenv">http://www.wood.army.mil/dpwenv</a> ) . A reporting form showing needed information can also be found at the web address.	Aug-07
2.) Identification and reporting process established for enforcement actions	4.2.3.1.2*	1	<b>Complete</b> - As outlined in the SWMP, a four-level Continuum of Enforcement consisting of a Verbal Warning, a Letter of Warning, a Notice of Non-Compliance, and Regulatory Notification will be used. See Attachment E - SWMP BMP #3B for greater detail regarding each level in the Continuum of Enforcement for storm water quality.	9/11/2009
3.) Implementation of illicit discharge reporting procedure	4.2.3.1.2*	1-5	Planned to begin in second reporting cycle	
<b>BMP 3C - Illicit Discharge Detection and Elimination Plan (SWMP 7.3.3, page 26)</b>				
1.) Complete list of existing information on illicit connection tests performed to date	4.2.3.1.3*	1	The FLW Directorate of Public Works (DPW) has been responsible for the installation infrastructure since its inception and the work process, which DPW is responsible for reviewing and executing, has been in place for decades. FLW is currently developing a Scope of Work to conduct smoke testing of the sanitary sewer system. The results of this testing should reveal illicit storm water connections to the sanitary sewer system and also reveal possible leaks/breaks in the sanitary collection system.	In Progress
2.) Maintain records of illicit discharges identified, enforcement, and corrective actions	4.2.3.1.3*	1-5	Spreadsheet under development.	In Progress

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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
3.) Development of a reporting procedure (ex. contacts flow chart) and continuum of enforcement	4.2.3.1.3*	1	<b>Complete</b> - The Continuum of Enforcement is outlined in Section 7.3.2 - BMP #3B of the SWMP (Attachment E). The MS4 Program Manager will ensure the appropriate enforcement action is taken in accordance with the SWMP. The proponent for each of the established enforcement actions is established in the SWMP and is as follows: Verbal Warning - Chief, Energy, Environment, and Natural Resources Division; Letter of Warning - Director of Public Works; Notice of Non-Compliance - Deputy Garrison Commander; and Regulatory Notification - Appropriate Regulatory Agency. A flow chart was also created outlining the reporting procedure for the continuum of enforcement (see Figure 3).	9/11/2009
4.) Trainings for staff/targeted audiences for illicit discharge detection	4.2.3.1.3.1 - 4.2.3.1.3.5	2-3	Planned to begin in second reporting cycle	
5.) Conduct field tests for illicit discharge and connections for existing storm system	4.2.3.1.3*	2-3	Planned to begin in second reporting cycle	
6.) Maintain records of illicit discharges identified, enforcement and corrective actions.	4.2.3.1.3*	1-5	Planned to begin in second reporting cycle	
<b>BMP 3D - Identification of Non-storm Water Discharges and Flows (SWMP 7.3.4, page 27)</b>				
1.) Conduct investigation and evaluation of non-storm water discharges and flows	4.2.3.1.4- 4.2.3.1.6	1-2	Planned to begin in second reporting cycle	
2.) Develop a standard operating procedure to address the impact any non-storm water discharges or flows identified as significant contributors of pollutants to the system	4.2.3.1.4- 4.2.3.1.6	1-2	Planned to begin in second reporting cycle	
3.) Implement the standard operating procedure for significant non-storm water discharges and flows	4.2.3.1.4- 4.2.3.1.6	3-5	Planned to begin in third reporting cycle	

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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 3E - Evaluate the Illicit Discharge Detection and Elimination Program (SWMP 7.3.5, page 27)</b>				
1.) Monitor completion of measurable goals outlined in BMP #'s 3A-3D	4.2.3.1.3.6	1-5	BMP #3A - a storm sewer system inventory and inspection has been completed; BMP #3B - an illicit discharge reporting procedure has been developed (see Figures 1 and 2) and an identification and reporting process has been established for enforcement actions [see Attachment E]; BMP #3C - a Continuum of Enforcement flowchart has been developed (see Figure 3); and BMP #3D - planned to begin in second reporting cycle	BMP #3A - 6/10/10 BMP #3B - Aug-07 BMP #3C - 9/11/09 BMP #3D - on-going
2.) Decrease in the number of illicit discharges into the installation's storm water system	4.2.3.1.3.6*	1-5	On-going effort. There has been no smoke testing to date so there is no data regarding decreases in the number of illicit discharges; however, two illicit discharges were found by contractors in January 2010 and were corrected by the base maintenance contractor. The FLW DPW has been responsible for the installation infrastructure since its inception and the work process, which DPW is responsible for reviewing and executing, has been in place for decades. FLW is currently developing a Scope of Work to conduct smoke testing of the sanitary sewer system. The results of this testing should reveal illicit storm water connections to the sanitary sewer system and also reveal possible leaks/breaks in the sanitary collection system.	On-going

**Note: The Illicit Discharge Detection and Elimination MCM correlates to Section D of MDNR Form MO 780-2049**

- Green shading indicates goal has been either completed or implemented
- Orange shading indicates goal that was scheduled for completion this reporting cycle but not completed
- No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- DPW - Directorate of Public Works
- FLW - Fort Leonard Wood
- GIS - Geographic Information System
- GPS - Global Positioning System
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SWMP - Storm Water Management Plan

TABLE 4  
 Construction Site Storm Water Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 4A - Regulatory Mechanism and Enforcement Procedures (SWMP 7.4.1, page 28)</b>				
1.) Complete evaluation of existing SWPPP in relation to the six minimum control measures.	4.2.4.1.1*	2	Planned for completion in second reporting cycle	
2.) Amend SWPPP, if necessary, to comply with MS4 permit conditions	4.2.4.1.1*	2-3	Planned to begin in second reporting cycle	
3.) Implement administrative procedures/policies regarding the SWPPP, document inspections and enforcement procedures	4.2.4.1.1.1 - 4.2.4.1.1.3	2-5	Planned to begin in second reporting cycle	
<b>BMP 4B - Construction Site Implementation of Erosion and Sediment Control BMPs (SWMP 7.4.2, page 31)</b>				
1.) Create a tracking system (ex. database) that maintains records of all construction site operators' approved permits and BMPs implemented onsite	4.2.4.1.6*	1	<p><b>Complete</b> - Two electronic databases have been implemented for tracking land disturbance activities at FLW. The first database maintains a record of construction site operators' approved permits. Within this database is all critical information such as permit number, project location, and project POC.</p> <p>The second electronic database tracks the compliance status of each permit and stage of enforcement being taken. This tracking system includes results of inspections, which includes adherence to BMPs and legal requirements.</p> <p>From July 2009 to June 2010 there were 22 permits submitted, with 19 approved and three pending approval.</p>	May-10
2.) Complete site plan reviews to ensure compliance with SWPPP	4.2.4.1.3	1-5	On-going. All submitted work plans are reviewed by DPW Environmental Branch to ensure compliance with the SWPPP.	On-going
3.) Maintain records of on-going site inspections and enforcement actions for sediment and erosion control practices implemented onsite	4.2.4.1.5*	1-5	<p>On-going. Records of site inspections and inspection reports are maintained in electronic and hardcopy formats. Compliance issues noted during inspections are recorded on the inspection report and compliance tracking database.</p> <p>There were 731 inspections performed between July 2009 and June 2010.</p> <p>There were three enforcement actions identified between July 2009 and June 2010. The three enforcement actions consisted of a warning letter from the DPW Environmental Branch Chief. The warning letters were issued due to an untimely response in addressing deficiencies observed during inspections for non-conformances with BMPs (i.e., silt fencing, ground cover).</p>	On-going

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TABLE 4  
Construction Site Storm Water Runoff Control Minimum Control Measure  
MS4 Annual Report  
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Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 4C - Waste Controls for Construction Site Operators (SWMP 7.4.3, page 31)</b>				
1.) Maintain records of all construction site operator's approved permits and BMPs	4.2.4.1.7*	1-5	On-going. Records of permits, permit applications, and SWPPPs (identifying BMPs to be implemented) are maintained at the DPW Environmental Office.	On-going
2.) Evaluate existing SWPPP in relation to the six minimum control measures and make necessary amendments for compliance with increased construction waste controls, if appropriate	4.2.4.1.2*	1-2	The SWPPP has been evaluated, however, it has not yet been revised. Planned for completion in second reporting cycle.	
3.) Inspect projects on FLW for construction waste control BMPs on a routinely scheduled basis, potentially integrated with erosion and sediment control inspection process	4.2.4.1.2*	2-5	Planned to begin in second reporting cycle	
<b>BMP 4D -Procedure for Site Plan Reviews (SWMP 7.4.4, page 32)</b>				
1.) Continue site reviews for projects >1 acre of land disturbance	4.2.4.1.3	1-5	On-going. All projects >1 acre of land disturbance are reviewed. Between July 2009 and June 2010 there were 46 construction sites > 1 acre that required land disturbance permits and were inspected while the land disturbance permit was active.	On-going
2.)Review of current site review process and identification of policy changes, if needed	4.2.4.1.3	1-2	Planned for completion in second reporting cycle	
3.) If determined appropriate, develop storm water project submittal checklist for storm water management and compliance with MS4 permit conditions for use during site review	4.2.4.1.3	2-3	Planned to begin in second reporting cycle	
<b>BMP 4E - Establishment of Procedures for Receipt and Consideration of Noncompliance (SWMP 7.4.5, page 33)</b>				
1.) Create a SWPPP report mechanism (ex: phone line, webpage form) for public to report construction site complaints.	4.2.4.1.4	1	Not yet complete. Alternatives are being evaluated. The installation does have a system for public comments and it is still being determined if this system is appropriate for FLW.	In progress
2.) Create policy and procedures to track complaint reports from all installation construction site SWPPP non-compliance	4.2.4.1.4*	1-2	Planned for completion in second reporting cycle	
3.) Create procedures to track information from construction site inspections and enforcement actions	4.2.4.1.7*	1-2	<b>Complete</b> - A procedure has been developed to utilize a standardized checklist when inspecting permitted land-disturbance sites. Inspection reports are generated for each site, and compliance information is added to the tracking database. Copies of site inspection checklists and inspection reports are retained for future reference.	Jun-10

The Permit Section Compliance column identifies required elements of the permit

\*This is a proposed tool to assist with compliance with permit requirements

TABLE 4  
 Construction Site Storm Water Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
4.) Maintain records for all inspections and enforcement actions for sediment and erosion control practices	4.2.4.1.6*	1-5	On-going. Records of site inspections and inspection reports are maintained in electronic and hardcopy formats. Compliance issues noted during inspections are recorded on the inspection report and compliance tracking database. There were 731 inspections performed between June 2009 and June 2010.	On-going
<b>BMP 4F - Establishment of Procedures for Site Inspection and Enforcement (SWMP 7.4.6, page 33)</b>				
1.) Maintain copies of all construction site operator's permits and BMPs within the installation	4.2.4.1.6*	1-5	On-going. Records of permits, permit applications, and SWPPPs (identifying BMPs to be implemented) are maintained at the DPW Environmental Branch.	On-going
2.) Develop tracking mechanism (ex. database) for inspection and enforcement action records	4.2.4.1.6*	1-2	<b>Complete</b> - An electronic database has been developed which tracks new and repeated non-conformances identified at permitted sites along with the status of enforcement action, if any, that has been taken for each site.	May-10
3.) Ensure inspectors for runoff control SWPPP and BMP evaluations have appropriate training	4.2.4.1.6*	1-5	Planned to begin in second reporting cycle	
4.) Development of administrative procedure for internal review, enforcement mechanisms and sanctions	4.2.4.1.6*	1-3	Planned for completion in Year 2 (Spring 2011)	
<b>BMP 4G - Evaluate the Success of Construction Site Storm Water Runoff Control (SWMP 7.4.7, page 34)</b>				
1.) Adherence to the SWPPP at each construction site, which is tracked through the inspection and enforcement reporting procedures	4.2.4.1.7*	1-5	On-going. Records of site inspections and inspection reports are maintained in electronic and hardcopy formats. Compliance issues noted during inspections are recorded on the inspection report and compliance tracking database. In addition, it is a permit requirement that the permittee have a responsible person named in the site SWPPP and that records are kept by the permittee of training, inspections, or modifications to the SWPPP. These permitted sites are regularly inspected (weekly, bi-weekly, or monthly depending on the sites compliance status) to ensure they are in compliance and are maintaining records.	On-going

**Note: The Construction Site Storm Water Runoff Control MCM correlates to Sections C & F of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

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No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

BMP - Best Management Practice

DPW - Directorate of Public Works

FLW - Fort Leonard Wood

MDNR - Missouri Department of Natural Resources

MS4 - Municipal Separate Storm Sewer System

POC - Point of Contact

SWMP - Storm Water Management Plan

SWPP - Storm Water Pollution Prevention Plan

The Permit Section Compliance column identifies required elements of the permit

\*This is a proposed tool to assist with compliance with permit requirements

TABLE 5  
 Post-Construction Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 5A - Regulatory Mechanism for Addressing Post-Construction Runoff (SWMP 7.5.1, page 35)</b>				
1.) Develop command policy statement addressing post construction control requirements	4.2.5.1 - 4.2.5.1.2	2	<b>Complete</b> - Garrison Command Policy No. 200-1, Fort Leonard Wood Environmental Management Strategy. See Attachment F for more details about this policy.	6/9/2009
2.) Review existing mechanisms for inspection and enforcement of post construction controls	4.2.5.1 - 4.2.5.1.2	1-2	Planned for completion in second reporting cycle	
3.) Implement inspection and enforcement policy addressing post construction controls	4.2.5.1 - 4.2.5.1.2	2-4	Planned to begin in second reporting cycle	
4.) Train personnel/contractors on policies and procedure related to post construction controls	4.2.5.1 - 4.2.5.1.2*	2-4	Planned to begin in second reporting cycle	
<b>BMP 5B - Development and Implementation of Structural and/or Nonstructural BMPs (SWMP 7.5.2, page 38)</b>				
1.) Review and evaluate structural and non-structural BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
2.) Develop/Identify standard specifications for selected structural BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
3.) Develop/Identify standard specifications for selected non-structural BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
4.) Ensure adequate training for impacted audiences (See 1A) on long-term BMP site planning, design, and implementation/construction	4.2.5.1.4* - 4.2.5.1.6.2*	2-3	Planned to begin in second reporting cycle	
5.) Incorporate post-construction structural and non-structural BMP requirements into site planning and review process	4.2.5.1.4* - 4.2.5.1.6.2*	1-2	Planned for completion in second reporting cycle	
6.) Develop inspection and operations and maintenance programs for long-term site BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	2	Planned for completion in second reporting cycle	
7.) Implement inspection and operations and maintenance programs for long-term site BMPs	4.2.5.1.4* - 4.2.5.1.6.2*	3-5	Planned to begin in third reporting cycle	
<b>BMP 5C - Long-term Operation and Maintenance of BMPs (SWMP 7.5.3, page 40)</b>				
1.) Evaluate existing FLW SWPPP and make revisions as necessary to provide for long-term operation and maintenance of BMPs and compliance with the FLW command policy statement for post-construction controls	4.2.5.1.3	1	<b>Complete</b> - Completed a review of the FLW SWPPP evaluating it against the permit requirements of the Land Disturbance Permit, the MS4 Permit, minimum control measures in the SWMP, and the Industrial Permit (SIC code 9711). The review and evaluation included recommendations for changes to the SWPPP.	Apr-10
2.) Develop tracking mechanism (ex. database) for all implemented long-term structural and nonstructural BMPs, and inspection and enforcement actions on the installation	4.2.5.1.3	1-2	Planned for completion in second reporting cycle	
3.) Develop and implement program for inspection and maintenance of long-term control BMPs	4.2.5.1.3	2-5	Planned to begin in second reporting cycle	

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 \*This is a proposed tool to assist with compliance with permit requirements

TABLE 5  
 Post-Construction Runoff Control Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 5D - Evaluate the Success of Post-Construction Runoff Controls (SWMP 7.5.4, page 40)</b>				
1.) Adherence to the Post Construction Runoff Control Regulatory Mechanisms established and implemented on the installation (identified in BMP 5A)	4.2.5.1.7	1-5	Planned to begin in second reporting cycle	
2.) Successful long-term operation and maintenance of structural and nonstructural BMPs, as identified in BMPs 5B and 5C	4.2.5.1.7	1-5	Planned to begin in second reporting cycle	

**Note: The Post-Construction Runoff Control MCM correlates to Section F of MDNR Form MO 780-2049**

Green shading indicates goal has been either completed or implemented

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No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- FLW - Fort Leonard Wood
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SIC - Standard Industrial Classification
- SWMP - Storm water Management Plan
- SWPPP - Storm water Pollution Prevention Plan

TABLE 6  
 Pollution Prevention/Good Housekeeping Minimum Control Measure  
 MS4 Annual Report  
 U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
<b>BMP 6A - Municipal Operations and Maintenance Program (SWMP 7.6.1, page 41)</b>				
1.) Review existing Pollution Prevention/Good Housekeeping policies on FLW and identify opportunities for incorporating storm water pollution prevention practices	4.2.6.1.1*	1	<b>Complete</b> - Completed a review of the FLW SWPPP evaluating it against the permit requirements of the Land Disturbance Permit, the MS4 Permit, minimum control measures in the SWMP, and the Industrial Permit (SIC code 9711). The review and evaluation included recommendations to create additional SWPPPs or develop Pollution Prevention and Good Housekeeping Guidance document for specific activities at FLW. In addition, the FLW Environmental Management Strategy, Garrison Command Policy #200-1 was signed by the Garrison Commander on June 9, 2009. See Attachment F for more details on Garrison Command Policy #200-1.	Apr-10
2.) Identify and create inventory of municipal operations and industrial facilities impacted by the operation and maintenance program BMP	4.2.6.1.1	1	<b>Complete</b> - An Environmental Management System (EMS) was developed for FLW. The EMS is the part of the Installation's overall management system that integrates environmental concerns and issues in the organization's management processes. The EMS addresses organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining environmental policy.  In developing the Installation's EMS, all operational activities on the Installation were reviewed to determine the risk of each for adverse environmental impacts, including impacts to water quality. A listing of the aspects and impact of those activities determined to have an associated environmental risk was then developed and incorporated into the EMS. An extract of those activities having a potential risk to water quality is included in this report as Attachment G.	Dec-09
3.) Develop and implement controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, fleet or maintenance shops and other operational areas operated by FLW	4.2.6.1.2 - 4.2.6.1.4	2-3	Planned to begin in second reporting cycle	
4.) Develop and implement procedure for treatment and/or proper disposal of waste removed from the storm sewer system	4.2.6.1.5	2-4	Planned to begin in second reporting cycle	

The Permit Section Compliance column identifies required elements of the permit  
 \*This is a proposed tool to assist with compliance with permit requirements

TABLE 6  
Pollution Prevention/Good Housekeeping Minimum Control Measure  
MS4 Annual Report  
U.S. Army Maneuver Support Center and Fort Leonard Wood

Measurable Goals	Permit Section Compliance	Implement Permit Year	Status for July 28, 2010 annual report	Completion Date
5.) Develop and implement procedures to ensure that new and existing flood management projects are assessed for impacts on water quality or incorporation of water quality protection practices	4.2.6.1.6	2	Planned for completion in second reporting cycle	
6.) Continue compliance with FLW Spill Prevention and Response Plan	4.2.6.1.1*	1-5	Planned to begin in second reporting cycle	
<b>BMP 6B - Pollution Prevention/Good Housekeeping Training Program (SWMP 7.6.2, page 42)</b>				
1.) Identify existing and available pollution prevention/good housekeeping materials from federal, state, and local sources	4.2.6.1.1*	1	<b>Complete</b> - See Attachment C (Publications List) for a listing of brochures and other materials available for distribution. Survey of publications will be on-going and updated as new information becomes available.	Feb-10
2.) Identify distribution methods to each targeted audiences (ex: workshops, posters, etc.)	4.2.6.1.*	1-2	Planned for completion in second reporting cycle	
3.) Conduct trainings for pollution prevention/good housekeeping practices	4.2.6.1.7	2-5	Planned to begin in second reporting cycle	
4.) Evaluate impact of trainings for pollution prevention/good housekeeping practices	4.2.6.1.7*	2-5	Planned to begin in second reporting cycle	
5.) Evaluate and revise educational materials as necessary to ensure target audiences are informed and complying with pollution prevention/good housekeeping practices	4.2.6.1.7*	2-5	Planned to begin in second reporting cycle	
<b>BMP 6C - Evaluate the Success of Pollution Prevention/Good Housekeeping (SWMP 7.6.3, page 42)</b>				
1.) Adherence to the Municipal Operations and Maintenance Program established and implemented on the installation, identified in BMP #6A	4.2.6.1.8*	1-5	Planned to begin in second reporting cycle	
2.) Trainings held and number of attendees for the Pollution Prevention/Good Housekeeping Training Program, identified in BMP #6B	4.2.6.1.8*	1-5	Planned to begin in second reporting cycle	

**Note: The Pollution Prevention/Good Housekeeping MCM correlates to Section E of MDNR Form MO 780-2049**

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No shading indicates goals that will be implemented during future reporting cycles

**Abbreviations**

- BMP - Best Management Practice
- EMS - Environmental Management System
- FLW - Fort Leonard Wood
- MDNR - Missouri Department of Natural Resources
- MS4 - Municipal Separate Storm Sewer System
- SIC - Standard Industrial Classification
- SWMP - Storm water Management Plan
- SWPPP - Storm water Pollution Prevention Plan