

2017 MS4 Annual Report

U.S. Army Garrison Fort Wainwright, Alaska

APDES Permit No. AKS055859

Prepared for:

U.S. Army Garrison Fort Wainwright, Alaska

Prepared by:

New North Consulting, LLC

February 15, 2018

RECEIVED

FEB 1 2018

**DEPARTMENT OF
ENVIRONMENTAL CONSERVATION**

APPENDICES

- A** Storm Water Pollution Prevention Newspaper Article
- B** Storm Water Pollution Prevention Outreach Materials
- C** Garrison Policy Letter #35
- D** Sample Erosion and Sediment Control Plan
- E** MS4 Construction Site Inspection Form
- F** Department of the Army memorandum, Army Storm Water Management Using Low Impact Development, 21 September 2015
- G** Army Low Impact Development Technical User Guide
- H** Storm Water Pollution Prevention Training Presentations
- I** Updated Table of Multi-Sector General Permit-Regulated Facilities at Fort Wainwright

LIST OF ACRONYMS

AEC	Army Environmental Command
ADEC	Alaska Department of Environmental Conservation
APDES	Alaska Pollutant Discharge Elimination System
BMP	Best management practice
CGP	Construction General Permit
CHPP	Central Heat and Power Plant
DoD	Department of Defense
DPW	Directorate of Public Works
EPA	Environmental Protection Agency
ESCP	Erosion and Sediment Control Plan
FOG	Fats, oils, and grease
FWA	Fort Wainwright
MCM	Minimum control measure
MEP	Maximum extent practicable
MILCON	Military Construction
MS4	Municipal separate storm sewer system
MSGP	Multi-Sector General Permit
NOI	Notice of Intent
OWS	Oil/water separator
PAO	Public Affairs Office
POL	Petroleum, oil, lubricant
PX	Post Exchange
QAPP	Quality Assurance Project Plan
SGT	Sergeant
SWMP	Storm Water Management Plan
SWPP	Storm water pollution prevention
SWPPP	Storm Water Pollution Prevention Plan
USAG	United States Army Garrison
USACE	United States Army Corps of Engineers
WQS	Water quality standards

1.0 INTRODUCTION

1.1 Overview

This document has been prepared to satisfy the annual reporting requirements for the Fort Wainwright (FWA) Municipal Separate Storm Sewer System (MS4) Permit.¹ FWA must submit a Summary Annual Report and a Detailed Annual Report to fulfill the reporting requirements set forth in Part 4.3 of the MS4 Permit. The Summary Annual Report is included as Appendix A; the Detailed Annual Report comprises the main body of this document.

FWA was issued the MS4 Permit on September 26, 2016 with an effective implementation date of November 1, 2016. According to the compliance schedule presented in Table 4-2 of the Permit (*Submission Deadlines for Annual Reports*), Annual Reports are due February 15 following each respective Permit year. This report accounts for the 2017 calendar year (in addition to November and December of 2016, since the permit became effective in November 2016).

The purpose of the Annual Report is to:

1. Evaluate compliance with Permit conditions,
2. Gauge the appropriateness of best management practices (BMPs),
3. Track BMP implementation towards satisfying measureable goals identified in the Storm Water Management Plan (SWMP), and
4. Determine the overall effectiveness of the SWMP.

This document is structured according to the Minimum Control Measures (MCMs) listed in section 3 of FWA's MS4 Permit:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment

¹ *Alaska Pollutant Discharge Elimination System Permit For Storm Water Discharges From Small Municipal Separate Storm Sewer Systems, Final Permit, Permit Number: AKSO55859*; hereto referenced as "the MS4 Permit," "FWA's MS4 Permit," "the Permit," or "Permit."

6. Pollution Prevention and Good Housekeeping

1.2 Detailed Annual Report Requirements

Part 4.3.3 lists what must be included in, or with, the Annual Report, at a minimum:

- An updated SWMP document as required in Part 2.0 of the MS4 Permit.
- A description of the effectiveness of each SWMP program component or activity (see Part 4.2 of the MS4 Permit).
- Planned activities and changes for the next reporting period for each SWMP program component or activity.
- An evaluation of compliance with the requirements of the MS4 Permit, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals of the SWMP for each MCM.
- Results of any information collected and analyzed during the previous twelve-month reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the maximum extent practicable (MEP).
- A summary of the activities FWA plans to undertake during the next reporting cycle (including an implementation schedule) for each MCM.
- Proposed changes and completed changes to the SWMP, including changes to any BMPs or any identified measurable goals for any MCMs.
- Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable water quality standards (WQS).
- Notice if FWA is relying on another entity to satisfy some of the permit obligations, if applicable.

The following sections of this report address applicable provisions in the above list. Copies of all Annual Reports must be available to the public through the municipal library system, an FWA-maintained website, or other easily accessible location.

2.0 ANNUAL REPORTING REQUIREMENTS FOR MCMs

Reporting requirements for each MCM are addressed in the order in which they are described in FWA's MS4 Permit.

2.1 MCM 1 – Public Education and Outreach

2.1.1 Permit Year 1 Reporting Requirements for MCM 1

Section 3.1.4 of the MS4 Permit requires the following information be included in the Annual Report regarding MCM 1:

- Describe the public education program and outreach activities accomplished during the previous calendar year, and submit at least one copy of each educational material distributed.
- Describe the methods and frequency of disseminating information.
- Describe the target audiences and pollutants/sources that are addressed by the program and how they were selected.
- Estimate the number of people reached by the program over the previous 12-month period.
- List the measureable goals for the public education and outreach program over the next 12-month period.
- List the dates by which the measureable goals will be achieved.
- Identify the person(s) responsible for implementing and coordinating the education activities.

2.1.2 MCM 1 Compliance Discussion

The Public Education and Outreach Program at FWA is detailed in SWMP Section 3.1. The compliance schedule for implementation of MCM 1 milestones is included in Table 1 of FWA's MS4 Permit. Table 1 describes the general permit requirement and provides the compliance date (typically, which permit year) that each respective requirement must be implemented by. Four measureable goals were required to be implemented for MCM 1 during the first year of permit coverage (i.e., prior to December 31, 2017):

1. Publish articles in a local newspaper or permittee website regarding storm water pollution prevention (SWPP).

On March 3, 2017 an article was published in the Garrison newspaper (the Alaska Post) titled *New stormwater permit ensures swimmable, fishable, and drinkable waters for all*. The article

described the new MS4 permit, what the permit intends to achieve, and provided contact information for storm water-related inquiries and illicit discharge awareness. The six MCMs were identified in the article, with a brief description of target goals. The Alaska Post is a weekly newspaper produced by the U.S. Garrison Fort Wainwright Public Affairs Office (PAO). The publication serves more than 16,000 soldiers, families, and DOD civilian employees at Fort Wainwright and local communities. The Alaska Post is made available throughout the installation at various locations as well as on line. A link to the publication is located at Fort Wainwright's home webpage, located at: www.wainwright.army.mil.

2. Create or purchase SWPP materials for key audiences and distribution at annual FWA events (within one year of permit date)

Three different outreach brochures/rack cards were developed: *Storm Water Compliance at Maintenance Facilities*, *Spill Awareness and Guidance for Food Facilities*, and *Pet Waste and Water Quality*. These materials are made available to residents, employees, contractors, and visitors at the Department of Public Works (DPW) Environmental Division office, and are distributed at a variety of installation events. In 2017, they were distributed at the local Earth Day celebration and during a Fire and Safety Open House. Over 500 brochures were distributed during the 2017 calendar year. Remaining brochures will continue to be distributed at appropriate installation events. Due to variables such as personnel training, weather for outdoor activities, and potential deployments, dates for installation events during 2018, when outreach brochures will be distributed, have not established at the time this report was prepared.

3. Update housing tenant materials to include storm water related materials (within one year of permit date)

The *North Haven Communities Tenant Guide* was updated on October 22, 2017. The guide conveys educational information to tenants regarding activities that can impact storm water. Examples include proper pet waste management, pest management, vehicle maintenance activities, recycling, and the proper handling, management, and disposal of household hazardous wastes. All residents receive the current version of the Tenant Guide when they move in to their residential units. In 2017, the new tenant guide was distributed to 1,842 residential units.

4. Develop and make available to FWA personnel a website with information about storm water management (within one year of permit date)

FWA's environmental compliance website² provides links to each program department under the Environmental Division. The web page also provides a specific link to FWA's storm water program. The storm water web page provides an overview of the installation's storm water program, including which storm water permits the installation operates under. Key aspects of

² <https://www.wainwright.army.mil/index.php/about/environmental/compliance>

the storm water permits are discussed, and contact information is provided, in addition to links to specific storm water permits and management plans.³

A copy of the Alaska Post article discussed above is provided in Appendix A of this report; copies of other educational outreach materials discussed in this section are provided in Appendix B.

2.1.3 Measurable Goals for MCM 1 During the Next 12 Months

The measureable goals under MCM 1 that must be implemented during calendar year 2018 are listed below, with anticipated milestone dates, and the responsible party/parties for respective actions.

1. Publish article(s) in a local newspaper or FWA website regarding SWPP.

FWA will continue to educate the public about SWPP by publishing articles in the local newspaper and/or installation website, and materials will continue to be distributed at annual FWA events such as Earth Day celebrations and open houses. DPW Environmental staff will be responsible for these tasks. As the privatized housing contractor develops updated housing tenant materials, DPW Environmental will make the materials available, in addition to new residents receiving the updated information in their orientation packets. The installation's environmental compliance website will be updated semi-annually, as required. The DPW Environmental Division will coordinate with the installation's PAO to facilitate this process and convey pertinent information.

2. Develop and install signs describing SWPP and pet waste management along the Chena River, in FWA recreational parks, and in other sensitive areas. Signage shall be reviewed and updated, if needed, at least once during the permit cycle.

FWA will design and install SWPP signage as required. As discussed in Section 3.1.3.3 of the SWMP, the DPW Environmental Division has identified the following areas to install signage with SWPP-specific messaging:

- Memorial Park
- Glass Park
- Chena Cove Recreation Area
- Engineer Park

³ This year, the U.S. Army has changed the layout and format of all installation websites to standardize their appearance and function. This created a slight challenge in loading material onto the website and required breaking file sizes into small groups. Therefore only the body of the SWMP is available on the site (no SWMP attachments).

The first sign(s) will be installed prior to the ground freezing (by the end of the 2018 construction season). Additional signage will be developed and installed in different areas each permit year as required.

3. Create or purchase and distribute a brochure on the proper use and disposal of lawn chemicals and household hazardous products and distribute to key audiences.

DPW Environmental staff will develop and distribute these brochures.

The United States Army Garrison (USAG) FWA Garrison Commander has ultimate responsibility for all regulatory compliance at Fort Wainwright; the USAG FWA chain of command below the USAG FWA Garrison Commander has compliance responsibilities as dictated by position, and the USAG FWA Water Program Manager has direct responsibility for day-to-day compliance with the MS4 Permit and SWMP, including coordinating and implementing the Public Education and Outreach program at FWA.

2.2 MCM 2 – Public Involvement and Participation

2.2.1 Annual Report Requirements for MCM 2

Section 3.2.7 of the MS4 Permit requires the following information be included in the Annual Report regarding MCM 2:

- In the first Annual Report only, describe the state or local requirements for public involvement, including how the public was involved in the development of the SWMP submitted with the permit application.
- Describe the activities and target audiences for public involvement that the program accomplished for the preceding 12-month period, including any monitoring and/or survey results, number of storm drains stenciled, etc.
- Describe the procedure(s) for receiving and reviewing public comments.
- Describe the measureable goals for the public involvement/participation program over the next 12-month period.
- List the dates by which FWA will accomplish each of the upcoming measureable goals.
- Identify the person(s) responsible for implementing and coordinating the public involvement/participation activities.

2.2.2 MCM 2 Compliance Discussion

The Public Involvement and Participation program at FWA is detailed in SWMP Section 3.2. Four measureable goals were required to be implemented for MCM 2 during the first year of permit coverage (i.e., prior to December 31, 2017):

1. FWA must make the SWMP and all Annual Reports available to the public by posting them on an FWA-maintained website.

A copy of FWA's SWMP is currently available on the FWA website (link provided in section 2.1.2, above). Copies of the signed and certified 2017 Multi-Sector General Permit (MSGP) and MS4 Annual Reports will be posted on the website by March 15, 2018.

2. FWA must host a community event aimed at litter removal or similar cleanup within the MS4.

The annual USAG-FWA Spring Clean Up was held May 8–12, 2017 addressing the cantonment area of the post, including areas along the Chena River. Multiple tenant units and organizations participated, including 1-25th SBCT, 17th CSSB, UATF, USARAK staff, Bureau of Land Management (BLM), RCI Housing, Doyon, 574th QM, 507 Signal, EOD, and DPW staff. Loose trash was collected and properly disposed of, and the FWA community was engaged in a SWPP-specific activity in which program goals were conveyed.

3. FWA must develop and implement a storm drain-stenciling program by hosting a design contest in FWA schools. Within two years, half of the storm drain inlets must be stenciled. Within four years, 100 percent of the storm drain inlets must be stenciled.

Several designs for a storm water program mascot were developed in 2017. During the Earth Day Open House, students at the installation voted, and ultimately selected "Sergeant (SGT) Salmon" as the mascot. In 2018, a coloring contest of SGT Salmon will occur, and stencils will be created from the final graphic. Prior to the end of the 2018 construction season, DPW staff will facilitate the stenciling of 50% of installation storm drains.

4. FWA must convene a quarterly Storm Water Steering Committee to coordinate and accomplish the goals of the SWMP. The meeting schedule must be made known to the public and Alaska Department of Environmental Conservation (ADEC) through direct mail or e-mail notification, or other locally appropriate means.

At the time this report was prepared, this requirement had not been fully implemented. Quarterly storm water meetings did occur in 2017, however, the meetings were combined with other, required military meetings, and were therefore not fully open to the public. With recent personnel changes at FWA include a new Installation Commander, new Environmental Chief, and a pending position for a new Water Program Manager; it is anticipated that new management will support ongoing implementation of a Storm Water Steering Committee as intended (and required) by the MS4 Permit.

Prior to SWMP development, the Garrison discussed with the Environmental Protection Agency (EPA) Region 10 and ADEC that the Department of Defense (DoD) is unable to include the public in the development of management plans for military installations. Therefore, unlike other regulated municipalities, the public did not have input into the development of FWA's SWMP. During the process of permit implementation, however, there are opportunities and mechanisms

in place for receiving and processing public feedback and engaging the public through education, involvement, and participation, per the requirements of MCMs 1 and 2. SWPP messaging and training reach a diverse population at FWA. The DPW Environmental Division has an open-door policy and encourages public feedback. The FWA community may provide comments and concerns to DPW; more often, DPW receives input from tenant groups and the privatized contractors on post, rather than from individuals. Nonetheless, the public is welcome to inquire about various programs, provide feedback, and is encouraged to report any illicit discharges that may be observed on FWA properties, including the MS4. DPW considers all input received, and up-chains relevant information through the installation command structure for consideration and/or resolution.

2.2.3 Measurable Goals for MCM 2 During the Next 12 Months

The measureable goals under MCM 2 that must be implemented during calendar year 2018 are annual extensions of Year 1 requirements discussed above. The actions FWA will implement are listed below, with anticipated milestone dates, and the responsible party/parties for the respective actions.

- Fort Wainwright will continue to plan and host community litter clean up activities annually, during the month of May. All tenant units and organizations including 1-25th SBCT, 17th CSSB, UATF, USARAK staff, BLM, RCI Housing, Doyon, 574th QM, 507 Signal, EOD, and DPW staff will be invited and encouraged to participate.
- Maintain a quarterly Storm Water Steering Committee that represents multiple FWA organizations, and is open to ADEC and the public, as required.

The USAG FWA Garrison Commander has ultimate responsibility for all regulatory compliance at Fort Wainwright; the USAG FWA chain of command below the USAG FWA Garrison Commander has compliance responsibilities as dictated by position, and the USAG FWA Water Program Manager has direct responsibility for day-to-day compliance with the MS4 Permit and SWMP, including coordinating and implementing the Public Involvement and Participation program at FWA.

2.3 MCM 3 – Illicit Discharge Detection and Elimination

2.3.1 Annual Report Requirements for MCM 3

Part 3.3.11 of the FWA MS4 Permit states that Annual Report requirements for MCM 3 must be included *“Within two years from the effective date of this permit and annually thereafter...”*

Therefore, there are no Annual Report requirements under MCM 3 for Year 1 of the Permit. Nonetheless, the actions FWA has taken during the past year to satisfy certain MCM 3 requirements are discussed below.

2.3.2 MCM 3 Compliance Discussion

Part 3.3.1 of the MS4 Permit states the following:

Within one year from the effective date of this permit, the permittee must inventory and map the locations of industrial facilities to include in the storm sewer system map.

FWA has had coverage under the MSGP for multiple permit cycles, and has therefore maintained and updated maps of industrial facilities at the installation for many years. The map will be included in both the installation's industrial Storm Water Pollution Prevention Plan (SWPPP) and MS4 SWMP by the end of May 2018. Due to various factors, including the regulatory interpretation of what constitutes an "industrial" facility, FWA plans to remove multiple facilities from MSGP coverage in 2018, and will manage them instead under MS4 program, the SWMP, or other environmental compliance programs. This process, which will include an updated map of industrial facilities, will be completed by May 2018. The transfer of facilities from the MSGP coverage to MS4 Permit coverage is discussed further in Section 2.6 of this report.

Part 3.3.3 of the MS4 Permit states the following:

Within two years from the effective date of this permit and annually thereafter, the permittee shall carry out the following inspections:

...Part 3.3.3.2: Conduct dry weather outfall inspections to identify and investigate any illicit, inappropriate or undocumented non-storm water discharges to the storm sewer system.

DPW Environmental staff conducted a dry-weather, MS4-wide survey on June 22–23, 2017 to detect any illicit discharges at the installation. The assessment included inspections of the Chena River corridor along the cantonment. No illicit discharges were observed. In addition to this survey, outfalls at the installation that may receive industrial discharges are inspected quarterly under the MSGP program. Due to the nature of weather in Fairbanks, these inspections are often conducted during dry conditions.

Part 3.3.6 of the MS4 Permit states the following:

Within two years from the effective date of this permit, the permittee must effectively prohibit non-storm water discharges into their system through a regulatory mechanism, such as a Garrison Policy, to the extent allowable under federal, state, or local law. The permittee must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders.

The installation adopted Garrison Policy Letter #35 on March 7, 2016. The Garrison policy requires all individuals, units, directorates, activities, organizations, partners, and tenants including the U.S. Army Corps of Engineers (USACE), contractors, consultants; and all other personnel living, working, or conducting other authorized activities at USAG FWA to comply with

FWA MS4 Permit provisions and the installation SWMP. The policy also includes enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders. Garrison Policy Letter #35 was included with submittals to ADEC for both the draft and final MS4 Permit applications and the SWMP, and is also submitted with this Annual Report, as required, as Appendix C.

Part 3.3.10 of the MS4 Permit states the following:

Within three years from the effective date of this permit, the permittee must develop a comprehensive storm sewer system map. At a minimum, the map must show jurisdictional boundaries, the location of all inlets and outfalls, names and locations of all waters that receive discharges from those outfalls, and locations of all FWA operated facilities, including snow disposal sites. The permittee must submit a copy of the completed map to DEC as part of the corresponding Annual Report.

In October 2017, FWA completed a storm water survey of every inlet, catch basin, and outfall at the installation. In November 2017, this information was loaded into an advanced watershed modeling software program (PCSWMM), which is used to help manage sub-basin runoff within the FWA MS4. At the time this report was prepared, FWA was in the process of updating the model, with an anticipated completion date of May 2018.

Remaining MCM 3 requirements have respective milestones beyond Year 2 of the MS4 Permit. FWA will discuss those goals in subsequent Annual Reports.

2.3.3 Measurable Goals for MCM 3 During the Next 12 Months

The measureable goals under MCM 3 that must be implemented during calendar year 2018 are listed below, with anticipated milestone dates, and the responsible party/parties for respective actions.

- FWA must develop and implement a program to detect and eliminate illicit discharges. Specifically, the program must incorporate detection, identification of the source, and removal of non-storm water discharges, including illegal dumping, into the storm sewer system. FWA must, as part of this activity, develop an information management system to track illicit discharges.
- FWA must conduct the following inspections: wet weather outfall inspections to identify and investigate any illicit, inappropriate or undocumented non-storm water discharges to the storm sewer system; dry weather outfall inspections to identify and investigate any illicit, inappropriate or undocumented non-storm water discharges to the storm sewer system.
- FWA must survey and inspect oil/water separators (OWSs) to ensure proper connections to sanitary sewer system.

- FWA must inform users of the storm water conveyance system and the general public of hazards associated with illegal discharges and improper disposal of waste, and provide educational outreach materials.
- FWA will continue to conduct dry weather field screening for non-storm water flows from all outfalls (to include all outfalls by the end of the current MS4 Permit term). FWA will include field tests of selected chemical parameters as indicators of discharge sources. DPW Environmental staff will investigate any illicit discharge within 15 days of its detection, and take action to eliminate the source of the discharge within 45 days of its detection.
- FWA must document the following information during the 2018 calendar year related to illicit discharge detection and elimination, and include relevant information in the next Annual Report (2018 Annual Report) to ADEC:
 - A description of the criteria used to prioritize investigations in areas suspected of having illicit discharges (e.g., targeting older areas of the installation, areas of high public complaints, areas of high recreational or environmental value such as parks, golf courses, and drinking water sources).
 - A description of procedures used to locate and remove illicit discharges, including detection methods.
 - A summary of all dry weather testing conducted to date, and of FWA's efforts to remove any illicit discharge(s) identified.
 - A copy of the established regulatory mechanism(s) used to prohibit illicit discharges into the MS4. If FWA has yet to implement this requirement, describe the plan and schedule for doing so and progress towards implementation.
 - A description of FWA's enforcement policy and jurisdiction. The policy must include procedures for coordination with adjacent municipalities and/or federal or state regulatory agencies, to address situations when investigations indicate the illicit discharge originates outside FWA's jurisdiction. The policy must include procedures for notifying ADEC for assistance in enforcement of this permit provision, if FWA lacks legal authority to establish enforceable rules, or if an illicit discharger fails to comply with procedures or policies established by FWA.
 - A description of the methods used over the previous 12-month period (2018) to inform the public and/or train employees, contractors, and tenants about illicit discharges and the improper disposal of waste.

The USAG FWA Garrison Commander has ultimate responsibility for all regulatory compliance at FWA; the USAG FWA chain of command below the USAG FWA Garrison Commander has compliance responsibilities as dictated by position, and the USAG FWA Water Program Manager has direct responsibility for day-to-day compliance with the MS4 Permit and SWMP,

including coordinating and implementing the Illicit Discharge Detection and Elimination program at FWA.

2.4 MCM 4 – Construction Site Storm Water Runoff Control

2.4.1 Annual Report Requirements for MCM 4

Section 3.4.10 of the MS4 Permit requires the following information be included in the Annual Report regarding MCM 4:

- A copy of the established ordinance or other regulatory mechanism used to require erosion, sediment and waste controls at construction sites. If FWA has yet to develop the required regulatory mechanism, a description of the plan and implementation schedule must be provided.
- A summary of the number of sanctions and enforcement actions taken by FWA to ensure compliance with the construction site ordinance during the previous 12-month period. To the extent allowable under FWA's legal authority, sanctions may include both monetary and non-monetary penalties.
- A copy of the written requirements for appropriate erosion, sediment, and waste control BMPs at construction sites.
- A summary of the number of site plan reviews conducted.
- A description of the procedures for receipt and consideration of information submitted by the public.
- A summary of the number of sites inspected during the previous 12-month period, including a description of the site inspection procedures, how sites are prioritized for inspection, and when and how often sites are inspected.
- A list of measureable goals for the construction site runoff control program, including dates by which FWA will achieve each of the measureable goals.
- The name and title of the person(s) responsible for coordination and implementation of the construction site runoff control program.

2.4.2 MCM 4 Compliance Discussion

The Construction Site Storm Water Runoff Control program at FWA is detailed in SWMP Section 3.4. Five measureable goals were required to be implemented for MCM 4 during the first year of permit coverage (i.e., prior to December 31, 2017):

1. FWA must adopt a regulatory mechanism, such as a Garrison Policy letter, to the extent allowable under federal, state, or local law, which requires construction site operators to

practice appropriate erosion, sediment and waste control. This regulatory mechanism must include sanctions to ensure compliance.

In preparation for the MS4 permit (as introduced in Section 2.3.2 of this report), FWA developed Garrison Policy #35, which became effective on March 7, 2016. The policy letter, signed by the Installation Commander, discusses the MS4 Permit, SWPP program goals, and the requirements of the six MCMs. The letter also describes MS4 Permit responsibilities of the Garrison, installation tenants, and construction site operators on the installation. The letter explains actions that may be taken with individuals or entities that fail to comply with the SWMP.

2. FWA must publish and distribute requirements for construction site operators to implement appropriate erosion and sediment control BMPs and to control waste, such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality.

Garrison Policy Letter #35 requires operators of construction projects that are smaller than one acre in size but larger than 5,000 square feet and have the potential to impact waters of the U.S., to develop an Erosion and Sediment Control Plan (ESCP). A sample ESCP is included in FWA's SWMP (Attachment 4). In addition to erosion and sediment control measures, ESCPs also include measures to properly manage other construction-related pollutants, as outlined in this requirement. All ESCPs are kept on file at the DPW Environmental office. The sample ESCP in the FWA SWMP is provided in Appendix D of this report.

To compliment Alaska statute, Garrison Policy #35 also requires all operators of construction sites equal to, or greater than one acre in size (including common plans of development), to obtain and comply with the Alaska Pollutant Discharge Elimination System (APDES) Construction General Permit (CGP). The Garrison policy requires operators to submit their project SWPPP to DPW Environmental for review and approval.

3. FWA must develop procedures for reviewing all site plans for potential water quality impacts, including erosion and sediment control, control of other wastes and any other impacts that must be examined according to the requirements of the law, ordinance or other enforceable mechanism of Part 3.4.3. These procedures must include provisions for receipt and consideration of information submitted by the public.

All construction projects at FWA go through a "work order review" process that allows all departments within the DPW Environmental Division, including environmental compliance, a chance to review the proposed work and comment on regulatory requirements. Regarding storm water, projects may be identified as requiring a CGP or ESCP, depending on the project size, the location, and/or the potential of the project to impact waters of the U.S. If a CGP or ESCP are required, the respective plan is developed and submitted to the DPW Environmental for review.

4. FWA must develop standard language for inclusion in FWA construction contracts defining contractor roles and responsibilities for erosion and sediment control.

The majority of contracts for construction projects requiring permit coverage are managed through USACE. USACE developed standard language that is included in all their construction contracts for projects at FWA. With non-Military Construction projects, the military will not own the structure being built, and therefore cannot specify contract language. In such cases however, the construction plan are still reviewed by DPW Environmental to help ensure compliance with applicable provisions of the SWMP.

5. FWA must develop and implement procedures for site inspection and enforcement of control measures established as required in Parts 3.4.3 and 3.4.4 of the MS4 Permit, including enforcement escalation procedures for recalcitrant or repeat offenders.

Garrison Policy Letter #35 established enforcement procedures to help ensure compliance with the control measures established in Parts 3.4.3 and 3.4.4 of the MS4 Permit. There is an enforcement escalation matrix available to the Garrison Commander for recalcitrant or repeat offenders. Outside of extenuating circumstances, DPW Environmental staff performs at least one inspection at all construction projects at the installation. Construction projects spanning more than one year are inspected at least annually. To support the construction site inspection and enforcement program, FWA Environmental Compliance developed an "MS4 Construction Site Inspection Form" to document compliance inspections and help reinforce permit conditions. A copy of this form is provided in Appendix E of this report.

6. FWA must inspect all construction sites within the jurisdiction of the FWA MS4 for appropriate erosion/sediment/waste control at least once per year.

As stated above, all construction sites at FWA are inspected at least once per year. There were three projects at FWA in 2017 that required CGP coverage.⁴ An additional five inspections were conducted at projects requiring an ESCP. No sanctions or enforcement actions were taken as a result of construction site inspections performed in 2017.

2.4.3 Measurable Goals for MCM 4 During the Next 12 Months

The measureable goals under MCM 4 that must be implemented during calendar year 2018 are provided below, with anticipated milestone dates, and the responsible party/parties for respective actions.

- The DPW Environmental office, or a contractor on their behalf, will develop and conduct at least one training session for the FWA construction/design/engineering audience

⁴ Of the three projects, one was managed by FWA's Restoration program, and the other did not break ground in 2017.

related to the construction ordinance and BMP requirements referenced in Parts 3.4.3 and 3.4.4 of the MS4 Permit. This training will occur sometime during the 2018 calendar year when the appropriate audience is available.

- During 2018, FWA will track and include all required items listed in Part 3.4.10 of the MS4 Permit, as applicable, for inclusion in FWA's next MS4 Annual Report.

The USAG FWA Garrison Commander has ultimate responsibility for all regulatory compliance at Fort Wainwright; the USAG FWA chain of command below the USAG FWA Garrison Commander has compliance responsibilities as dictated by position, and the USAG FWA Water Program Manager has direct responsibility for day-to-day compliance with the MS4 Permit and SWMP, including coordinating and implementing the Construction and Post-Construction Storm Water Management programs at FWA.

2.5 MCM 5 – Post Construction Storm Water Management in New Development and Redevelopment

2.5.1 Annual Report Requirements for MCM 5

Section 3.5.7 of the MS4 Permit requires the following information be included in the Annual Report regarding MCM 5:

- A copy of the BMP design manual containing structural and non-structural BMPs that will be used to manage post-construction runoff from new development and redevelopment projects within the MS4. Include any specific priority areas for this program.
- An explanation of the design and performance features of the chosen BMPs intended to minimize water quality impacts.
- A copy of the established ordinance or other regulatory mechanism used to address post-construction runoff control. If FWA has yet to develop the required regulatory mechanism, a plan and schedule for implementation must be included.
- A description of how long-term operation and maintenance of the selected BMPs will be ensured, including the organizations responsible and their expected operation and maintenance schedule.
- A description of the plans to inform and educate developers and the public about appropriate project designs that minimize water quality impacts.
- A list of measureable goals for the post-construction runoff control program, including dates by which FWA will achieve each of the measureable goals.
- The name and/or title of the person(s) responsible for coordination and implementation of the post-construction storm water management program. (See Section 2.5.2, below.)

2.5.2 MCM 5 Compliance Discussion

All MCM 5 requirements in the FWA MS4 Permit are due for completion in Year 3 or Year 4 of the permit cycle. However, FWA has already addressed some of the items listed above, which are required to be included in the Annual Report as completed; those items are described below.

A copy of the established ordinance or other regulatory mechanism used to address post-construction runoff control. If FWA has yet to develop the required regulatory mechanism, a plan and schedule for implementation must be included.

Additionally, Part 3.5.2 of the MS4 Permit requires the following:

Within three years from the effective date of this permit, the permittee must adopt a regulatory mechanism, such as a Garrison Policy letter, to the extent allowable under federal, state, or local law to address post-construction runoff from new development and redevelopment projects. If such a mechanism did not previously exist, development and adoption of a mechanism must be part of the program. The permittee must evaluate existing procedures, policies, and authorities pertaining to activities occurring on their property that may be used to assist in the development of the required regulatory mechanism.

Garrison Policy Letter #35 mandates compliance with the six MCMs identified in the MS4 Permit, including post-construction runoff control. The policy states that all applicable user groups must comply with provisions outlined in the installation's SWMP. Section 3.5 of the FWA SWMP details compliance with MCM 5. The policy letter is discussed in more detail in Sections 2.3.2 and 2.4.2 of this Annual Report. FWA's DPW Environmental Division references two primary documents for post-construction runoff control BMPs: 1) Department of the Army memorandum, *Army Storm Water Management Using Low Impact Development*, 21 September 2015, and 2) *Army Low Impact Development Technical User Guide*, January 2013. These documents are included in Appendix F, and Appendix G of this report, respectively.

The USAG FWA Garrison Commander has ultimate responsibility for all regulatory compliance at Fort Wainwright; the USAG FWA chain of command below the USAG FWA Garrison Commander has compliance responsibilities as dictated by position, and the USAG FWA Water Program Manager has direct responsibility for day-to-day compliance with the MS4 Permit and SWMP, including coordinating and implementing the Construction and Post-Construction Storm Water Management programs at FWA.

2.5.3 Measurable Goals for MCM 5 During the Next 12 Months

There are no measureable goals for MCM 5 that are due within the next 12 months (calendar year 2018).

2.6 MCM 6 – Pollution Prevention and Good Housekeeping

2.6.1 Annual Report Requirements for MCM 6

Section 3.6.6 of the MS4 Permit requires the following information be included in the Annual Report regarding MCM 6:

- The Annual Report must document FWA's efforts to prevent or reduce pollutant runoff from FWA operations through the operation and maintenance program, including:
 - A description of the activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to the MS4.
 - A description of the employee-training program used to prevent and reduce storm water pollution, including the targeted department personnel, frequency of such training, and a copy of training materials. (See Section 2.6.2, below.)
 - A summary description of the controls for reducing or eliminating the discharge of pollutants from areas owned or operated by FWA, including but not limited to streets, roads, and highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, and snow disposal sites operated by FWA.
 - A description of procedures to ensure proper disposal of waste removed from the MS4 and MS4 operations including dredge spoil, accumulated sediments, floatables, and other debris.
 - A description of procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices.
 - A list of all industrial facilities owned or operated by FWA that discharge to the MS4, including industrial facilities that are subject to the APDES MSGP or individual APDES permits for discharges of storm water associated with industrial activity, and/or facilities as identified as part of the inventory required by Part 3.3.1 of the MS4 Permit. FWA must include the permit tracking number(s) or a copy of the Notice of Intent(s) (NOI) for each facility, as appropriate.
 - A list of measureable goals for the pollution prevention and good housekeeping program, including dates by which FWA will achieve each of the measureable goals.
 - The name and title of the person(s) responsible for coordination and implementation of the pollution prevention and good housekeeping program.

2.6.2 MCM 6 Compliance Discussion

The Pollution Prevention and Good Housekeeping program at FWA is detailed in SWMP Section 3.6. One measureable goal was required to be implemented for MCM 6 during the first year of permit coverage (i.e., prior to December 31, 2017):

- FWA must conduct annual SWPP inspections, including: wet-weather outfall inspections (100% each year), snow disposal areas (100% each year), and catch basins (50% each year).

FWA has consistently performed a number of storm water outfall inspections over the past few years, including during the 2017 calendar year. These inspections included quarterly industrial outfall inspections and quarterly visual monitoring at industrial outfalls, both of which are required by the installation's MSGP. Quarterly visual monitoring occurs during measureable storm events (i.e., during "wet weather"), and visually inspects outfalls for the presence of floatables, odor, erosion, structural integrity, vegetation conditions, and other required parameters. There are 12 outfalls at FWA that could receive industrial storm water discharges. Most of these outfalls also receive MS4 discharges, and they are located in a variety of locations at the installation. Therefore, they are representative of multiple activities, industrial and municipal in nature, at the installation. Discharges rarely reach any outfalls at the installation due to long, permeable conveyance channels leading to the outfalls, in which storm water typically infiltrates. Utilizing permeable ditches and swales is a BMP selected and implemented by FWA to help ensure potential pollutants, including floatables and sediment, do not discharge to waters of the U.S. Wet-weather outfall inspections were conducted on June 11, 2017. Catch basins were inspected between June 20–25, 2017.

One area where discharges are more likely to reach waters of the U.S. is at the Ladd Army Airfield, where some storm drains are hard plumbed to the Chena River, or to permeable areas immediately adjacent to the river. These storm drains and conveyances were also inspected quarterly under the MSGP program. Storm drains in residential and other municipal (i.e., non-industrial) areas convey storm water to permeable swales and ditches; no municipal drains are hard-plumbed to waters of the U.S.

During the third and fourth calendar quarters of 2017, MS4 field inspections were conducted at areas where the potential exists for storm water contamination. The following areas were inspected:

- Bassett hospital: parking areas, fats, oil, and grease (FOG) accumulation area, parking lots, trash management areas
- Post Exchange (PX): parking areas, FOG accumulation area, parking lots, trash management areas

- Residential areas: random selection of housing units and associated yards, playground areas, trash management areas, storm drains and conveyance channels they discharge to
- Post eateries: outdoor trash and FOG management areas at PX, Burger King, FWA dining facilities, and associated parking lots
- River Road Soil Stockpile
- Snow stockpiles: stockpiles utilized by the installation roads and grounds contractor and the privatized housing contractor. Post-season inspections of snow stockpiles occurred during May 2017 to look for any indication of contamination, such as spills, loose trash, and other debris; where present, follow up inspections were conducted to ensure necessary items were properly addressed.

As required by the MSGP, all facilities identified in the installation's industrial SWPPP were inspected quarterly, at a minimum.

During the 2017 calendar year, varying numbers of personnel at each respective facility identified in the installation's industrial SWPPP were trained according to MSGP requirements. As required, the industrial storm water training occurs annually. At some facilities, a primary and/or alternate is/are trained, and at others, the entire unit or facility staff is trained. Participation depends on unit, executive officer, or facility manager preference and logistical considerations. A training conducted on December 4, 2017 included installation Roads and Grounds contractor personnel, with a session specifically targeting both industrial and municipal aspects of storm water compliance at FWA. At the cantonment, most of the industrial storm water training sessions occurred during the fourth calendar quarter of 2017 (the BLM's training occurred earlier in the year due to seasonal staffing); at FWA-owned facilities off the cantonment, trainings occurred earlier in the year due to mission requirements.

Three MS4 training events also occurred at FWA on August 22–23, 2017. The training provided an overview of the MS4 Permit and SWMP to DPW contracting department staff, environmental compliance staff, and staff from the FWA privatized utility contractor (Doyon Limited). The trainings were developed and provided by a storm water compliance consultant. These trainings facilitated interdepartmental discussions regarding the MS4 Permit, and broadened trainees' knowledge of the MS4 Permit and goals of the FWA SWMP.

Storm water pollution prevention training sessions occur annually at FWA. As previously stated in this report, there are too many objective variables to schedule training sessions far in advance. Industrial facilities are typically trained during the fourth calendar quarter; BLM personnel are typically trained in the spring/summer due to staffing considerations. Audiences that receive SWPP training within the MS4 population may include maintenance staff, construction contractors, USACE, DPW staff, privatized housing contractor staff, privatized utility contractor staff, staff at post eateries, hospital personnel, etc. The DPW Environmental Division attempts to include all target audiences in MS4 training through a rotating schedule, as

schedules and resources allow. DPW Environmental staff maintains all SWPP inspection results and training documentation. As required, PowerPoint training presentations (both MS4 and MSGP) provided in 2017 are included in Appendix H of this report.

Industrial Facility Inventory

Because FWA operates under an MSGP (Permit Tracking #AKR06AC73), industrial facilities and associated outfalls have been mapped. Recently, the Army Environmental Command (AEC) released guidance for Army installations to follow when identifying whether or not a facility conducts activities that meet the regulatory definition of "industrial." After considering the AEC's recently published *Industrial Stormwater: A guide to Industrial Stormwater Permitting, March 2016, Final*, DPW Environmental at FWA concluded that multiple facilities at the installation that were being managed under the MSGP and industrial SWPPP are not defined by SIC Codes identified as requiring coverage under the MSGP.

As a result of this assessment, the following facilities have been removed from the installation's industrial SWPPP, and will instead be managed under Fort Wainwright's MS4 Permit and SWMP: Buildings 1053, 1185, 1535, 1537, 2095/2096, 2118, 2295-North, 2295-South, 2297, 3018, 3026, 3030, 3425, 3467, 3470, 3479-South, 3480, 3484, 3485, 3487, 3492-North, 3492-South, 3494-North, 3494-South, 3496, 3498, 3562, 3730, 4050, and 4058. This became effective on January 1, 2018. At this time, these facilities are managed similarly under the SWMP as they previously were under the MSGP. FWA is currently working on updating the industrial SWPPP, MS4 SWMP, and the map of industrial facilities to reflect these changes; the updated map will be included in the industrial SWPPP and SWMP updates when all documents are finalized. Appendix I of this report contains a table of the facilities that will be managed under the MSGP starting January 2018. FWA also included this discussion in the installation's 2017 MSGP Annual Report for ADEC.

The only other industrial facility at FWA that is not covered under FWA's MSGP is the Central Heat and Power Plant (CHPP). The CHPP is operated by the FWA privatized utility contractor (Doyon Limited), and is managed by a separately permitted MSGP (Permit Tracking #AKR06AE33).

The USAG FWA Garrison Commander has ultimate responsibility for all regulatory compliance at Fort Wainwright; the USAG FWA chain of command below the USAG FWA Garrison Commander has compliance responsibilities as dictated by position, and the USAG FWA Water Program Manager has direct responsibility for day-to-day compliance with the MS4 Permit and SWMP, including coordinating and implementing the Pollution Prevention and Good Housekeeping program at FWA.

2.6.3 Measurable Goals for MCM 6 During the Next 12 Months

The measureable goals under MCM 6 that must be implemented during calendar year 2018 are provided below, with anticipated milestone dates, and the responsible party/parties for respective actions.

- FWA must develop and implement an operation and maintenance program intended to prevent or reduce pollutant runoff from FWA operations. This program must address FWA activities occurring with potential for negative storm water related water quality impacts, including: the use of sand and road deicers; fleet maintenance and vehicle washing operations; street sweeping, cleaning and maintenance; grounds/parks, golf course, and open space maintenance operations; building maintenance; solid waste transfer activities; water treatment plant operations; storm water system maintenance; and snow disposal site operation and maintenance. In addition, FWA must address the following: materials storage; hazardous materials storage; used oil recycling, spill control and prevention measures for refueling facilities; new construction and land disturbances; and snow removal practices.
- In 2018, and annually thereafter, FWA must develop and conduct appropriate training for appropriate FWA personnel related to optimum maintenance practices for the protection of water quality.
- FWA must ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices.

3.0 ADDITIONAL ANNUAL REPORTING REQUIREMENTS

The MS4 Permit requires FWA to discuss measures that will be implemented over the next 12-month period to achieve compliance with permit provisions. Most of these requirements and associated measures are specific to MCMs and are discussed in Section 2.0 of this report. This section discusses additional requirements that are not specific to the six MCMs, and therefore, were not previously discussed in this report.

3.1 Monitoring Program Plan

Part 4.1.1 of the MS4 Permit states the following:

The permittee must develop, implement, and revise as necessary, a comprehensive Monitoring Program Plan. A description of this plan must be included in the SWMP document... Part 4.1.1.1 continues... The Monitoring Program Plan must be designed to assess compliance with this permit; measure the effectiveness of the permittee's SWMP; measure the chemical, physical, and biological impacts to the receiving waters resulting from storm water discharges; characterize storm water discharges; identify sources of specific pollutants; and detect and eliminate illicit discharges and illegal connections to the MS4.

The monitoring requirements in FWA's MS4 Permit have multiple milestones associated with them; the following measures must be implemented during the 2018 calendar year:

- FWA must develop a Storm Water Outfall Monitoring Plan consistent with the monitoring objectives described above (See Permit Parts 4.1.1 – 4.1.2.3). The outfalls selected by FWA in the Storm Water Outfall Monitoring Plan must be representative of major land uses at the facility.
- FWA must develop a Monitoring Program Plan that includes a Quality Assurance Project Plan (QAPP) for all analytical monitoring to be conducted, including but not limited to the activities described in (Permit) Part 3.0. Prior to beginning any analytical monitoring, FWA must submit the plan to ADEC. The plan shall be submitted to the address given in Part 4.5. of the MS4 Permit.

At the time this report was prepared, FWA was developing a QAPP and sampling plan, in draft stage. The final plan is anticipated for completion in May 2018. FWA will implement applicable requirements of Part 4.1 of the MS4 Permit during the 2018 calendar Year. The DPW Environmental Division is responsible for developing and implementing the MS4 monitoring program and associated submittals.

3.2 Evaluation of Overall Program Effectiveness

This is the first reporting cycle under the FWA MS4 Permit, accounting for the 14-month period from November 2016 through December 2017. Part 4.2 of the MS4 Permit states the following:

At least annually the permittee must evaluate its compliance with the permit conditions, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals for each of the minimum control measures in Part 3.0. This evaluation of program compliance must be documented in the Annual Report.

With the exception of only partial implementation of the requirement to conduct a quarterly Storm Water Steering Committee, FWA has implemented all required measures for the first Permit year as detailed in the installation's MS4 Permit, and believes the installation is in compliance with the MS4 Permit. After evaluating the information currently available, the Garrison believes the measures selected to ensure compliance with the MS4 program are appropriate, and effectively reduce pollutants in storm water runoff to the FWA MS4 (and waters of the U.S.) to the MEP.

The only significant change to the MS4 program and SWMP document that FWA initiated is the addition of managing the industrial-like facilities under the MS4 program (discussed in Section 2.6.2 of this report), formerly managed under the installation's MSGP. While this could be perceived as a significant change, little is anticipated to change during the next permit year, relative to how the facilities are managed. Since FWA is permittee for both the MSGP and MS4, and intends to manage the facilities under the MS4 Permit similarly to how they were being managed under the MSGP, the change becomes essentially a paper exercise. However, it is an important exercise, in regards to environmental compliance. Because activities at the respective facilities are interpreted by FWA to not result in storm water discharges associated with industrial activity,⁵ the MS4 Permit and associated SWMP are the appropriate management mechanisms to regulate activities at those facilities, and resulting storm water discharges from them.

⁵ As defined at 40 CFR 122.26(b)(14), and interpreted by the Garrison.

4.0 CERTIFICATION

Appendix A, Part 1.12.3 of the FWA MS4 Permit states the following:

Any report required by an APDES permit, and a submittal with any other information requested by the Department, must be signed by a person described in Appendix A, Part 1.12.2, or by a duly authorized representative of that person.

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

Name of Authorized Representative: _____

Richard L. Morris

Title: _____

Environmental Division Chief

Signature: _____

[Signature]

Date Signed: _____

31 JAN 18

Email: _____

richard.l.morris56.civ@mail.mil

Appendix A

Storm Water Pollution Prevention Newspaper Article

Appendix B

Storm Water Pollution Prevention Outreach Material

Appendix C

Garrison Policy Letter #35

Appendix D

Sample Erosion and Sediment Control Plan

Appendix E

MS4 Construction Site Inspection Form

Appendix F

Department of the Army memorandum, Army Storm Water Management

Using Low Impact Development, 21 September 2015

Appendix G

Army Low Impact Development Technical User Guide

Appendix H

Storm Water Pollution Prevention Training Presentations

Appendix I

Updated Table of Multi-Sector General Permit (MSGP)

Regulated Facilities at Fort Wainwright