Storm Water Pollution Prevention Plan

For Compliance with the APDES 2020 Multi-Sector General Permit (MSGP)

U.S. Army Garrison Alaska

Fort Wainwright, Alaska

July 2020

TABLE OF CONTENTS

LIST OF TABLES

APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

AAFES	Army and Air Force Exchange Service
ACGP	Alaska Construction General Permit
ADEC	Alaska Department of Environmental Conservation
AHA	Alert Holding Area
AKA	Also known as
APDES	Alaska Pollutant Discharge Elimination System
AST	Aboveground storage tank
BLM	Bureau of Land Management
BMP	Best management practice
BOD_5	Biochemical oxygen demand
BRTA	Black Rapids Training Area
CBI	Confidential business information
CEMML	Center for Environmental Management of Military Lands
CFR	Code of Federal Regulations
CHPP	Central Heat and Power Plant
COD	Chemical Oxygen Demand
CRTC	Cold Regions Test Center
CWA	Clean Water Act
DLA	Defense Logistics Agency
DoD	Department of Defense
DPW	Directorate of Public Works
DTA	Donnelly Training Area
ELG	Effluent limitations guidelines
eNOI	Electronic Notice of Intent
EPA	U.S. Environmental Protection Agency
ESCP	Erosion and Sediment Control Plan
FOD	Foreign object damage
FRP	Facility Response Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEMTT	Heavy expanded mobile tanker truck
HM	Hazardous material
HMAP	Hazardous Material Accumulation Point
HMWMP	Hazardous Material and Waste Management Plan
HW	Hazardous waste

HWAA	Hazardous waste accumulation area
JD	Jurisdictional Determination
JP	Jet propellant
MDMR	MSGP Industrial Discharge Monitoring Report
MS4	Municipal Separate Storm Sewer System
MSDS	Material Safety Data Sheets
MSGP	Multi-Sector General Permit
NFA	No further action
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NWTC	Northern Warfare Training Center
ODPC	Oil discharge and pollution control
OWS	Oil/water separators
OASys	Online Application System
POC	Point of contact
POL	Petroleum, oil, and lubricant
POV	Privately owned vehicle
PWE	Public Works Environmental
RAA	Recyclable materials accumulation area
RCRA	Resource Conservation and Recovery Act
SAA	Satellite accumulation area
SIC	Standard Industrial Classification
SPCC	Spill Prevention, Control, and Countermeasure
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TSDF	Treatment, storage, or disposal facility
TSS	Total suspended solids
UAA	Universal waste accumulation area
USACE	United States Army Corps of Engineers
USAG	United States Army Garrison
USARAK	United States Army Alaska
UST	Underground storage tank
Waters of the U.S.	Waters of the United States

WQS	Water Quality Standards

1.0 SWPPP CERTIFICATION

This Storm Water Pollution Prevention Plan (SWPPP) must be signed and dated in accordance with Appendix A, Subsection 1.12 of the Multi-Sector General Permit (MSGP). The SWPPP certification is below.

U.S. Army Garrison Alaska does not use airfield-deicing products that contain urea at Fort Wainwright.

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

Name: _____ Title: _____

Signature: _____ Date: _____

2.0 SWPPP MODIFICATIONS AND AVAILABILITY

2.1 Required SWPPP Modifications

This SWPPP must be modified whenever necessary to address any of the triggering conditions for corrective action in Part 8.1 of the MSGP, and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part 8.2 of the MSGP indicates that changes to control measures are necessary to meet the effluent limits under the permit. Changes to this SWPPP must be made in accordance with the corrective action deadlines in MSGP Parts 8.3 and 8.4, and must be signed and dated in accordance with MSGP Appendix A, Subsection 1.12.

The Alaska Department of Environmental Conservation (ADEC) Corrective Action Form is provided in Appendix F of this SWPPP.

2.2 SWPPP Availability

Part 5.7 of the MSGP states, “A permittee must retain a copy of the current SWPPP required by this permit at the facility, and it must be immediately available to DEC or Environmental Protection Agency (EPA) at the time of an onsite inspection or upon request. If the facility is inactive the SWPPP must be retained at a readily available location or the office of the operator. DEC may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within DEC, EPA, U.S. Fish and Wildlife Service, or National Marine Fisheries Service.”

The Fort Wainwright Water Program Manager maintains a copy of this SWPPP at the Public Works Environmental (PWE) office. It is readily available to state, federal, and regulatory agencies, and available to the public upon request.

3.0 INTRODUCTION

This document has been prepared for Fort Wainwright to satisfy the Storm Water Pollution Prevention Plan (SWPPP) requirements of the Alaska Pollutant Discharge Elimination System (APDES) 2015 Multi-Sector General Permit for Storm Water Discharges Associated With

Industrial Activity (MSGP).[1] This SWPPP documents storm water management practices at industrial facilities at Fort Wainwright, Alaska, and is a guide for the installation's storm water pollution prevention team.

3.1 Storm Water Pollution Prevention Plan

The MSGP requires the permittee to prepare a SWPPP and specifies what must be included in that plan (e.g., identification of potential sources of storm water pollution, descriptions of practices on the installation to reduce storm water pollution, and measures to ensure compliance with the terms and conditions of the MSGP). Part 5 of the MSGP details the information required in the SWPPP. The body of this document comprises Fort Wainwright's SWPPP for industrial activities at Fort Wainwright properties.

This plan is organized as follows:

- Section 1.0 describes the SWPPP signatory requirements and certification.
- Section 2.0 addresses SWPPP modifications and availability requirements for this document.
- Section 3.0 describes the different EPA and ADEC storm water permits and their requirements; discusses the purpose of the SWPPP and the Storm Water Management Plan (SWMP), and responsibilities of the storm water pollution prevention team under the 2015 MSGP and SWPPP; and explains the history of storm water compliance at Fort Wainwright.
- Section 4.0 provides facility and contact information, and describes Fort Wainwright's location, topography, and drainage.
- Section 5.0 provides a discussion of industrial activities at Fort Wainwright and potential pollutant sources associated with them.
- Section 6.0 discusses control measures that all industrial facilities at Fort Wainwright must implement, as applicable, to address activities and potential pollutants described in Section 5.0.
- Section 7.0 discusses sector-specific requirements for the five industrial sectors active at Fort Wainwright.
- Section 8.0 presents schedules and procedures for monitoring.
- Section 9.0 details required storm water pollution prevention inspections under the MSGP, including routine facility inspections, the quarterly visual assessment of storm water discharges, and comprehensive site inspections.
- Section 10.0 discusses reporting and record keeping requirements of the MSGP.

[1] The MSGP is included in this SWPPP as Appendix B.

- Section 11.0 explains the protocols for terminating permit coverage.

3.2 Regulatory Framework

Under the authority of the Clean Water Act (CWA), the EPA established rules to protect Waters of the United States (Waters of the U.S.) from pollutants transported by storm water runoff. These regulations are part of the National Pollutant Discharge Elimination System (NPDES) regulations found in Title 40 of the Code of Federal Regulations Part 122.26 (40 CFR 122.26) and mandate that storm water dischargers obtain permits for point source discharges to Waters of the U.S. In October 2009, EPA authorized ADEC to administer and enforce the NPDES program in the State of Alaska. As a result of this change, facilities in Alaska requiring storm water permits are required to obtain an APDES permit from ADEC. There are three basic categories of discharges that necessitate obtaining APDES storm water discharge permits:

- Discharges associated with industrial activity
- Discharges from municipal separate storm sewer systems (MS4s)
- Discharges associated with construction

3.2.1 Industrial Storm Water Permit

Operators of industrial facilities in Alaska that discharge storm water to Waters of the U.S., either directly or through an MS4, must obtain an APDES industrial storm water permit. They may apply either for an individual APDES permit or make use of the general permit established for this purpose. "Storm Water Discharges Associated With Industrial Activity" is a regulatory term defined in 40 CFR §122.26(b)(14)(i-xi).

3.2.2 Municipal Separate Storm Sewer System Permit

The APDES storm water program requires operators of regulated small MS4s (i.e., MS4s serving populations less than 100,000) to obtain authorization to discharge storm water under an APDES permit. EPA considers Fort Wainwright to own and operate a regulated small MS4 "by rule." This determination required Fort Wainwright to submit a small MS4 permit application to ADEC. The main provision of MS4 permits is to prepare and implement a SWMP that explains how the permittee will minimize potential pollution of Waters of the U.S. from MS4 storm water runoff. Fort Wainwright's SWMP documents MS4 program goals and associated best management practices (BMPs), also referred to as control measures, to achieve the goals. Fort Wainwright's MS4 permit took effect on 1 November 2016 and covers facilities and activities that discharge storm water runoff to the Fort Wainwright storm sewer system, including discharges from residential areas, construction activities, and the industrial activities managed by the MSGP that are discussed in this SWPPP. The boundaries covered by this permit are Urbanized Area of the main cantonment as defined by the U.S. Census Bureau.

The MS4 program is the umbrella program for all storm water management at Fort Wainwright, and this industrial SWPPP is one component of storm water management on the installation. This SWPPP also covers industrial areas that fall outside of the MS4 permit jurisdiction such as the Railhead in the southeast corner of the cantonment.

3.2.3 Construction Storm Water Permits

Although federal and State of Alaska storm water regulations consider construction to be an industrial activity, the MSGP does not regulate storm water discharges from construction activities. A construction storm water permit must be obtained for construction disturbing one or more acres of land. In the State of Alaska, ADEC's 2016 Alaska Construction General Permit[2] (ACGP) is the typical mechanism for obtaining such coverage. Additionally, to reinforce protection of receiving waters in areas that drain to regulated MS4s during and after construction, Fort Wainwright's SWMP includes minimum control measures for construction and post-construction runoff control. Thus, construction projects at Fort Wainwright must comply with the installation's SWMP in addition to the terms of the ACGP.

3.3 History of Industrial Storm Water Compliance at Fort Wainwright

Fort Wainwright was initially granted storm water discharge permit coverage under EPA's original MSGP in 1996. It has continued to operate under subsequent MSGPs.

3.3.1 Inventory of Industrial Facilities

Facilities currently operating at Fort Wainwright that meet the regulatory definition of industrial include the installation's rock quarries (Sector J – Non-Metallic Mineral Mining and Dressing), landfill (Sector L – Landfills, Land Application Sites, and Open Dumps), warehousing, maintenance, and fueling facilities (Sector P – Land Transportation and Warehousing), and airfield service facilities both on and off the Ladd Army Airfield (Sector S – Air Transportation). The primary SIC code for Fort Wainwright is 9711, National Security. The primary industrial activity is Sector S. Co-located activities on the installation include Sectors J, L, and P.

Many facilities exist throughout the installation that support land transportation related activities. These include motor pools, fuel points, trade shops, and the like, that perform vehicle maintenance, lubrication, fueling, washing, outdoor storage, etc. These facilities, which do not meet the MSGP's Standard Industrial Classification (SIC) codes, do not meet the regulatory definition of "industrial". If they were off-post performing identical functions, MSGP coverage would be unnecessary but because they occur on a military installation, they are managed as industrial activities and included in this SWPPP for management under the MSGP. The closest sector with narrative descriptions that define these facilities is Sector P (Land Transportation

[2] Alaska Pollutant Discharge Elimination System General Permit for Discharges from Large and Small Construction Activities, February 2016; consult ADEC website for current permit.

and Warehousing). Two warehouses on post have also been incorporated into this sector at Fort Wainwright as Sector P best describes activities that occur there.

The coal-fired Central Heat and Power Plant (CHPP) was covered under previous MSGPs at Fort Wainwright. The CHPP is now privately owned and operated on Fort Wainwright property by Doyon Utilities. Doyon is currently responsible for environmental compliance for this facility and other utility buildings and infrastructure on post. Doyon facilities operate under their own environmental permits, as applicable. For this reason, industrial activity at the CHPP is not discussed in this SWPPP or included for coverage under Fort Wainwright's MSGP.

Building 3489 functions as the installation's Hazardous Waste Consolidation Facility (HWCF), operated by the PWE waste turn-in contractor. At one point, under a previous MSGP and associated SWPPP, this facility had been defined as Sector K (Hazardous Waste Treatment, Storage, or Disposal Facilities [TSDFs]). Subsequently, operations at the facility changed, thus changing its designation from a TSDF to a short-term (less than 90 day) hazardous waste consolidated collection facility and recyclable materials transfer facility. At that time, Sector K was removed from the installation's SWPPP, but Building 3489 remained in the SWPPP, to provide additional oversight of operations and ensure activities there do not contaminate storm water.[3]

The Defense Logistics Agency (DLA) Document Services, formerly the Document Automation and Production Service, operated out of the basement of Building 3401. Although this facility did not conduct activities with the potential to contaminate storm water, it was included in previous SWPPPs due to Sector X (Printing and Publishing) designation. As DLA Document Services is no longer present on Fort Wainwright properties, it has been removed from subsequent coverage.

After considering the Army Environmental Command's Industrial Stormwater: *A guide to Industrial Stormwater Permitting*, March 2016, Final, PWE concluded that multiple facilities at the installation that were recently managed under the industrial SWPPP are not defined by SIC Codes identified as requiring coverage under the MSGP. Therefore, the following facilities have been removed from the installation's industrial SWPPP, and will instead be managed under Fort Wainwright's other environmental programs as appropriate: Buildings 1053, 1185, 2095, 2096, 3018, 3026, 3467, 3470, 3484, 3562, 3730, 4050, 4058, and 5109. The following facilities not located within the cantonment are also removed from industrial SWPPP coverage: Buildings 1343, 1610, 1844, 1848, 1881, 1930 (all located in the Donnelly Training Area), and Building 2020 (Black Rapids Training Area). The Firing Point Sally Pit at DTA is also not included in the 2020 SWPPP as it does not discharge to waters of the U.S.

[3] Due to removal of Sector K designation, Building 3489 will be managed according to Sector P requirements for warehousing activities.

A list of industrial facilities and their associated activities is included in Table 1.

Table 1. List of Industrial Facilities and Activities

Industrial Sector	Building number	Description	Activity with Potential to Pollute Storm Water							
			Fueling/ De-fueling	Above Ground Liquid Storage Tanks	Vehicle, Aircraft, and Equipment Maintenance	Vehicle, Aircraft, and Equipment Washing	Loading/ Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage
L	1191	Directorate of Public Works (DPW) Landfill	X	X	X		X	X		
P	1500	Bureau of Land Management (BLM) Maintenance Facility and Fuel Pump	X		X		X	X	X	
S	1510	BLM Bulk Fuel Issue and Hazardous Material (HM) / Hazardous Waste (HW) Management Storage	X	X			X	X	X	
P	1544	BLM Fire Cache Warehouse			X	X	X	X	X	

Industrial Sector	Building number	Description	Activity with Potential to Pollute Storm Water							
			Fueling/ De-fueling	Above Ground Liquid Storage Tanks	Vehicle, Aircraft, and Equipment Maintenance	Vehicle, Aircraft, and Equipment Washing	Loading/ Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage
S	- -	BLM Fire Retardant Storage and Issue	X	X	X	X	X	X	X	
S	1557	Hangar 1						X		
S	1565	Aviation Fueling and Fuel Storage	X				X	X	X	
S	2077 (east)	Hangar 8	X		X	X	X	X	X	
S	2077 (west)	Hangar 7	X		X	X	X	X	X	
S	2081	Aviation Re-fuel Facility	X	X				X		
S	2088	Hangar 6	X		X	X	X	X	X	
P	2116	Alert Holding Area (AHA)					X			
S	2120	Fueling/De-fueling Island at AHA	X	X						

Industrial Sector	Building number	Description	Activity with Potential to Pollute Storm Water							
			Fueling/ De-fueling	Above Ground Liquid Storage Tanks	Vehicle, Aircraft, and Equipment Maintenance	Vehicle, Aircraft, and Equipment Washing	Loading/ Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage
S	2132	Hangar 5	X		X	X	X	X	X	
P	2295 (north & south)	Vehicle/Equipment Maintenance Facility	X		X	X	X	X	X	
P	2400	Railhead Operations	X	X		X	X		X	
P	2297	Brigade Motor Pool			X	X	X	X	X	
S	3007	Hangar 4	X		X	X	X	X	X	
S	3009	Unmanned Aircraft Systems (UAS) Hangar	X		X		X	X	X	
S	3015	DPW Contractor Maintenance	X		X	X	X	X	X	X
P	3030	Logistics Readiness Center					X		X	
P	3380	Stryker Wash Facility				X		X		

Industrial Sector	Building number	Description	Activity with Potential to Pollute Storm Water							
			Fueling/ De-fueling	Above Ground Liquid Storage Tanks	Vehicle, Aircraft, and Equipment Maintenance	Vehicle, Aircraft, and Equipment Washing	Loading/ Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage
P	3425	Vehicle/Equipment Maintenance Facility			X	X	X	X	X	
P	3479 (South)	Light Maintenance Facility			X		X			
P	3480	Maintenance Facility			X	X	X	X	X	
P	3485	Vehicle/Equipment Maintenance Facility		X	X	X	X	X	X	
P	3487	Warehouse					X		X	
P	3489	Hazardous Material Accumulation Point					X	X	X	
P	3490	DOL Installation Maintenance Division			X	X	X	X	X	

Industrial Sector	Building number	Description	Activity with Potential to Pollute Storm Water							
			Fueling/ De-fueling	Above Ground Liquid Storage Tanks	Vehicle, Aircraft, and Equipment Maintenance	Vehicle, Aircraft, and Equipment Washing	Loading/ Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage
P	3492 (north & south)	Vehicle/Equipment Maintenance Facility		X	X	X	X	X	X	
P	3494 (north & south)	Vehicle/Equipment Maintenance Facility		X	X	X	X	X	X	
P	3496	Vehicle/Equipment Maintenance Facility		X	X	X	X	X	X	
P	3498	Consolidated Brigade Motor Pool		X	X	X	X	X	X	
P	5008 & 5010	Brigade Warehouse		X			X		X	

3.3.2 No Exposure Certification

Appendix C (Definitions) of the MSGP defines "No Exposure" as:

> *No exposure – all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff.*

Facilities that do not conduct industrial activities that are exposed to storm water, including materials storage, and that do not have industrial residues or historic contaminants exposed to storm water, may claim conditional exclusion from MSGP coverage. EPA guidance[4] on No Exposure states that facility operators claiming No Exposure must regularly evaluate conditions at their facility to ensure that conditions have not changed that would influence exposure to storm water. If conditions change that result in exposure, operators must apply for a storm water permit.

EPA guidance also states that only an entire facility can apply for No Exposure exclusion, not individual outfalls or parts of a facility. Therefore, if an industrial activity at Fort Wainwright is conducted in a manner that eliminates exposure to storm water, but meets the requirements for coverage under the MSGP, it must remain covered by the installation MSGP and be managed accordingly in the SWPPP. Only if all industrial activities met the No Exposure criteria could the exclusion be utilized by Fort Wainwright.

A circumstance in which a Fort Wainwright facility may not have to implement all requirements of the MSGP during all calendar quarters is if the facility is inactive and unstaffed. Requirements for inactive and unstaffed facilities are discussed in Section 1.3.3, below.

3.3.3 Exception for Inactive and Unstaffed Sites

If no industrial activities or materials are exposed to storm water at a facility while temporarily inactive and unstaffed, benchmark monitoring requirements do not apply. Part 7.2.1.6 of the MSGP lists three actions/conditions that facilities must satisfy to exercise this exclusion:

- Permittees must maintain a statement onsite with the SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to storm water in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Appendix A, Subsection 1.12.
- If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and

[4] *Guidance Manual for Conditional Exclusion from Storm Water Permitting Based on "No Exposure" of Industrial Activities to Storm Water*, EPA, June 2000 (https://www.epa.gov/sites/production/files/2016-02/documents/noxguide.pdf)

the permittee must immediately begin complying with the applicable benchmark monitoring requirements under Part 7.2 as if they were in their first year of permit coverage. The permittee must indicate in their first benchmark monitoring report that their facility has materials or activities exposed to storm water or has become active and/or staffed.

- If the permittee is not qualified for this exception at the time they are authorized under this permit, but during the permit term they become qualified because their facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to storm water, then the permittee must notify ADEC of this change in their next benchmark monitoring report. A permittee may discontinue benchmark monitoring once they have notified ADEC, and prepared and signed the certification statement described above concerning their facility's qualification for this special exception.

Additional exclusions from MSGP requirements are granted to facilities identified by Sectors G, H, and J. Of these three sectors, only Sector J (Non-Metallic Mineral Mining and Dressing) applies to Fort Wainwright. Gravel quarrying operations sometimes occur on the cantonment and at DTA. Sector J facilities that meet the criteria detailed in MSGP Part 11.J.8.1 may waive additional assessments and inspections. This is discussed in more detail in Section 7.1.1 of this SWPPP.

4.0 FACILITY DESCRIPTION AND CONTACT INFORMATION

4.1 Facility Description Information

4.1.1 Overview of Fort Wainwright Facility

Fort Wainwright is a military reservation located in central Alaska, north of the Alaska Range, in the Tanana River Valley. The installation consists of the main post, or cantonment, and outlying training and maneuver areas. These areas include Tanana Flats Training Area, Yukon Training Area, DTA, Gerstle River Training Area, Black Rapids Training Area (BRTA), and Whistler Creek Rock Climbing Area. The cantonment lies within the Fairbanks North Star Borough, east of Fairbanks, in the Chena River drainage basin. The location of the cantonment is shown on the *General Location Map: Fort Wainwright Cantonment and Vicinity* in Appendix A. Fort Wainwright's cantonment is composed of approximately 5,785 acres of urban area, residential developments, support facilities, and the Ladd Army Airfield.

Fort Wainwright's primary industrial activities occur at the cantonment. The automotive repair shops that are present at DTA and BRTA will be addressed by other USAG Alaska environmental programs and will no longer be covered under the SWPPP. For a detailed list of facilities at DTA and BRTA see Table 1b.

Fort Wainwright has historically been tasked with commanding, training and maintaining assigned military units at a state of readiness required for ground defense of Alaska. Currently, Fort Wainwright is the home of the United States Army Garrison (USAG) and units of the United States Army Alaska (USARAK) including the 1st Stryker Brigade Combat Team, 25th Infantry Division, the 16th Combat Aviation Brigade (Alaska), and the Medical Department Activity-Alaska. The USARAK mission is as follows:

> *USARAK provides trained and ready forces in support of worldwide unified land operations and supports United States Indo-Pacific Command (USINDOPACOM) Theater Security Cooperation Program in order to contribute to a stable and secure operational environment. On order, executes Joint Force Land Component Command functions in support of Homeland Defense and Defense Support of Civil Authorities in Alaska.."* [5]

Fort Wainwright PWE is the office within the DPW that manages environmental compliance. PWE at Fort Wainwright is located at 3023 Engineer Place, Building 3023, Fort Wainwright, AK 99703-4500. Fort Wainwright is a federal facility, not located in Indian Country. Geographical

[5] https://home.army.mil/alaska/index.php/USARAK-mission-vision

coordinates for the center of Ladd Army Airfield at Fort Wainwright are: N 64º 50' 15" Latitude and W 147º 36' 52" Longitude.[6]

4.1.2 Industrial Activity Area

Part 2.1.8.3 of the MSGP requires the SWPPP to include an estimate of the area of industrial activity exposed to storm water. Due to the size of the installation and the fact that industrial activities are spread out across the cantonment, it is difficult to arrive at an exact figure. Adding together the respective sub-catchment (i.e., mini-watershed) areas of outfalls that discharge industrial storm water, however, provides a conservative estimate of the area of industrial activity exposed to storm water. The combined area of sub-catchments with industrial activity occurring within them equals 1,660 acres.[7] However, it should be noted that an entire sub-catchment area might not be exposed to industrial activity or runoff from those activities.

4.2 Discharge Information

Industrial activities at Fort Wainwright discharge to the Fort Wainwright regulated small MS4. See Section 3.2.2 of this document for MS4 background. The Fort Wainwright MS4 discharges storm water to the Chena River, Badger Pit, Clear Creek Channel[8] (a semi-ephemeral, channelized, and ditched stream that flows through the cantonment), Monterey Lakes, and various wetlands on the installation. The Chena River and wetlands are considered Waters of the U.S. for purposes of APDES compliance. Badger Pit underwent jurisdictional determination with the U.S. Army Corps of Engineers Regulatory and as of May 2020, Badger pit was determined to be not a regulatory Water of the U.S.

The MSGP defines impaired waters as those which have been listed pursuant to Section 303(d) of the CWA and states that if the permittee discharges to an impaired water body, each pollutant for which the water body is impaired must be monitored (if there is a standard analytical method for that parameter). The Chena River was formerly 303(d) listed as an impaired water body for sediment, but has been removed from the list in 2018.

It is unlikely that sediment would be present in discharges from industrial activities at Fort Wainwright. With the exception of Sector J activities, ground disturbance does not occur during normal activities at industrial facilities on the installation. Most conveyances are comprised of long, permeable ditches, swales, and vegetated buffers, which largely allows sediment to settle out prior to reaching the Chena River. Sediment on vehicles, equipment, and aircraft is typically

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[6] www.home.army.mil/alaska/index.php/fort-wainwright.

[7] Sub-catchment data from Center for Environmental Management of Military Lands, Colorado State University, February 2013

[8] Clear Creek Channel has been heavily modified over the years and has been included as a drainage feature in the Municipal Separate Storm Sewer System.

rinsed off at contained wash racks. Sector J activities at Fort Wainwright discharge to Badger Pit, not the Chena River, and construction activities are regulated, as applicable, by the ACGP and/or an Erosion and Sediment Control Plan (ESCP) under the MS4 program. Section 8.4 of this SWPPP details impaired waters monitoring requirements at Fort Wainwright.

Industrial sectors at Fort Wainwright subject to Effluent Limitations Guidelines (ELGs) monitoring under the MSGP include Sectors J and L. Doyon Utilities is responsible for environmental compliance at the CHPP at Fort Wainwright. See Section 8 of this SWPPP for a more detailed discussion of monitoring requirements at Fort Wainwright.

ELGs for Sector J that may be applicable at Fort Wainwright involve mine dewatering discharges at construction sand and gravel mining facilities. This monitoring is only applicable if such activities are conducted at Fort Wainwright. See Part 11.J.9 of the MSGP and Section 8.3 of this SWPPP for more discussion of ELGs for Sector J.[9]

Non-hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart B are presented in Part 11.L.10 of the MSGP. Monitoring of the parameters listed in that section of the permit must occur prior to discharges from the landfill mingle with other flows.

4.3 Post Hydrology

4.3.1 Overview of Hydrology at Fort Wainwright

Fort Wainwright lies within the floodplain of the Chena and Tanana Rivers. The main post area is underlain by an alluvial aquifer fed during high flow periods by both the Tanana and Chena Rivers. The Tanana River is fed by rain and snowfall and melt-water from glaciers and snowfields in the Alaska Range; maximum discharge typically occurs in July. Minimum discharge from the Tanana usually occurs in late winter when the river is fed by groundwater. Low flow in the Chena typically occurs during winter months. Flow in the Chena River tends to peak earlier than the Tanana, since the Chena is primarily non-glacier fed. Both rivers tend to freeze over during the winter months, however even during the coldest weather the Chena may have patches of open water on the surface downriver, closer to the Fairbanks power plant discharge.

Fort Wainwright's main post relies on the Chena River Lakes Flood Control Project for flood protection. The project consists of an earth-fill dam across the Chena River east of the cantonment, a levee along the north bank of the Tanana River, and a series of drainage ditches. Interior Drainage channel B, which was constructed as part of the flood control project, runs along the eastern side of the cantonment near Badger Road.

[9] At the time this SWPPP was prepared, no mine dewatering activities were occurring or planned; this requirement is included for future reference.

Large drainage ditches on Fort Wainwright may function as part of the flood control system, providing temporary detention capacity for excess Chena River flows. This explains why river water backs up outfall channels during high water when there are no discharges.

The surface water drainage system at Fort Wainwright is mostly comprised of grass-covered surface channels. Underground storm water lines are located on the airfield, on north post, and in some housing areas. Surface soil and topsoil may be silty loess and organic materials, but sub-surface soils in the cantonment area are generally Chena alluvium, consisting mainly of silty and sandy gravel. These soils are well drained and have high permeability, when not frozen. The presence of frozen ground or permafrost under various portions of the cantonment area inhibits infiltration of surface water in those areas. Discontinuous permafrost in the cantonment area is generally located in undeveloped areas supporting forested and scrub shrub wetlands. Evidence of minor settling may be noticed in any area of post.

The topography of the cantonment area is generally flat, except for Birch Hill in the northern part of the cantonment area. Much of the cantonment area is unpaved, except for roads, parking areas, airfield runways and ramps. Fort Wainwright receives an average of approximately 11.2 inches of precipitation per year,[10] of which about 6.35 inches falls in June through September. A significant portion of the annual precipitation occurs as snowfall (the average annual snowfall is 51.2 inches). An extreme rainfall event in Fairbanks (the 25-year, 24-hour storm) is about 2.34 inches. A more typical large rainfall event (the 2-year, 24-hour storm) is about 1.16 inches [11].

Under typical rainfall conditions, storm water runoff from the post is low. Most annual runoff is expected to be generated by initial snowmelt in spring (usually April). Due to the flat topography and generally permeable soils in the area, much of the non-snowmelt water infiltrates before it reaches a surface water body. Water tends to accumulate in low areas during spring break-up, due to the relatively flat terrain (United States Army Corps of Engineers [USACE] 1987). Once thawed, soil permeability increases allowing for relatively quick drainage. Standing water is more common in the south post area than elsewhere on post.

4.3.2 Industrial Outfalls at Fort Wainwright

The current list of Industrial outfalls are as follows:

- FWA-001
- FWA-002
- FWA-003
- FWA-004

[10] https://wrcc.dri.edu/summary/Climsmak.html

[11] https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html

- FWA-005
- FWA-006
- FWA-007

The existing outfalls are shown in Appendix A Maps and described in Table 5.

The following outfalls were managed under the 2015 MSGP and associated Fort Wainwright SWPPP: FWA-001, FWA-002, FWA-003, FWA-004, FWA-005, FWA-006, FWA-007, FWA-009, and FWA-009.

In February 2013, the Center for Environmental Management of Military Lands (CEMML) conducted a storm water survey and model to detail surface runoff drainage features on the installation. To determine which outfalls on the installation required coverage under the 2015 MSGP, facility-specific information was considered along with data from the 2013 CEMML study. In July 2015 two outfalls had been removed from the previous list, and three were added, for a total of 13 industrial outfalls active on the installation: Outfall 1, Outfall 2, Outfall 3, Outfall 4, Outfall 5, Outfall 7, Outfall 8a, Outfall 8b, Outfall 9, Outfall 10, Outfall 12, Outfall 13, and Outfall 14. In September 2017 the outfall naming convention was changed to add the prefix FWA before the outfall number. During the name changes, Outfall 5 was renamed to Outfall FWA-006, Outfall 8a and Outfall 8b were renamed and are now covered under Fort Wainwright's MS4 permit, Outfall 9 was renamed Outfall FWA-011, Outfall 12 was renamed Outfall FWA-005, Outfall 13 was renamed Outfall FWA-009, Outfall 14 was removed, and Outfall FWA-008 was added. In previous years, Fort Wainwright intended on exercising the "substantially identical outfall" monitoring exception described in Part 7.2.2.2 of the MSGP for Outfall FWA-008 and FWA-007 and FWA-004; However, no outfalls are being pursued as substantially identical for the 2020 MSGP. The CEMML study continued during the 2015 Permit and a most recent map was produced in 2019.

4.3.2.1 Industrial Outfalls Removed from MSGP Coverage

Two former outfalls, FWA-010 and FWA-011, discharged into Badger Pit which is now known to not be a Water of the U.S. These outfalls have been removed from MSGP coverage.

4.3.2.2 New Industrial Outfalls Included for Coverage Under the 2015 MSGP

There has been an attempt to retain the names of existing outfalls that have been established for many years to reduce confusion that would likely result if their names were changed in this SWPPP. However, some outfalls were renamed in an attempt to keep a sequential order. Outfall 5 was renamed to FWA-006, Outfall 12 was renamed FWA-005, and Outfall 13 was renamed FWA-009. Outfall FWA-008 was added under MSGP coverage and receives flow from the east end of the BLM yard along the edge of Ketcham Road. Outfall FWA-008 discharges into the Chena River.

4.4 Contact Information/Responsible Parties

4.4.1 Facility Operator/Owner

United States Army Garrison Alaska
COL Christopher J. Ruga
1046 Marks Road
Fort Wainwright, AK 99703-4500

4.4.2 SWPPP Contact

Ida Petersen, or current Water Program Manager
PWE Water Program Manager
Directorate of Public Works, Environmental Division
3023 Engineer Place, Building 3023
Fort Wainwright, AK 99703-4500
Phone: (907) 361-6220
Email: ida.r.petersen.civ@mail.mil
PWE general phone line (if Water Program Manager is unavailable): (907) 361-9686

4.4.3 24-Hour Emergency Contact

Fort Wainwright Fire and Emergency Services
1060 Gaffney Road #3800
Fort Wainwright, AK 99703-3800
Dispatch: (907) 353-7535
Emergency line: 911
24-Hour Spill Line: (907) 482-7267
24-Hour Spill Line is manned by Brice Environmental, environmental compliance contractor.

4.5 Storm Water Pollution Prevention Team

Fort Wainwright has established a storm water pollution prevention team with responsibilities outlined in Table 2. The PWE Water Program Manager has primary responsibility for ensuring compliance with the MSGP and SWPPP, and for documenting compliance. Members of the pollution prevention team have reviewed this SWPPP, or relevant portions of the SWPPP, and are aware of their roles and responsibilities. Team members with the most direct responsibilities for preventing pollution of storm water runoff include facility personnel, infrastructure maintenance personnel and contractors, and the Water Program Manager.

Table 2. Installation-Wide Storm Water Pollution Prevention Team Members and Responsibilities

Position	Responsibilities
Chief, Environmental Division	Garrison-wide environmental compliance. Point of contact (POC) for regulatory officials.
Chief, Environmental Compliance Branch (PWE)	Garrison-wide environmental compliance. Responsible for overseeing Program Managers and assists in procuring funding for ongoing and future storm water projects and program implementation.
Water Program Manager (PWE)	Oversight of installation-wide storm water program; responsible for SWPPP development and implementation; inspection, training, and monitoring programs for MSGP compliance; record keeping; program evaluation; SWPPP updates.
Hazardous Waste Program Manager (PWE)	Oversight of installation-wide hazardous materials and waste management program, including materials tracking and inspecting accumulation points.
Spill Program Manager (PWE)	Oversight of installation-wide spill program, including prevention, reporting, and response.
Solid Waste Program Manager (PWE)	Oversight of installation-wide solid waste management program, including operation of the landfill.
Tanks Program Manager (PWE)	Oversight of the installation's tanks management program. Works with Spills Program and Water Program to manage SPCC.
DPW Roads & Grounds maintenance contractor	Infrastructure maintenance, implementation and maintenance of applicable control measures.
PWE compliance contractors*	Conduct quarterly MSGP facility inspections including comprehensive site inspections; annual MSGP trainings, outfall inspections; monitoring, sampling, HM/HW inspections; mapping.
Facility Storm Water Supervisors, primary and alternate (may also be facility HM/HW managers)**	Implement facility-specific control measures; oversee facility HM/HW storage and handling, and spill prevention, control and response; report issues up-chain and/or to PWE.
Environmental Compliance Officers	Responsible for coordinating environmental concerns between their respective organization and the DPW Environmental Office.

* Subject to funding, these tasks may be performed by multiple contractors, or in-house by PWE personnel.

** Due to the nature of military assignments, facility storm water coordinators change regularly.

4.6 MSGP Compliance Maps

Part 5.2.3.3 of the MSGP requires the features listed below be incorporated into a map that is included as an appendix to the SWPPP. Due to the number of facilities managed by this SWPPP, their geographically spread-out locations, and the volume of required features, the features below are represented on multiple maps included in Appendix A of this SWPPP.

- Size of the property in acres
- Location and extent of significant structures and impervious surfaces
- Directions of storm water flow using arrows
- Locations of all existing structural control measures
- Locations of all receiving waters in the immediate vicinity of the facility, indicating if any of the waters are impaired, and if so, whether the waters have TMDLs established for them
- Locations of all storm water conveyances including ditches, pipes, and swales[12]
- Locations of potential pollutant sources identified under MSGP Part 5.2.4.2
- Locations where significant spills or leaks identified under MSGP Part 5.2.4.3 have occurred
- Locations of all storm water monitoring points[13]
- Locations of storm water inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall FWA-001, FWA-002, etc.), indicating if one or more outfalls will be treated as "substantially identical" under MSGP Parts 6.2.3, 5.2.6.2, and 7.1.1, and an approximate outline of the areas draining to each outfall
- Where storm water from the facility discharges to an MS4[14]
- Locations and descriptions of all non-storm water discharges identified under Part 4.2.10 of the MSGP

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[12] See CEMML's *Watershed Map* in Appendix A.

[13] Monitoring points are the industrial outfalls; correct labeling and locations of these outfalls are displayed on the *Fort Wainwright Cantonment* map; disregard outfall locations and respective monikers on the CEMML *Watershed Map*.

[14] See CEMML's *Watershed Map*.

- Locations where the following activities are exposed to precipitation:
  - Fueling stations
  - Vehicle and equipment maintenance and/or cleaning areas
  - Loading/unloading areas
  - Locations used for the treatment, storage, or disposal of wastes
  - Liquid storage tanks[15]
  - Processing and storage areas
  - Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility
  - Transfer areas for substances in bulk
  - Machinery
  - Locations and sources of run-on to from adjacent property that contains significant quantities of pollutants

[15] The Fort Wainwright Spill Prevention, Control, and Countermeasure Plan displays the locations of all liquid storage tanks.

5.0 SUMMARY OF POTENTIAL POLLUTANT SOURCES

5.1 Industrial Activities and Associated Pollutants

To support the mission of host units at Fort Wainwright, as well as to operate the installation efficiently and effectively, multiple industrial activities regularly occur that have the potential to contaminate storm water. Part 5.2.4 of the MSGP requires a summary be included in this SWPPP of industrial materials and activities at Fort Wainwright with a description of associated potential pollutant sources. This section identifies potential storm water pollution sources associated with each industrial activity at Fort Wainwright, including the use and storage of industrial materials and material handling. Control measures that address these activities, materials, and associated pollutants are discussed in SWPPP Sections 5 and 6.

The facilities where these activities are performed are presented in Table 1; Table 3 lists pollutants associated with each industrial activity at Fort Wainwright.

Principal activities at Fort Wainwright that represent a potential impact to storm water are associated with the following:

- Vehicle, aircraft, and equipment fueling
- Vehicle, aircraft, and equipment maintenance
- Vehicle, aircraft, and equipment washing
- Loading and unloading materials
- Industrial waste management
- Outdoor storage
- Salt Storage

5.1.1 Vehicle, Aircraft, and Equipment Fueling

The majority of fueling operations at Fort Wainwright involve military aircraft, military and contractor vehicles and equipment, and privately owned vehicles (POVs). Fuel is stored in a variety of containers including aboveground storage tanks (ASTs), underground storage tanks (USTs), mobile tanker trucks such as heavy expanded mobile tanker truck (HEMTT) fuelers, external helicopter fuel tanks, and blivets. Fuels include diesel, gasoline, and jet fuel, which are transferred by a variety of methods including fixed dispensers and mobile tanker vehicles. The Fort Wainwright Spill Prevention, Control, and Countermeasure (SPCC) Plan details the locations of bulk fuel storage, types of fuels stored, and descriptions of the storage tanks. A copy of the SPCC is maintained with this SWPPP by the PWE Tanks Program Manager. A

copy is also provided to the Fort Wainwright Fire and Emergency Services and units responsible for bulk fueling and fuel maintenance.

Activity-specific control measures for fuel and fuel storage are presented in Section 6.12.

5.1.1.1 Pollutants Associated with Fueling

Pollutants associated with fueling are primarily saturated and aromatic hydrocarbons associated with the following fuel types:

- Diesel fuel
- Unleaded gasoline
- Jet propellant (JP)-8

5.1.2 Vehicle, Aircraft, and Equipment Maintenance

Vehicle, aircraft, and equipment maintenance is conducted at designated locations at Fort Wainwright. They include vehicle and equipment maintenance facilities, aircraft hangars, and industrial trade shops. Activities include maintenance on hydraulic systems, engines, sheet metal work, batteries, avionic electronics, and painting work. Maintenance occurs mostly inside maintenance facilities on the installation, though some outdoor maintenance is occasionally necessary.

Activity-specific control measures for vehicle, aircraft, and equipment maintenance are presented in Section 6.13.

5.1.2.1 Pollutants Associated with Vehicle, Aircraft, and Equipment Maintenance

Pollutants associated with vehicle, aircraft, and equipment maintenance include:

- Lubricating oils and grease
- Fuel
- Sediment
- Paint
- Transmission and hydraulic fluids
- Antifreeze
- Parts-cleaning solvents
- Battery acid

- Metals
- Firefighting foams, such as aqueous film-forming foam (AFFF) and high-expansion foam (HEF)

5.1.3 Vehicle, Aircraft, and Equipment Washing

Discharge of water to the storm drainage system used to wash vehicles, aircraft, and equipment is prohibited under the MSGP. Vehicle, aircraft, and equipment washing is conducted in designated areas at Fort Wainwright. These areas include maintenance facility wash racks, aircraft maintenance hangars, and other dedicated vehicle and equipment wash facilities on the installation. When used properly, wash racks at these facilities contain all wash water, sediment, and associated contaminants to prevent their entry into the storm drainage system.

Activity-specific control measures for vehicle, aircraft, and equipment washing are presented in Section 6.14.

5.1.3.1 Pollutants Associated with Vehicle, Aircraft, and Equipment Washing

Pollutants associated with vehicle, aircraft, and equipment washing include:

- Lubricating oils and grease
- Fuel
- Antifreeze
- Windshield fluid
- Detergents (containing nutrients such as phosphates or surfactants)
- Sediment
- Metals

5.1.4 Loading and Unloading Materials

Materials that are regularly loaded or unloaded at Fort Wainwright are those associated with the fueling and maintenance of vehicles, equipment, and aircraft, such as oil, fuel, parts cleaner solvents, coolants, batteries, etc. The most common containers are 55-gallon drums (polyethylene and steel) and 5-gallon steel cans, though products come in a variety of container types and sizes. Loading and unloading activities present a potential threat for the release of chemicals, as materials are often moved multiple times, sometimes with the use of equipment, such as forklifts. Control measures, mostly operational in nature, that have been implemented to address this concern are discussed in Section 6.15. Loading and unloading of salt is conducted at Building 3015, and is discussed in Section 5.1.7.

HM/HW for disposal or recycling are drummed or otherwise containerized at the facilities where they are generated, and are picked up by the installation's waste turn-in contractor as needed, prior to being brought to the installation's HMAP (see Section 5.1.5 below).

5.1.4.1 Pollutants Associated with Loading and Unloading

Pollutants associated with loading and unloading include:

- Lubricating oils and greases
- Fuels
- Transmission and hydraulic fluids
- Antifreeze
- Parts-cleaning solvents
- Battery acid
- Detergents (containing nutrients such as phosphates or surfactants)
- Paint
- Fire retardant
- Soil and invasive species

5.1.5 Industrial Waste Management

The PWE waste turn-in contractor operates a short-term (less than 90 day) hazardous waste consolidation facility (HWCF) and recyclable materials transfer facility at Building 3489. Other industrial waste management activities, including HW management and handling, primarily occur at maintenance facilities at Fort Wainwright. Facilities that generate HW and/or HM suitable for recycling operate satellite accumulation areas (SAAs), hazardous waste accumulation areas (HWAAs), recyclable materials accumulation areas (RAAs), universal waste accumulation areas (UAAs), and/or used oil collection points. Regular pick-up of these materials is scheduled, or they are collected as needed, by the waste turn-in contractor.

Activity-specific control measures for industrial waste management are presented in Section 6.16.

5.1.5.1 Pollutants Associated with Industrial Waste Management

Pollutants associated with industrial waste management include:

- Used lubricating oils and greases

- Used/contaminated fuels
- Used transmission and hydraulic fluids
- Used antifreeze
- Used parts-cleaning solvents
- Used batteries (and associated chemicals)
- Used aerosol cans
- Metals
- Different varieties of paint
- Aerosol cans
- Contaminated floor sweep
- Contaminated absorbent pads, booms, etc.
- Contaminated water from spills and leaks

Facility personnel maintain inventories of HM at their individual facilities, as well as Resource Conservation and Recovery Act (RCRA) required record keeping, as applicable.

5.1.6 Outdoor storage

Outdoor storage at industrial facilities is intermittent depending on season, facility operations, and mission. Under the MSGP, even releases of non-hazardous chemicals (e.g., biodegradable soap) from industrial facilities to storm water runoff is prohibited, and must be safeguarded from the occurrence. Outdoor storage occurs secondary to indoor storage, when indoor space is limited. Materials stored outdoors can include petroleum, oil, and lubricants (POLs), antifreeze, batteries, portable fuel tanks, generators, treated wood, metal pipes, fire retardant, and other materials commonly used at military installations.

Vehicles and equipment are also staged outdoors at many facilities on the installation. Whenever materials are stored outdoors that present a potential for storm water contamination, control measures must be implemented to address that potential.

Activity-specific control measures addressing the storage of materials, vehicles and equipment are presented in Section 6.17.

5.1.6.1 Pollutants Associated with Outdoor Storage Areas

Pollutants associated with outdoor storage areas include:

- Fuels
- Lubrication oils and grease
- Fire retardant
- Antifreeze
- Battery acid
- Metals
- Cold mix asphalt
- Residue from coal tar creosote from pressure-treated wood
- Residue from chromated copper arsenate from pressure-treated wood

5.1.7 Salt Storage

Magnesium chloride (AKA “mag-flake”) is stored in weatherproof “super sacks” inside conex containers in the yard at Building 3015. As needed, the mag-flake is mixed with rock chips and spread on installation roads for deicing and traction. Section 6.7 of this SWPPP discusses control measures implemented for this activity to reduce the likelihood of storm water contamination from salt.

5.1.7.1 Pollutants Associated with Salt Storage

- Magnesium chloride

Table 3. List of Industrial Activities and Associated Pollutants

Industrial Activity	Associated Pollutants
Vehicle, aircraft, and equipment fueling	Saturated and aromatic hydrocarbons associated with: • Diesel fuel • Unleaded gasoline • JP-8
Vehicle, aircraft, and equipment maintenance	• Lubricating oil and grease • Fuel • Sediment • Paint • Transmission and hydraulic fluids • Antifreeze • Parts-cleaning solvent • Battery acid • Used absorbents • Metals • Firefighting foams (HEF and AFFF)
Vehicle, aircraft, and equipment washing	• Lubricating oil and grease • Fuel • Antifreeze • Windshield fluid • Detergents (containing nutrients such as phosphates or surfactants) • Sediment • Metals
Industrial waste management	• Used lubricating oils and greases • Used fuels • Used transmission and hydraulic fluids • Used antifreeze • Used parts-cleaning solvents • Used batteries (and associated chemicals) • Used aerosol cans • Contaminated absorbent materials • Contaminated water from leaks and spills
Loading and unloading materials	• Lubricating oils and greases • Fuels • Transmission and hydraulic fluids • Antifreeze • Parts-cleaning solvents • Battery acid • Detergents (containing nutrients such as phosphates or surfactants) • Paint • Fire Retardant • Soil and invasive species
Outdoor storage areas	• Fuels • Lubrication oils • Antifreeze • Battery acid • Metals • Residue from coal tar creosote from pressure-treated wood • Chromated copper arsenate residue from pressure-treated wood

	• Fire retardant • Residues from cold mix asphalt
Salt	• Magnesium chloride

5.2 Spills and Leaks

The MSGP requires that the SWPPP contain a description of all significant spills and leaks of oil or toxic or hazardous pollutants that occurred during the three years prior to the date the permittee prepared the SWPPP. Additionally, the MSGP requires that the SWPPP identify the locations where potential spills and leaks could occur. Due to the nature of activities on the installation and the population of vehicles, equipment and aircraft, spills could occur virtually anywhere on the cantonment. To address this potential, Fort Wainwright has established a spill prevention and response program, requiring spills and leaks to be addressed and reported as they occur. Personnel that conduct activities or handle materials that could result in leaks and spills are trained in spill prevention and response, which includes safety measures and knowing who to contact for emergencies. Preventive maintenance of infrastructure and vehicles compliment this program.

Locations where spills and leaks may be more likely to occur than others include fuel transfer areas, vehicle storage yards, outdoor HM storage areas, and the flight line. All areas where loading and unloading of industrial materials occur are included in this category. Fort Wainwright has implemented numerous control measures at facilities with these attributes. In addition to this SWPPP, personnel must adhere to provisions in the installation's SPCC and Hazardous Material and Waste Management Plan (HMWMP)[16], which describe proper management to reduce the likelihood of spills and leaks. All spills on post are to be promptly reported, contained, cleaned up, and spill debris managed in accordance with these plans, and applicable State of Alaska and federal requirements. Spills to the storm water conveyance system are additionally tracked and followed-up under the MS4 Illicit Discharge Detection and Elimination Program, which utilizes the same 24-Hour Spill Reporting number manned by the environmental contractor.

Minor leaks, drips, and spills (indoor and outdoor) are addressed with dry absorbent materials. These include absorbent pads, booms, floor sweep, and beaded absorbents. As practicable, POL residues on concrete are removed using EPA National Contingency Plan authorized bioremediation agents, such as Micro-Blaze, a product designed to digest organics and hydrocarbons. When floor sweep is used, it is collected and properly disposed of in a timely fashion. Small POL- or antifreeze-contaminated dirt and/or gravel spots are periodically collected and properly disposed of. These materials are staged in labeled containers with proper lids until collected by the PWE waste turn-in contractor.

Appendix C is a summary of spills and leaks reported at Fort Wainwright in the three years preceding the update of this SWPPP (January 2017 through January 2020). The summary is sorted by date, and details the material spilled, location, cause of the spill, and the method of cleanup and disposal for any spills one gallon or greater. A figure in Appendix A titled *Significant*

[16] Hazardous Material and Waste Management Plan, December 2013, USARAK and USAG-FWA.

Spills and Leaks in the Fort Wainwright Cantonment Area depicts the locations of spills greater than ten gallons and identifies spills to Waters of the U.S or ditches connected to Fort Wainwright's storm water system and MS4.

5.3 Non-Storm Water Discharges

Permittees must evaluate their facility for the presence of non-storm water discharges and if discovered, determine if they are allowable under the MSGP. Allowable non-storm water discharges must be included on the facility's site plan, and prohibited discharges must either be eliminated, or separately permitted. Evaluation(s) and any corrective action(s) associated with non-storm water discharges must be documented, as per requirements listed in Part 5.2.4.4 of the MSGP, and provided below:

- The date of any evaluation
- A description of the evaluation criteria used
- A list of the outfalls or onsite drainage points that were directly observed during the evaluation
- The different types of non-storm water discharge(s) and source locations
- The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge

Industrial facilities and the outfalls from which they discharge are inspected on a quarterly basis. Due to the relatively dry climate and flat topography at Fort Wainwright, it is unlikely that above-grade, ongoing, non-storm water discharges would not be easily discovered. If a discharge was observed from a pipe on the side of a building, for example, or a flow observed through a storage yard, it would be documented before, or during an inspection, and investigated further.

Discharges to the ground and illicit sewer connections can be more difficult to detect. In 1997, Fort Wainwright DPW conducted a survey to ensure that all oil/water separators (OWSs) on the installation were correctly tied into the sanitary sewer system. Illicit connections were addressed, and subsequent OWS installation in new development at Fort Wainwright plumbed OWSs to the sanitary sewer system. In 2017, CSU conducted an inventory of all OWSs as part of MS4 permit requirements. The DPW Contracting Officer maintains OWS records and provides them to PWE upon request.

Historic septic systems are typically removed as they are discovered. As an example, an old septic tank and associated leach pit used to service a bathroom and floor drain in Building 1191 was discovered at the Fort Wainwright landfill. EPA designated the system a Class V Motor Vehicle Waste Water Disposal Well, and required Fort Wainwright to close it. A contractor properly addressed the system in 2011. In 2015 a septic tank and associated leach pits were

unearthed at the golf course near Building 2092. The system was only used for sanitary purposes such as kitchen and bathroom sinks and a bathroom toilet, not for discharging industrial wastewaters. Soil tests determined that there was no contamination associated with the system that would necessitate further action by Fort Wainwright. The pits were backfilled in May 2015.

Due to impractical costs associated with bringing sanitary sewer connections to the golf course and ski area, maintained septic systems remain at those two locations. At the time this SWPPP was prepared there was no reason to believe these septic systems contribute to storm water contamination. They will be periodically evaluated for any issues.

In 2009, Doyon commissioned an installation-wide study of the water and wastewater systems at Fort Wainwright. One of the goals of the study was to evaluate infrastructure and establish a five-year master plan to expand capacities as necessary, and address any deficiencies discovered. Although assessment of the Fort Wainwright MS4 was not specifically a part of the study, any illicit connections of the storm sewer system to the sanitary system would have likely been discovered in the course of the evaluation. Furthermore, evaluating and upgrading the sanitary system helps reduce the instance of old, or compromised sanitary components failing, which can result in storm water contamination. Part 4.0 of the study detailed Doyon's five-year master plan.

PWE's most recent non-storm water discharge certification is provided in Appendix D.

5.4 Sampling Data Summary from Previous Permit Term

5.4.1 Sampling Challenges at Fort Wainwright

The MSGP requires that a summary be provided in the SWPPP of sampling data collected during the previous permit term. Due to extreme freezing conditions of both ground and air in Fairbanks for much of the year, the majority of Fort Wainwright's storm water drainage system is above ground. It is comprised of a series of permeable ditches and swales that span the cantonment area prior to reaching outfalls along the Chena River, wetlands, and associated Waters of the U.S. During the previous MSGP term, the SWPPP managed twelve industrial outfalls on the cantonment. These outfalls were difficult to access for much of the year due to snow and ice accumulation in the conveyances and areas around them.

The permeability of the conveyances on post and the distance runoff travels prior to reaching outfalls results in runoff rarely reaching outfalls on Fort Wainwright. This condition is even observed during summer storm events of various intensities. Often, when water is observed at an outfall, it is a result of water backing up from the receiving water body rather than from outfall discharge. The most reliable time of year to observe discharges at the outfalls occurs during spring break-up, when the ground is still frozen yet air temperatures are above freezing, thusly allowing water to flow freely. Under these conditions, which are most common in the late morning and early afternoon, runoff can travel significant distances across the installation and

potentially reach the outfalls from across post. During the late summer, if the ground is inundated with water from prolonged rain, a storm event is more likely to produce flow at multiple outfalls.

Benchmark samples were not required nor collected during the term of the 2015 permit.

5.4.2 Sector-Specific Sampling at Fort Wainwright Under the 2015 MSGP

Industrial sectors present at Fort Wainwright during the previous term were Sectors J, L, P, and S. The discussion below describes the sampling requirements for each sector under the previous MSGP. In addition to sector-specific sampling, impaired waters monitoring was required at all outfalls discharging to the Chena River; total suspended solids (TSS) and turbidity were included parameters at applicable outfalls (Impaired waters monitoring samples are no longer required; see SWPPP Section 8.4.).

5.4.2.1 Sector J (Non-Metallic Mineral Mining and Dressing)

Sampling for ELGs is required for Sector J activities for mine dewatering discharges at crushed stone mining facilities, mine dewatering discharges at construction sand and gravel mining facilities, and at mine dewatering discharges at industrial sand mining facilities. The only dewatering that has occurred at Badger Pit was for dust suppression on post roads. Water was drawn from the lake and pumped into trucks, which then sprayed the water on dirt road surfaces. The only required ELG parameter for mine dewatering activities was pH. At the time this SWPPP was prepared, no active dewatering was occurring at Badger Pit.

5.4.2.2 Sector L (Landfills, Land Application Sites, and Open Dumps)

All landfill, land application sites and open dumps under the previous permit were required to conduct benchmark sampling for TSS. Additionally, discharges from non-hazardous waste landfills subject to ELGs in 40 CFR Part 445 Subpart B were required to sample for nine other parameters. However, during the most recent permit term, no samples were collected as the former outfall at the landfill area was determined to no longer discharge to Waters of the U.S., nor conveyances to outfalls to Waters of the U.S.

5.4.2.3 Sector S (Air Transportation)

Under the 2015 MSGP, sector-specific benchmarks for Sector S only applied at airports where a single permittee, or a combination of permitted facilities used more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis. As Fort Wainwright does not qualify for either designation, Sector S benchmarks were not required.

5.4.2.4 Sector P (Land Transportation and Warehousing)

The 2015 MSGP required no benchmark monitoring or ELGs under Sector P.

5.4.3 Sampling Events During Previous Permit Term

Because the Chena River was classified as a Category 5, 303(d)-listed impaired waterway at the time, annual impaired waters monitoring was required once at Fort Wainwright outfalls to the river during the first year of coverage under the 2015 MSGP. No discharges were present during the fourth quarter of 2015 to sample. The majority of samples taken throughout the previous permit term were composed of snowmelt during spring break-up. During the first quarter of 2016, runoff from winter break-up was able to be sampled from ten outfalls. Impaired waters monitoring yielded turbidity results ranging from 6 to 98 nephelometric turbidity units (NTU) from outfalls and 7.7 NTU for the Chena River background sample. Results for total suspended solids (TSS) ranged between 2.6 and 72 milligrams per liter (mg/L) at outfalls and 8.2 mg/L in the Chena River. The highest levels of turbidity and TSS were observed at former Outfall 5, corresponding to outfall FWA-006 in the current SWPPP.

Also during the first quarter of 2016, Outfall 10, which led to Badger pit, was able to be sampled for quarterly benchmark monitoring parameters of nitrate plus nitrite nitrogen and TSS, as well as effluent monitoring parameter of pH. The results were 0.35 mg/L of nitrogen, 35 mg/L TSS, and pH of 6.98. No other flow events were observed at Outfall 10 to be able to collect further benchmark samples. Outfall 10 was later renamed FWA-010, but is no longer considered an outfall as it discharges to Badger Pit, determined not to be a Water of the U.S.

Four outfalls each were able to be sampled during the second quarter and in the third quarter of 2016. Results were within the ranges observed during the first quarter, with one exception. During the third quarter of 2016, Outfall 9 (more recently named outfall FWA-011, which is no longer considered a storm water outfall following the jurisdictional determination at Badger pit) showed sample results of 210 NTU for turbidity and 140 mg/L for TSS.

No additional inspections or control measures were deemed necessary following review of the 2016 MSGP monitoring data. The sampling results were reviewed by PWE and provided to ADEC in FWA's discharge monitoring reports. Storm water sampling documentation is maintained by the PWE Water Program Manager and is provided to the ADEC Compliance and Enforcement Division as it becomes available. Sampling conducted under the 2020 MSGP will be kept in, or with, this SWPPP.

6.0 STORM WATER CONTROL MEASURES

Part 5.2.5 of the MSGP requires permittees to document in the SWPPP the types and locations of control measures implemented that address, as applicable, the requirements presented in MSGP Parts 3.2, 4.1 – 4.3, and 11. USAG Alaska has implemented a wide-range of storm water control measures under previous MSGPs to ensure that every reasonable effort is taken to reduce the likelihood of contaminating storm water runoff at the installation. The MSGP uses the term *control measures* to include both structural and non-structural control measures. The control measures described in this section address the industrial activities that occur at Fort Wainwright, and complement and reinforce operating procedures and requirements found in other State of Alaska and Army documents, including Department of Defense (DoD) instructions and directives, and Army regulations. Documents that apply to the entire post are maintained at PWE and include the following:

- Draft Hazardous Material Management Program, 28 July 2020, USAG-FWA
- Draft Hazardous Waste Management Plan, March 2020
- Spill Prevention Control and Countermeasure Plan, Fort Wainwright, January 2018
- Storm Water Management Plan, USAG-FWA, September 2016

The storm water pollution prevention team regularly evaluates the effectiveness of control measures and modifies them or implements new ones where and when necessary.

Best management practices are exactly that – “best” practices. Often, measures are implemented that satisfy the need for the measure, even if it may not be the *best* practice, per se. Therefore, the term *control measure* has generally replaced *BMP* in the industry. As stated before, control measures can be structural, such as a pole barn or containment curbing, or it can be operational, such as performing maintenance indoors instead of outdoors. Sector-specific control measures are those required by the MSGP for respective sectors only, and are not required for activities outside those sectors. At Fort Wainwright, a spectrum of structural, operational, and sector-specific control measures are implemented, as applicable, to satisfy MSGP requirements.

The MSGP requires control measures be implemented at industrial facilities for the following categories:

1. Minimize exposure
2. Good housekeeping
3. Preventive maintenance
4. Spill prevention and response procedures

5. Erosion and sediment controls
6. Management of runoff
7. Salt storage piles or piles containing salt
8. Employee training
9. Non-storm water discharges
10. Waste, garbage, and floatable debris
11. Dust generation and vehicle tracking of industrial materials

Additional control measures included in this plan address the following activities:

12. Fueling and fuel storage
13. Vehicle, aircraft and equipment maintenance
14. Vehicle, aircraft and equipment washing
15. Industrial waste management
16. Loading and unloading
17. Outdoor storage

Sector-specific control measures are discussed in SWPPP Section 5.

6.1 Minimize Exposure

The purpose of this SWPPP is to identify and prevent potential contaminants from polluting receiving waters. The following control measures can reduce the potential for storm water contamination resulting from industrial activities. Whenever practicable, activities are conducted and storage areas are designated in covered, contained areas at Fort Wainwright. The following are procedures used to minimize the exposure of contaminants to the storm water drainage system:

- Load and unload materials indoors or under covered areas.
- Store materials indoors or off the ground under adequate cover to prevent contact with storm water, which includes run-on and runoff.
- Handle new chemical containers unopened until they are inside the building of use.
- Store containers that have been opened indoors, or in a covered, contained area.
- Provide adequate secondary containment for POL and liquid storage.
- Store waste in a contained environment, out of contact with storm water.

- Conduct industrial activities indoors, in a controlled environment to prevent unintentional discharges to the storm sewer system.
- Conduct vehicle washing at designated areas only.
- Identify and use non-toxic or less toxic substitute materials ("environmentally preferred").
- Eliminate indoor connections to the storm sewer.
- Use drip pans under leaking vehicles, aircraft, and equipment.
- Stockpile snow on permeable surface(s) at perimeter of facility, away from storm water conveyances and drains; try to maintain ≥100 feet between stockpile(s) and drain(s).
- Only use PWE-approved products for safety related deicing.

6.2 Good Housekeeping

Good housekeeping encompasses a wide spectrum of practices at Fort Wainwright that are implemented at individual facilities as well as by installation-wide maintenance personnel. At the facility level, implementing measures to avoid drips, leaks, and spills, and promptly addressing them when they do occur, are paramount. Orderly management of HM containers contributes to this effort. Installation-wide good housekeeping includes strategic areas for snow stockpiling, regularly scheduled trash pickups and locations, and wet-sweeping paved roads following spring snowmelt and when necessary. The following procedures implemented as applicable:

- Sweep outdoor paved areas (do not hose down).
- Do a thorough sweeping following spring snowmelt.
- Use a mechanical brush or vacuum sweeper when possible.
- Place trash receptacles with proper lids at necessary locations.
- Properly dispose of garbage/solid waste.
- Label drums, cans, containers, tanks, and valves.
- Maintain a material inventory.
- Limit material inventory based on need.
- Adhere to shelf-life protocols in HM program.
- Store materials in proper containers with tight-fitting lids.
- Store materials off the ground (e.g., on pallets), out of contact with storm water.

- Maintain facilities in a clean, orderly fashion.

6.3 Preventive Maintenance

MSGP Part 4.2.3 requires permittees to regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in storm water discharges. As well, all control measures (including non-structural) that are used to achieve the effluent limits required by the permit must be maintained in effective operating condition. If control measures need repair or replacement, necessary repairs or modifications must be implemented within 14 days, or as expeditiously as practicable.

A preventive maintenance program that includes regularly inspecting, testing, maintaining, and repairing of industrial equipment and systems helps avoid situations that may result in leaks, spills, and other accidents. These activities can greatly reduce breakdowns or failures that could result in the discharge of pollutants to surface waters. A combination of scheduled and on-call maintenance accompanied by routine inspections is expected to address preventive maintenance concerns at Fort Wainwright.

Fort Wainwright's operations include ongoing evaluation and maintenance of post infrastructure. A DPW contractor performs many of these tasks. The maintenance schedule differs depending on what is being maintained. There are three main, preventive maintenance programs at Fort Wainwright that complement the industrial storm water program on the installation: 1) storm drainage system maintenance, 2) preventive maintenance of paved surfaces, and 3) OWS maintenance. These programs are discussed below.

6.3.1 Storm Drainage System Maintenance

The following tasks are performed as a part of the summer seasonal Surface Water Drainage Preventative Maintenance Program at Fort Wainwright. Storm water drainage maintenance is conducted April through October, incorporating a variety of tasks intended to maintain and improve snowmelt and storm water drainage. The program addresses drainage areas and culverts associated with road surfaces, parking areas, and vehicle, equipment, and airfield movement areas managed by this SWPPP.

The following activities occur during spring break-up (typically mid-April through mid-May):

- Surface Water Drainage Survey – Inspection and survey of snow melt water drainage noting:
  - Directions of flow
  - Areas of blockage or flow problems
  - Areas experiencing unusual drainage conditions or irregularities

  - Conditions of culverts, drains, spillways, openings, surrounding ditch line slope and culvert headwall, outlets and end walls
  - Presence and condition of culvert markers and mounting brackets
- Locations of problems and/or irregularities are identified and described, and respective recommended corrective actions and priorities are documented.

Survey results are provided to USACE for evaluation. USACE then provides the roads and grounds contractor a list of prioritized areas to address, based upon extent of drainage conditions. The contractor then initiates the following:

- Snow and ice blockages – Ditch-line drainage flow blockages caused by snow and ice accumulations are corrected using various equipment and hauled to designated areas as necessary.
- Water overflow from ditch and culvert blockages onto roadways, parking areas, yards and similar locations may be addressed as follows:
  - Mechanical pumps remove overflow from affected area(s) to functioning ditches or drains.
  - Mechanical sweeping brooms may be used to push water out of affected areas and into nearby areas determined to be appropriate for the purpose.
  - Overflow effecting roadways, sidewalks, parking lots and similar areas subject to motor vehicle and pedestrian traffic are posted with the appropriate warning signs and hazard markers to reduce the likelihood of accidents.
  - Areas of overflow located on roads, sidewalks, and parking lots subject to refreezing in the evening and early morning hours is included on the road surface chip/gravel sanding routes until the overflow condition is corrected.
  - Roads and sidewalks that are subject to, or have experienced water overflow and freeze/thaw conditions, are inspected and monitored for surface pavement and shoulder damage during the spring and summer seasons; necessary repairs are included in the Preventative Maintenance of Paved Surfaces program (discussed below).
  - Loose trash and debris are removed from open drainage systems, fences, and open grass areas adjacent to creek banks after severe weather or when water overflows the creek banks.

The following preventative maintenance is performed throughout the summer season as necessary:

- Obstructions and vegetation are removed along ditch lines that impede surface flow.
- Drainage grades and flow patterns are reestablished.
- Sediments and debris are removed from spillways, culvert head walls, end walls, outlets, and areas of lateral erosion, and degradation.
- Loose trash and other debris are collected and properly disposed of.
- Maintenance items identified and indicated during the spring breakup Surface Water Drainage Survey (described above) are addressed.
- Culvert markers and brackets are installed, replaced, and/or repaired.

6.3.2 Preventive Maintenance of Paved Surfaces

Road surface cleaning and sweeping services are implemented between April and September at Fort Wainwright. This service begins as practicable following breakup and may consist of the following:

- Chip gravel, stones, litter, metallic fragments, and all other similar debris found along road surfaces and shoulders are removed from road surfaces by sweeping, vacuuming, and use of magnetic sweeping equipment.
- Following completion of initial breakup sweeping, a monthly schedule for paved road surfaces is conducted for cleaning and sweeping.
- During sweeping operations, air quality standards regarding fugitive dust generation (as required by 42 U.S. Code 7401 and 18 Alaska Administrative Code 50) are observed; water is applied to road surfaces when necessary to reduce fugitive dust emissions.
- Road intersections are kept clean and free of accumulated chip gravel and other similar debris materials from the previous winter season's application for traction control.
- Traffic-warning signs are posted in immediate work site areas to reduce the likelihood of accidents that could result in leaks, spills, and other damage.

6.3.3 Oil/Water Separator Maintenance

Fort Wainwright's operations and maintenance activities include periodic evaluation, maintenance, and cleaning of OWSs. A DPW contractor typically performs these tasks. The schedule differs depending on the facility and respective needs; larger maintenance facilities are serviced more frequently than smaller shops. This schedule is dynamic and adjusts according

to current use of respective facilities. However, facility personnel may request maintenance at any point outside the schedule if they believe more frequent servicing is necessary.

OWS maintenance ensures proper functioning of pumps, floats, and switches. When necessary, in-line filters and sediment traps are cleaned as well. Additional, less frequent maintenance includes vacuuming out separator tanks, sediment trap pits, and oil collection basins, and if necessary, cleaning out petro-pak filter layers.

Exterior wash racks and their sediment collection tanks are winterized in the fall, and remain out of service until spring, when they are de-winterized and prepared again for use. During annual SWPP training, personnel are instructed to contact PWE if any drains are backing up or are not functioning as intended. Following such requests, PWE investigates to determine the best course of action, and the item is addressed as soon as practicable. PWE maintains a current list of OWSs on the installation.

6.4 Spill Prevention and Response

The MSGP requires that areas where potential spills can occur be identified and that appropriate handling procedures, storage requirements and use of specific spill control equipment be considered.

As a result of a reduction in the bulk fuel storage capacity at Fort Wainwright, an Oil Discharge and Pollution Control (ODPC) Plan and Facility Response Plan (FRP) are no longer required for the installation. A SPCC Plan was prepared in accordance with Title 40 CFR 112, pertaining to non-transportation related, non-production, on-shore storage facilities. The SPCC Plan is required because Fort Wainwright maintains over 42,000 gallons of underground storage capacity and over 1,320 gallons of above ground storage capacity, with above ground tank capacities exceeding 660 gallons. The PWE Water Program Manager maintains a copy of the Fort Wainwright SPCC Plan with this SWPPP.

The SPCC Plan describes methods in use at Fort Wainwright to prevent POL spills from reaching navigable waters. The plan includes spill prevention, discovery and emergency notification procedures. A copy of the plan is also maintained at each site with an above ground storage tank with capacity exceeding 660 gallons. PWE reviews, and if necessary, amends the SPCC Plan at least once every five years, or within six months after a change in facility design, construction, operation or maintenance that affects the potential for a spill of POL or hazardous substance.

Features of the SPCC Plan that pertain to storm water pollution prevention include:

- Response Strategies – The primary response strategy is containment and control. Physical barriers specified in the Plan include lined ditches, dikes, berms for spills on land, containment and/or absorbent booms and chicken wire barriers filled with absorbent material for spills in small streams. Snow is recognized as useful absorbent

material for a containment berm on land. Contaminated snow from spills or leaks is placed in containers and picked up by the PWE waste turn-in contractor.

- Recovery Strategies – Pumps, absorbents and skimmers are used to recover spilled oil.
- Disposal of Contaminated Material – Used oil is burned for energy recovery in Building 3476 or stored in various containers awaiting proper disposal through the HMAP located at Building 3489. Contaminated, absorbent material and debris generated from a spill cleanup are placed in over pack drums and turned in to Building 3489 as potentially hazardous waste. POL-contaminated soil is removed and treated/disposed of in accordance with the most recent State of Alaska Guidance for Storage, Remediation and Disposal of Petroleum-Contaminated Soils. Contaminated snow from spills or leaks is containerized and picked up by the PWE waste turn-in contractor.
- Fuel Training – Military POL specialists receive three months of training at Fort Lee, Virginia, for fuel handling. Training includes spill response procedures, on-the-job site-specific training at Fort Wainwright and additional fuel training as they are promoted. Some civilian DPW personnel (including the Heavy Equipment Section and Fire Prevention Division) are required to take the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training. Fire prevention personnel receive additional training. Training is also conducted quarterly on post under the requirements of the HMWMP.
- Fuel Transfer Procedures – Fuel is transferred and delivered as needed to individual storage tanks at Fort Wainwright by private contractor. Procedures designed to prevent spills during fuel transfer are described in the SPCC Plan.
- Potential Discharge – The SPCC Plan lists the existing ASTs and USTs with indicated capacities. USTs and piping installed after December 22, 1988, have leak detection capabilities. USTs installed prior to this date were retrofitted or replaced by 1993 to meet federal leak detection requirements. Portable storage tanks in the form of vehicular tankers and collapsible rubber blivets are used for transporting fuels to the field for training exercises. The collapsible rubber blivets can rupture and were responsible for approximately 15 percent of reported fuel spills larger than 100 gallons between 1982 and 1996. Storage tank emplacements are required to have containment structures and adequate response materials on site.

PWE is responsible for ensuring that Fort Wainwright facilities comply with the SPCC Plan. Where appropriate, PWE may require development and implementation of facility-specific SPCC plans in accordance with 40 CFR 112. Post-wide and facility-specific spill prevention and response measures are important control measures for reducing storm water pollution at Fort Wainwright.

6.5 Erosion and Sediment Controls

Because Fort Wainwright's cantonment area is situated on land with relatively flat topography, naturally occurring erosion is generally not an issue on the installation. Exceptions to this are naturally occurring, undercut segments of the banks of the Chena River. Much of the installation is vegetated and permeable, allowing storm water to infiltrate. Paved areas include roads, facility parking areas, and airfield runways and ramps. Vegetated buffers such as grassy strips, swales, and ditches receive runoff around facility perimeters and from paved areas. Nearly all of the Fort Wainwright MS4 is comprised of above-grade drainage, though a few residential and municipal areas direct runoff to engineered, below-grade features. Most of these flows daylight to permeable conveyances prior to reaching Waters of the U.S.

6.5.1 Chena River Bank Stabilization

The banks of the Chena River can be steep, but are largely vegetated, and generally undisturbed by activities at Fort Wainwright. Nonetheless, erosion has occurred at certain areas along the banks, to the extent expected in any natural environment. When erosion issues do arise, the installation implements measures, as practicable, to reduce impacts to the natural environment. For example, Fort Wainwright initiated two erosion control projects in 2010 to prevent further undercutting of the Chena River along River Road and part of the Chena Bend Golf Course. The projects involved the installation of rip-rap for bank stabilization, and re-vegetating the area with native species. Both projects necessitated USACE permits; project records are maintained by PWE.

6.5.2 Construction Activity

Aside from irregular occurrences such as larger-than-normal storms or snowmelt events, the greatest threat of erosion at Fort Wainwright would likely result from ground disturbance activities. Construction activities at Fort Wainwright one acre or larger are required to have coverage under an APDES construction storm water permit (see Section 3.2.3). These projects must include the development and implementation of a SWPPP, which is submitted to DPW for approval before construction activity is authorized to begin. DPW personnel work together in overseeing these projects to help ensure all required and appropriate measures are being properly implemented. Inspections by PWE staff as well as construction project coordinators identify and correct potential control measure deficiencies, to ensure that runoff from these sites is uncontaminated and free of sediment.

6.5.3 River Road Soil Stockpile

A soil stockpile site is situated south of River Road, across from the Fort Wainwright landfill. The stockpile is primarily used by DPW roads and grounds personnel and construction contractors. As discussed in Section 3.2.3, construction is considered to be an industrial activity by EPA, yet resulting storm water discharges are typically regulated under construction storm water permits, not the MSGP. However, due to the size of the River Road Soil Stockpile and

the number of user groups, the stockpile is partially managed by this SWPPP. Stockpile users who operate active construction sites that are one or more acres in size are required to include their stockpile activity in their project SWPPP and manage their activity area according to provisions in their construction storm water permit. Stockpile users who operate construction sites less than one acre in size are not bound by construction storm water permit requirements. Therefore, provisions have been included in this SWPPP to ensure that all activities conducted at the stockpile are performed while implementing applicable SWPP control measures.

Soil is brought from excavation activities to this site, where it is either dressed and seeded (inactive portions), or temporarily stockpiled for use as fill elsewhere on the installation. Temporary stabilization measures are required for active portions. Control measures to be implemented at the stockpile include the following:

- Track-walk active stockpile faces for temporary stabilization.
- Maintain a forested buffer around active portions of the site.
- Delineate activity area(s) using signage.
- Implement measures to reduce fugitive dust from activity area, as necessary.
- Prevent off-site tracking of sediment onto River Road with exit grates and/or road sweeping.

Additional control measures that users must implement, as applicable, are provided in Appendix E of this SWPPP. The location of the stockpile is presented on the *Fort Wainwright Cantonment* map in Appendix A. PWE provides user groups with a map displaying current delineations of user group areas, for ease of use and management.

6.5.4 Erosion Control Inspections

The MSGP requires quarterly inspections at industrial facilities. A line item on the quarterly inspection form includes observations of sediment and erosion control issues at each facility. Storm water coordinators at industrial facilities are instructed during annual storm water training to regularly inspect facility grounds for erosion and to report issues to PWE if they are observed. During comprehensive site inspections, storm drainage features are evaluated for their condition and effectiveness. The Water Program Manager maintains records of these inspections and associated corrective actions with this SWPPP.

6.6 Management of Runoff

Parts 4.2.5 and 4.2.6 of the MSGP require permittees to implement measures that reduce discharge quantity and velocity in conveyances and/or at outfalls, where necessary. Sections 2.3 and 3.4.1 of this SWPPP discuss features of the Fort Wainwright MS4 that reduce the likelihood of runoff reaching outfalls to Waters of the U.S. Conveyance length and permeability

are considered the primary measures to reduce the impact of industrial storm water discharges to receiving waters. In conjunction with operational measures implemented at each facility managed under this SWPPP, no additional runoff management measures are perceived as needed.

6.7 Salt Storage Piles or Piles Containing Salt

Part 4.2.7 of the MSGP states the following: "A permittee must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. A permittee must also implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile."

Mag-flake is delivered to Fort Wainwright in weatherproof super sacks, which are placed inside a conex in the yard at Building 3015 for storage, until use. Angled rock chips, soil, and cold batch asphalt are also stored in the yard, in open-aired concrete dividers. As needed, mag-flake is mixed with the rock chips by heavy equipment for use in de-icing and traction on Fort Wainwright roads. Additional rock chip is stored at Building 3584 (AKA "Chip Barn"), which is a roofed, three-sided building with separate, open-ended storage stalls. Rock chip is brought from the Chip Barn to the yard at Building 3015 as needed.

Use of magnesium-based salt is considered a control measure over the use of sodium based salt, as sodium chloride salt is known to decrease the infiltration capacity of soil over time. Another control measure is conservative use of the mag-flake, only using what is deemed necessary to maintain safe road conditions. A hydrophobic, absorbent boom is placed in front of the concrete dividers to reduce the opportunity for sediment and petroleum residue (from the asphalt) to escape the bin and mingle with storm water. The yard is graded to vegetated, permeable ground, where such contaminants are expected to infiltrate if they did become present in runoff.

6.8 Employee Training

Part 4.2.9 of the MSGP requires training for the storm water pollution prevention team as well as personnel that are responsible for implementation of, and compliance with, provisions of the permit. ADEC recommends administering this training annually at a minimum, and more frequently at facilities with high turnover of personnel. Facility storm water supervisors at Fort Wainwright receive annual storm water pollution prevention training that covers the components and goals of the SWPPP, pertinent sections of the MS4 Storm Water Management program (such as illicit discharges), control measures described in this section, and the responsibilities of facility personnel required by the MSGP and SWPPP. Special attention is paid to activities and pollutants associated with different facility operations and how to avoid their contamination of storm water.

At a minimum, one to two people at each facility identified in the SWPPP receives/receive formal, annual training by a storm water pollution prevention compliance contractor or PWE staff. Including more facility personnel can be challenging at certain facilities due to workflow considerations. Nonetheless, as many personnel are trained as the situation allows for. Some annual training events include entire motor pool units, maintenance crews, etc. In-house training materials are provided to facility personnel at each training event so new personnel and/or those not able to attend the training can utilize these materials at a convenient time.

As required by the MSGP, the PWE Water Program Manager maintains storm water training documentation with this SWPPP.

6.9 Allowable Non-Storm Water Discharges

Part 4.2.10 of the MSGP states, “A permittee must eliminate all non-storm water discharges not authorized by an APDES permit.” The MSGP also identifies additional allowable non-storm water discharges from permitted facilities, of which the following apply to Fort Wainwright:

- Discharges from emergency/unplanned fire-fighting activities
- Fire hydrant flushing
- Potable water, including water line flushing
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outdoor storage of refrigerated gases or liquids
- Irrigation drainage
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling
- Pavement wash waters where no detergents or hazardous cleaning products are used (e.g., bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), and the wash waters do not come into contact with oil and grease deposits or any other toxic or hazardous materials (unless cleaned up using dry cleanup methods). The permittee is prohibited from directing any authorized pavement wash waters directly into any surface water or storm drain inlet unless the permittee has implemented appropriate control measures that meet the non-numeric effluent limits in Part 4.2 [of the MSGP]. Where appropriate control measures are not in place, wash water runoff must first undergo treatment prior to discharge such as filtration, detention, or settlement
- Routine external building wash down / power wash water that does not remove significant amount of building paint or use detergents or hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols)

- Uncontaminated ground water or spring water
- Foundation or footing drains where flows are not contaminated with process materials
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blow-down or drains)
- Other uncontaminated discharges meeting water quality criteria that the Department approves on a case-by-case basis

Although the above discharges are not subject to APDES industrial storm water permitting requirements, appropriate measures must be implemented to prevent pollutants from entering the storm water drainage system, resulting from any discharges.

The MS4 Permit identifies the non-storm water discharges as well, as long as they are not a source of pollution to Waters of the U.S., of which the following apply to Fort Wainwright:

- Uncontaminated water line flushing
- landscape irrigation
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration (as defined at 40 CFR§ 35.2005(20))
- uncontaminated pumped groundwater
- discharges from potable water source
- foundation drains
- air conditioning condensate
- footing drains
- lawn watering
- individual residential car washing
- flows from riparian habitats and wetlands
- street wash water
- residential building wash waters without detergents
- flows from emergency firefighting activities

6.10 Waste, Garbage, and Floatable Debris

Part 4.2.11 of the MSGP states, "A permittee must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged."

Most industrial activities at Fort Wainwright are typically conducted indoors and at a significant distance from Waters of the U.S. Routine inspections of these sites and their surrounding areas help ensure good housekeeping measures such as trash removal and proper waste disposal occur. The DPW roads and grounds maintenance contractor regularly collects trash at industrial facilities around the installation. At each facility, dumpsters are provided with adequate covers to protect the dumpster contents from storm water. Personnel are instructed to keep the dumpster covers down at all times except when the dumpster is actively being used. Personnel contact the maintenance contractor to request additional service if the dumpster needs emptying prior to the regularly scheduled service, if a new lid is needed, etc. Ensuring that loose trash has been collected and properly disposed of is a line item on routine storm water inspection forms.

Loose trash tends to become incorporated into snow piles during the winter, as it may snow before a trash collection event occurs, thus masking the visual sign that trash is present. Most snow stockpile sites at Fort Wainwright are in the middle of flat, permeable fields, where melt-water mostly infiltrates or must travel a significant distance prior to reaching Waters of the U.S. This affords the opportunity during spring breakup of witnessing loose trash melt from the snow piles, so it is collected prior to becoming floatables in discharges. Throughout the melting season, as necessary, maintenance personnel collect and properly dispose of the loose trash at stockpile locations. A green-up day occurs each spring, when a thorough post-wide spring-cleaning event is held. The spring clean-up event is also a requirement under the MS4 permit.

The following measures are implemented where practicable at industrial facilities at Fort Wainwright to ensure that garbage and debris do not enter receiving waters:

- Provide dedicated, clearly marked, containers or dumpsters for disposal of garbage.
- Place trash receptacles in convenient locations.
- Keep containers protected from weather so that containers are not blown over during wind events or filled with snow or rain.
- Empty containers on a regular basis.
- Regularly inspect site to ensure that loose trash is collected and properly disposed of.
- Conduct thorough spring-cleaning after snow melt.

- Remove and properly dispose of all trash and garbage from grounds, snow stockpiles, parking areas and roadways.
- Follow control measures for proper disposal of hazardous waste and materials.

6.11 Dust Generation and Vehicle Tracking of Industrial Materials

Dust controls and reduction of off-site tracking are required by the MSGP, and include any controls that reduce the potential for dust, sediment and other potential contaminants to be carried through air, water, or as off-site tracking. Fort Wainwright implements wet-sweeping paved streets and parking areas as necessary to minimize dust and to prevent sediment from being discharged into the storm drainage system. Applicable contractors and/or maintenance personnel address excessive sediment, mud, and other contaminants on installation roads as necessary (see Section 6.3). If off-site tracking of sediment onto paved roads is observed on post during quarterly inspections, the observation is included in the report submitted to the PWE Water Program Manager. PWE then follows up with the responsible party to address the action item.

6.12 Fueling and Fuel Storage

Fueling activities at Fort Wainwright include small volume fuel transfer and bulk fuel transfer. Small volume fuel transfer includes fueling vehicles, equipment, and aircraft at fixed fuel points, as well as to/from portable sources such as fuel trucks and hand-held containers. Multiple measures have been implemented at fueling points to reduce the opportunity of leaks and spills to mingle with discharges to Waters of the U.S.

At all bulk fueling facilities, fuel is transferred to ASTs and USTs via delivery fuel trucks and fixed piping. The Fort Wainwright SPCC Plan describes the management of bulk fuel storage and transfer on the installation, contingency planning and response strategies, and training requirements for fuel handler personnel. Detailed information on all major aspects of the Fort Wainwright fueling program are included in the SPCC Plan and are not reproduced in this SWPPP. Personnel engaging in bulk fuel handling at Fort Wainwright are well trained to do so (see Section 6.4 for training received by fuel handling personnel).

6.13 Vehicle, Aircraft, and Equipment Maintenance

Vehicle, aircraft, and equipment maintenance is conducted at designated locations at Fort Wainwright. They include vehicle and equipment maintenance facilities, aircraft hangars, and industrial trade shops. Activities include maintenance on hydraulic systems, engines, sheet metal work, batteries, avionic electronics, and painting work.

An aggressive program has been implemented to conduct maintenance activities indoors, where spills and leaks can be contained to prevent contact with storm water. At most maintenance facilities, interior flows are directed to drains leading to OWSs. At some motor

pools, new warm storage tents have been built to keep tactical vehicles covered from precipitation and out of the coldest conditions. These new warm storage tents are constructed with a bermed concrete pad to prevent leaks, drips, or spills from flowing out of the structure. Spills to the floor inside these tents will need to be cleaned using dry methods or with use of a pump to remove water or fluids. Although the majority of maintenance occurs indoors, some maintenance is conducted outside of hangars on the flight line, and at motor pool yards, as necessary. An example of this occurs during major re-set events when indoor space is limited due to the sheer volume of vehicles, aircraft, and/or equipment that require service. Another example involves vehicles or aircraft requiring maintenance in the field.

When maintenance must occur outside, control measures are considered and implemented as possible (some restrictions apply on the flight line). These control measures include drip pan use, placing parts with residues on a ground cloth or tarp, and ensuring a spill kit with appropriate materials is kept onsite for spill response.

Over the years, Fort Wainwright has made efforts to reduce the inventory of stored HM, re-stock products only as necessary, and store smaller containers when possible. Additionally, facilities use, when practicable and effective, less-hazardous products. The installation's HMWMP details proper materials management that is effective in reducing accidents that could expose HM to storm water.

Stocked spill kits are accessible during maintenance activities, and personnel are trained to address leaks and spills promptly using dry cleanup methods.

The following list summarizes control measures that are implemented as practicable during vehicle, aircraft, and equipment maintenance activities at Fort Wainwright:

- Store vehicles, aircraft, and equipment awaiting maintenance indoors or under cover.
- Promptly address spills/drips/leaks with dry cleanup methods to prevent off-site tracking of contaminants.
- Maintain an organized inventory of materials and limit quantity stored based on need.
- Properly dispose of all fluids prior to vehicle/equipment or parts disposal.
- Conduct maintenance in designated areas.
- Obtain and use drain mats to cover drains in the event of a spill.
- Store cracked or damaged batteries in leak-proof secondary containers.
- Regularly inspect structural control measures (i.e., curbing, awnings, sediment traps, etc.) for proper function and structural integrity.

In the event that maintenance must occur outdoors, the following control measures are implemented when practicable:[17]

- Place absorbent material or non-permeable, bermed liners below work areas.
- Use drip pans prior to, during, and after maintenance, when necessary.
- Do not conduct work where spilled or leaked materials could easily enter the storm water drainage system (i.e., near drains, culverts, ditches, etc.) unless necessary.
- Avoid conducting work above floor drains; use drip pans and/or booms if necessary when work must occur near drains.
- Properly dispose of materials generated during maintenance.
- Following maintenance, ensure ground surfaces are uncontaminated; clean permeable surfaces and collect and dispose of contaminated dirt and gravel when necessary.

6.14 Vehicle, Aircraft, and Equipment Washing

Discharge of water to the storm drainage system used to wash vehicles, aircraft, and equipment is not allowed under the MSGP. Vehicle, aircraft, and equipment washing is conducted in designated areas at Fort Wainwright. These areas include maintenance facility wash racks, aircraft maintenance hangars, the Installation Wash Facility (often referred to as the "Stryker wash" facility), and other dedicated vehicle and equipment wash facilities on the installation. When used as intended, wash racks at these facilities contain all wash water, sediment and associated contaminants to prevent their entry into the storm drainage system.

Aircraft are either washed inside maintenance hangars, or outside in designated wash racks/areas with soap approved by the military for use on aircraft. Vehicles and equipment are washed with high-pressure steam in motor pools. Drains at hangars and at other wash racks have strip drains that are typically plumbed to an OWS. The OWSs pass water to the sanitary sewer after removing POLs from wastewater. Motor pool personnel are instructed during annual storm water training to either not use soap, or use non-emulsifying soaps approved for use over OWSs. Personnel are also instructed not to hose down ground surfaces outside, nor spray water from indoor to outdoor areas. Floors in hangars and wash racks are made of concrete and slope towards the drains so wash water does not escape dedicated washing areas.

Buildings 3007 (Hangar 4) and 2132 (Hangar 5) have "de-foamer" aircraft washing units located outside the respective buildings. The unit at Hangar 5 is positioned at the edge of an exterior

[17] Foreign object damage (FOD) can prevent use of drip pans, absorbent pads, etc. during activities on, or near the airfield.

wash rack with containment curbing and a central drain. The unit at Hangar 4 is attached to the building, and the wash area lacks curbing due to winter plowing and safety considerations. This wash area drains to a specific drain on the tarmac designed for such flows. Both drain systems have an integral, three-way valve that can either direct discharges toward the hangar's OWS system, the storm sewer system, or shunt flows to create a sump. During washing activities, runoff is routed into the building to the sanitary sewer. In the event of a spill, the valve is closed to create a sump. During normal operations, when no contaminants are observed on ground surfaces, the valve allows runoff to enter the storm sewer system.

Annual storm water training will incorporate proper use of the wash racks to help ensure only allowable discharges result from washing activities at these locations. Proper use will ensure that wash waters are directed towards the sanitary system, and no discharges with sediment, soap, or POL sheen (or any other contaminant) will be discharged to the storm sewer system.

Building 3380 (Stryker wash facility) has a more sophisticated plumbing system that involves two washing chambers, each plumbed separately. The first chamber is for de-mucking following field exercises; water drains to a sediment trap and OWS, and typically no soap is used, just high-pressure steam. The second chamber drains to a water recycling system that is capable of filtering out soap and recycling the water; soap can be used over these drains.

The following list summarizes control measures that are implemented as practicable at vehicle, aircraft, and equipment washing activities at Fort Wainwright industrial facilities:

- Wash only in designated facilities/areas.
- Only use OWS-compatible soaps over drains leading to an OWS.
- Prevent wash water from entering the storm water drainage system.
- Do not dispose of any materials or waste down wash rack drains.
- Liquid HM containers stored in unused wash bays must have secondary containment; drains are not secondary containment unless they are sumps designed for that purpose.
- Regularly inspect containment features, traps, sumps, drains, etc., for proper function and address as necessary.

6.15 Loading and Unloading

Materials that are regularly loaded or unloaded at Fort Wainwright are those associated with the fueling and maintenance of vehicles, equipment, and aircraft, such as oil, fuel, parts cleaner solvents, coolants, batteries, etc. The most common containers are 55-gallon drums and 5-gallon cans, though products come in a variety of container types and sizes. Loading and unloading activities present a potential threat for the release of chemicals, as materials are often

moved multiple times with the use of equipment, such as forklifts. Operational control measures have been implemented to address this concern.

HM/HW for disposal are drummed or otherwise containerized at the facilities where they are generated, and are picked up by the PWE waste turn-in contractor (see section 6.16).

The following list summarizes control measures for loading and unloading materials at Fort Wainwright industrial facilities:

- Load/unload materials inside or under covered areas whenever practicable.
- Handle new chemical containers unopened until they are at the area of use.
- If already opened, ensure container lids are tightly secured prior to transporting.
- Have a spill kit easily accessible when handling liquids.
- Do not load/unload liquid materials over storm drains unless necessary; if necessary, cover and boom around drains prior to activity.
- Manage traffic accordingly during loading/unloading activities to reduce the chance of an accident.
- Follow all material handling procedures in the HMWMP.

6.16 Industrial Waste Management

The PWE waste turn-in contractor operates a short-term (less than 90 day) hazardous waste consolidated collection facility and recyclable materials transfer facility at Building 3489. Facilities that generate hazardous wastes or materials suitable for recycling operate SAAs, HWAAs, RAAs, UAAs, or used oil collection points. These areas are scheduled for regular pickups, or as needed, by the PWE waste turn-in contractor.

Accumulation areas are located indoors or in grounded, vented, and contained, outdoor storage units (commonly referred to as “white elephants”) designed for that purpose. Accumulation areas are aggressively managed with adherence to appropriate safeguards and controls against spills, such as secondary containment pallets and spill response kits. Occasionally, facility personnel stage waste containers outside buildings prior to pick up by the waste turn-in contractor. During SWPP training and inspections, facility personnel are instructed to provide such containers with containment and cover if, and when, this must occur.

Specific procedures for industrial waste management at Fort Wainwright are described in the installation’s HMWMP, and must be implemented in addition to the requirements of this SWPPP, as applicable.

6.17 Outdoor Storage

Most materials at Fort Wainwright that present a potential source of storm water pollution are stored indoors, in contained enclosures outdoors, or under fixed cover, such as a pole barn. At many buildings, outdoor storage is intermittent, depending on the season and facility operations. Some facilities have pole barn structures to cover stored materials. Materials stored outdoors include construction materials (e.g., wood and wood products), cold mix asphalt, sand, gravel, POL tanks and containers, fire retardant, and metal items. Materials are stored off the ground (e.g., on wooden pallets) at a minimum. Fluid containers stored outside that have already been opened must have secondary containment and be covered from weather. Significantly rusting containers or any with residue on them must be covered from weather or stored indoors.

Outside staging of vehicles and equipment is also considered under this category. Numerous military vehicles are parked outdoors in yards at the facilities. Aircraft is occasionally staged outside hangars on the airfield. Vehicles, equipment and aircraft are regularly inspected for leaks and use of drip pans under leaky vehicles (or equivalent protection from exposure to storm water) is required. Ground vehicles for air support are maintained in motor pools, and aircraft are maintained in hangars, whenever practicable. If a leak is discovered under aircraft staged outside, drip pans or absorbent material is used until the leak is repaired.

Based on current control measures, outside storage of materials at Fort Wainwright is considered a low to moderate potential source of storm water pollution that can be addressed with operational control measures. Most materials that present a potential source of storm water pollution are stored indoors or under cover. The determination of “moderate” potential is primarily due to vehicle parking and the fluid leaks/drips that inevitably occur. However, control measures are expected to adequately address this potential.

The following list summarizes control measures implemented as practicable for outdoor storage activities at Fort Wainwright industrial facilities:

- Materials stored outdoors must be out of contact with run-on and runoff, and covered from weather.
- Liquids (even non-hazardous) stored outdoors should have secondary containment.
- Store materials away from high traffic areas and/or consider creating a barrier between these areas.
- Store vehicles, equipment, and aircraft indoors or under cover whenever possible.

- Drip pans should be placed and maintained under leaking tactical vehicles, equipment, and aircraft.[18]
- Drip pans should be positioned to catch leaks and drips, and be properly emptied/replaced as necessary.
- Cover oily parts or those containing chemical residue from weather.
- Empty and properly dispose of fluids prior to vehicle/equipment disposal.
- Maintain leaky vehicles, aircraft, and equipment prior to long-term storage.
- Regularly inspect vehicle, equipment, and aircraft storage areas for leaks and promptly address as necessary.

[18] Do not use unsecured drip pans where FOD is a concern.

7.0 SECTOR-SPECIFIC REQUIRMENTS

Part 4.2.8 of the MSGP states, “A permittee must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 11.” Part 11 of the MSGP details requirements that are specifically catered to address activities and potential pollutants commonly associated with respective industrial sectors.

The following industrial sectors have been identified at Fort Wainwright for purposes of determining which facilities to include in this SWPPP: Sector J (Non-Metallic Mineral Mining and Dressing), Sector L (Landfills, Land Application Sites, and Open Dumps), Sector P (Land Transportation and Warehousing), and Sector S (Air Transportation. Industrial facilities at Fort Wainwright and the activities that occur at them are presented in Table 1.

Sector-specific requirements are in addition to requirements specified elsewhere in this SWPPP and apply to the areas of the facility where relevant activities identified in Part 11 of the MSGP occur. Sector-specific limits and requirements are discussed in the following sub-sections. Included are control measures that ADEC requires for activities and areas that are typically present at facilities under respective sectors. Requirements in this section must be implemented where applicable.

7.1 Sector J – Non-Metallic Mineral Mining and Dressing

7.1.1 Sector J at Fort Wainwright

The Badger Pit gravel pit, also sometimes referred to as Engineer Pond and located in the south central cantonment area, is temporarily inactive at the time of preparation of this SWPPP. Gravel from the pit is either used as unclassified fill for vertical construction foundations or for road maintenance. Gravel is excavated and transported from the pit to the point of use and is not crushed, processed, or sorted either on site, or prior to use. Fort Wainwright does not have the capability to crush stone, and contractors do not conduct crushing activities.

In May 2020, the USACE Regulatory Division determined that the water in Badger Pit is not jurisdictional water of the U.S. Operations in this area have a minor possibility of discharging storm water to the Fort Wainwright MS4 and is associated with the drainage basin connected to Outfall FWA-004.

Potential pollutants associated with mineral extraction at Fort Wainwright include:

- Sediment
- Dust
- POLs

During quarrying operations, it is not uncommon for contractor equipment and generators to be staged at pit locations throughout the project's duration. PWE has developed control measures and guidelines that contractors must implement during these operations. Equipment and generators may only be fueled via truck, with no fuel of any type stored on site. If it is necessary for maintenance to occur in the field, contractors must follow the same control measures that soldiers and civilians must follow in the HMMP/HWMP, respectively. These include the use of drip pans, stocking spill kits on site, and following appropriate spill prevention and response protocols. PWE Compliance personnel routinely inspect active sites, and maintenance personnel and/or contractors address action items as necessary.

Former Industrial Outfall FWA-010 is located on the west side of the quarry pond. Former Industrial Outfall FWA-011 is located on the southwest side of the quarry pond. On occasion, contractors or military units obtain Temporary Water Use Authorization from the Alaska Department of Natural Resources pump water from the Badger Pit to trucks for dust suppression and water compaction on post roads. Organizations are required to obtain proper permitting for dewatering, and PWE requires the implementation of control measures/BMPs for preventing pollution of surface waters during dewatering activities. The DPW roads and grounds contractor uses various wells on post to pump water for this purpose as well.

Previously, the gravel pit at Firing Point Sally in the Donnelly Training Area was considered as a potential source of storm water discharge; however further review of the site topography and locations of nearest waters and wetlands with Fort Wainwright Natural Resources staff led to the conclusion that there is no discharge from any conveyance used for collecting and conveying storm water directly related to manufacturing, processing, or raw materials storage areas. No dewatering is occurring at the Firing Point Sally gravel pit, historically or planned in the future. Therefore no MSGP coverage is being sought for this gravel pit.

7.1.2 Covered Sector J Storm Water Discharges

The following requirements in section 7.1 apply to storm water discharges associated with industrial activity from Non-Metallic Mineral Mining and Dressing identified by the SIC Codes specified under Sector J in Table D-1 of Appendix D of the 2020 MSGP.

7.1.3 Definitions

The following definitions are taken from the MSGP and are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

Mining Operations

Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

Exploration Phase

Entails exploration and land disturbance activities to determine the financial viability of a site. The exploration phase is not considered part of “mining operations.”

Construction Phase

Includes the building of site access roads, facilities, and removal of overburden and waste rock to expose mineable minerals. The construction phase is not considered part of “mining operations”.

Active Phase

Activities including the extraction, removal or recovery of minerals. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of “active mining area” found at 40 CFR 440.132(a). The active phase is considered part of “mining operations.”

Reclamation Phase

Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the “active phase”, intended to return the land to an appropriate post-mining land use. The reclamation phase is considered part of "mining operations".

Non-Traditional Non-Metallic Mineral Mining Facility

Consists of non-metallic mineral mining facilities which conduct mineral mining and dressing for the sale or distribution of aggregate materials from a non-commercial establishment to be used on multiple unrelated projects. These facilities consist of operations without any permanent sales offices, scales, or other facilities being operated by a commercial establishment that would otherwise clearly fit within one of the SIC codes found in Sector J of Appendix D of the MSGP. These non-traditional facilities are managed by an operator, who oversees the removal of aggregate from the site, with either written contracts for specified aggregate quantities or an informal notice approving the distribution of material. The operator of these facilities who executes the contracts or provides the authority for individuals or parties to remove aggregate would meet the definition of an operator under this permit and be the sole party responsible to obtain permit coverage, maintain a SWPPP, maintain control measures, conduct inspections and monitoring, and submit reports.

Active Mineral Mining Facility

A place where work or other activity related to the extraction, removal, or recovery of minerals is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a).

Inactive Mineral Mining Facility

A site or portion of a site where mineral mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive mineral mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an APDES industrial storm water permit.

Temporarily Inactive Mineral Mining Facility

A site or portion of a site where mineral mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency. A temporarily inactive facility includes sites that are temporarily stabilized and have small stockpiles of non-metallic mineral mining material (less than 250 cubic yards/year) for local use or road maintenance during the temporarily inactive phase.

7.1.4 Sector-Specific Control Measures

The following sections discuss control measures specific to Sector J that are required by the 2020 MSGP. Most of this discussion is taken directly, or paraphrased, from the MSGP. This

approach ensures that members of the pollution prevention team are aware of applicable and potentially applicable permit requirements as the facilities may change over time. This approach also allows the pollution prevention team members to exercise judgment in determining the best means to prevent pollution of storm water runoff from the facility.

7.1.4.1 Clearing, Grading, and Excavation Activities

Erosion Control Measures

The erosion control measures listed below must be implemented to minimize soil exposure on the site during construction.

- *Delineation of Site*: The location of specific areas that will be left undisturbed such as trees, boundaries of sensitive areas, or buffers established under Part 11.J.4.1.3. of the MSGP, must be delineated (e.g., with flagging, stakes, signs, silt fence, etc.,).
- *Minimize the Amount of Soil Exposed during Construction Activity*: Include the following considerations in the selection of control measures and the sequence of project construction as they apply to the project site:
  - Preserve areas of native topsoil on the site, unless infeasible.
  - Sequence or phase construction activities to minimize the extent and duration of exposed soils to the extent practicable.
- *Maintain Natural Buffer Areas*: Maintain natural buffer areas at stream crossings and around the edge of any Waters of the U.S. that are located within or immediately adjacent to the property where the construction activity will take place in accordance with the following:
  - The buffer must be a minimum of 25 feet wide, unless infeasible based on site dimensions, or the width as required by local ordinance.
  - Exceptions are allowed for water dependent activities, specific water access activities, or necessary water crossings.
  - To the extent practicable, perimeter controls adjacent to buffers should be used, and storm water sheet flow should be directed to buffer areas to increase sediment removal and maximize storm water infiltration, unless infeasible.
- *Control Storm Water Discharges and Flow Rates*: Include the following control measures to handle storm water and total storm water volume discharges as they apply to the site:
  - Divert storm water around the site so that it does not flow onto the project site and cause erosion of exposed soils.
  - Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils.

- Avoid placement of structural control measures in active floodplains to the degree technologically and economically practicable and achievable.

- Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.

- Install permanent storm water management controls, if present at a site and where practical, so that they must be functional prior to construction of site improvements (e.g., impervious surfaces).

· *Protect Steep Slopes*: Include the following considerations in the selection of control measures as they apply to the project site:

- Design and construct cut-and-fill slopes in a manner that will minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (e.g., track walking).

- Divert concentrated flows of storm water away from, and around the disturbed portion of the slope. Applicable practices include, but are not limited to interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, check dams.

- Stabilize exposed areas of the slope in accordance with Part 11.J.4.4 of the MSGP.

Sediment Control Measures

Sediment control measures (e.g. sediment ponds, traps, filters, etc.) must be constructed as one of the first steps in grading. These control measures must be functional before other land disturbing activities take place. The following control measures that apply to the project site must be installed and established:

· *Storm Drain Inlet Protection Measures*: Install appropriate protection measures (e.g. filter berms, perimeter controls, temporary diversion dikes, etc.) to minimize the discharge of sediment prior to entry into the inlet for storm drain inlets located on site or immediately downstream of the site. Inlet protection measures must be cleaned or removed and replaced when sediment has filled one-third of the available storage.

· *Water Body Protection Measures*: Install appropriate protection measures (see MSGP Part 11.J.4.1.4) to minimize the discharge of sediment prior to entry into the water body for water bodies located on site or immediately downstream of the site. Protection measures must be cleaned or removed and replaced when sediment has filled one-third of the available storage.

- *Down-Slope Sediment Controls*: Down-slope sediment controls (e.g., silt fence, temporary diversion dike, etc.) must be established and used for any portion of the down-slope and side-slope perimeter where storm water will be discharged from disturbed areas of the site.

- *Stabilized Construction Vehicle Access and Exit Points*: Construction vehicle access and exit points must be established and stabilized. Access and exit points should be limited to one route, if possible. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.

- *Dust Generation and Track-Out from Vehicles*: The generation of dust must be minimized through the application of water or other dust suppression techniques, prior to vehicle exit. An effective way of minimizing off-site vehicle tracking of sediment from wheels must be implemented to prevent track-out onto paved surfaces.

- *Soil Stockpiles*: Soil stockpiles must be covered or stabilized; protect with sediment trapping measures, and where possible, locate soil stockpiles away from storm drain inlets, water bodies, and conveyance channels.

- *Authorized Non-Storm Water Discharges*: Minimize any non-storm water authorized by this permit.

- *Sediment Basins (where applicable*):

  - For common drainage locations that serve an area with ten or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from the drainage area from a 2-year, 24-hour storm, or equivalent sediment control measures, must be installed, maintained, and used where practicable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent sediment control measures, must be installed and used where practicable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. In determining whether installing a sediment basin is practicable, factors such as site soils, slope, available area on-site, etc., may be considered. In any event, public safety, especially as it relates to children, must be considered as a design factor for the sediment basin, and alternative sediment control measures must be used where site limitations would preclude a safe design.

  - For drainage locations which serve ten or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not practicable, smaller

sediment basins and/or sediment traps should be used. Silt fences, vegetative buffer strips, or equivalent sediment control measures are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).

- For drainage locations serving less than ten acres, smaller sediment basins and/or sediment traps should be used. Silt fences, vegetative buffer strips, or equivalent sediment control measures are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm event or 3,600 cubic feet of storage per acre drained is provided.
- When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, where practicable.
- Note: installing sediment basins in the presence of permafrost is challenging and might not be practicable in some instances because permafrost creates poor surface drainage that hinders the infiltration of runoff. Also, the excavation of permafrost in summer can trigger thawing and instability.

Dewatering

- If a construction activity includes excavation dewatering and has a discharge that could adversely impact a local drinking water well, a contaminated site (as identified by ADEC), or a water of the U.S., the ADEC Excavation Dewatering General Permit (AKG002000, or most current version) must be reviewed for specific requirements that may have to be complied with, in addition to the conditions of this permit.
- A discharge from eligible dewatering activities, including discharges from dewatering of trenches and excavations are prohibited unless treated by appropriate control measures. Appropriate control measures include, but are not limited to, sediment basins or traps, dewatering tanks, weir tanks, or filtration systems designed to remove sediment.

Soil Stabilization

- *Minimum Requirements for Soil Stabilization*: Stabilize all disturbed areas of the site to minimize on-site erosion and sedimentation and the resulting discharge of pollutants according to the requirements of Subpart J of the MSGP. Existing vegetation must be preserved wherever possible and disturbed portions of the site must be stabilized. Applicable stabilization control measures include, but are not limited to: temporary and permanent seeding, sodding, mulching, rolled erosion control product, compost blanket, soil application of polyacrylamide, the early application of gravel base on areas to be paved, and dust control. Use of impervious surfaces for stabilization should be avoided. See the Alaska Plant Materials Center's A Revegetation Manual for Alaska at http://plants.alaska.gov for help in efforts to select appropriate seed mixes and

information on methods for re-vegetation. The Garrison's Integrated Natural Resource Management Plan (INRMP) also provides guidance on seeds and preventing invasive species growth.

Treatment Chemicals

The use of treatment chemicals to reduce erosion from the land or sediment in a storm water discharge is allowed provided that all of the requirements listed below are met.

- *Treatment Chemicals*: Documentation of treatment chemicals selected for use at a site must include, at a minimum, the following information:
  - Manufacturer and/or supplier provided Material Safety Data Sheets (MSDS), specifications, and instructions for the transport, handling, storage, application, and disposal of the treatment chemical.
  - Approval by EPA for potable water use.
  - Approval by EPA or the States of California, Minnesota, Oregon, Washington, or Wisconsin for use in controlling erosion or sediment runoff from agricultural land or construction projects.
  - Manufacturer and/or supplier provided test results recognized by EPA or the States of California, Minnesota, Oregon, Washington, or Wisconsin that demonstrate that the treatment chemical is non-toxic to aquatic organisms when applied following the manufacturer or supplier recommended method of use and rate of application.
  - A permittee is prohibited from using cationic polymers, except for the use of chitosan as part of an Active Treatment System in compliance with Part 11.J.4.5.4 of the MSGP, or as approved by the ADEC in writing.
  - The names and titles of person(s) who handle and apply treatment chemicals at the construction site, the title of relevant training and date(s) the person(s) who apply the chemicals received training in the proper handling and application of treatment chemicals.
- *Treatment Chemical Use*
  - Employees who handle treatment chemicals must be trained to comply with the information required by Part 11.J.4.5.1 of the MSGP.
  - Treatment chemicals, waste chemicals, and/or flocculants must be handled, stored, and disposed of in appropriate leak proof containers under a storm-resistant cover or surrounded by secondary containment structures so as to prevent their discharge to Waters of the U.S.
- *Project Site Conditions*: Treatment chemicals are typically developed, tested, and approved in regions of the country that may have soils, soil and water temperatures, and

other site conditions significantly different from Alaska. These differences must be considered in the selection of the treatment chemicals for use at the Alaskan site.

- The selected treatment chemical must be deemed appropriate for soils at the site through project-specific tests of the chemical with local soils or product use data on projects with similar soils.
- The selected treatment chemical must be appropriate for the site topography, amount of precipitation expected at the site, and type of use.

· *Application of Treatment Chemicals*: The application of treatment chemicals shall be in combination with appropriate physical control measures (e.g., rolled erosion control products, ditch check dams, sediment basins, sediment bags, filtration, etc.) to ensure effectiveness of the treatment chemical. The use of treatment chemicals is not considered a substitute for appropriate physical control measures and does not preclude any other requirement of this permit.

- Land Application:
  - § All MSDS requirements must be complied with and manufacturer and/or suppliers written recommended application rate(s) followed, including site-specific considerations.
  - § An application method must be used that provides uniform coverage of the target area and avoids drift to non-target areas.
  - § The application must always be a sufficient distance upgradient or upstream to allow adequate mixing and reaction prior to reaching a pre-constructed sediment trap, basin inflow structure, or filtering device of sufficient width to ensure adequate removal of sediments laden with treatment chemicals before discharges reach Waters of the U.S.
- Water Application (including conveyance channel):
  - § The manufacturer and/or suppliers written recommended application rate(s) must be followed, including site-specific considerations.
  - § The application shall always be upstream from a pre-constructed sediment trap, basin inflow structure, vegetated swale, filtering device or a vegetated buffer of sufficient width to ensure adequate removal of sediments laden with treatment chemicals before discharges reach Waters of the U.S.
  - § Treatment chemicals shall not be applied directly to a water of the U.S.
  - § Application through the use of manufactured products (e.g. gel bars, gel logs, floc blocks, etc.) shall be used in combination with adequate ditch check dams, settling basins, or other physical control measures designed to settle out

chemically treated soils and minimize the presence of treatment chemicals before discharges reach Waters of the U.S. At a minimum, there must be at least 100 feet of ditch length downstream of the last manufactured product prior to reaching a water of the U.S. to provide a place for sedimentation to occur.

- Active Treatment Systems: When an Active Treatment System is used as a control measure, information required by the ADEC must be submitted for review at least fourteen days prior to start of operation of the active treatment system at the project and comply with Part 4.4 of the MSGP. At a minimum, the information must provide details on the following: relevant information required by Part 11.J.4.5.1 of the MSGP, engineering plans, description of treatment process, site conditions (including soil types), treatment chemicals, dose rates, monitoring to be conducted, expected residual chemical, proper operator training, methods for storage, procedures for spill prevention and containment, operation and maintenance, and record keeping and reporting.

Prohibited Discharge

The following are prohibited from being discharged from the site:

- Wastewater from concrete washout, unless managed by an appropriate control measure
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance
- Soaps or solvents used in vehicle and equipment washing

Good Housekeeping Measures

Effective good housekeeping measures must be designed, installed, implemented, and maintained to prevent and/or minimize the discharge of pollutants. Appropriate measures for any of the following activities that are used at the site must be implemented:

- *Washing of Equipment and Vehicles*: The following requirements must be complied with if washing of equipment or vehicles occurs at the site:
  - Verify that washing at the B3380 Installation Wash Facility or Building 3730 Auto Skills Center is not possible to complete (for instance, if the washing equipment is broken or the vehicle or equipment is not compatible with the system).
  - Designate areas to be used for washing of equipment and vehicles and/or wheel wash-down and conduct such activities only in these areas.
  - Locate such activities indoors or within a containment, and if these options are not possible, to the extent practicable, locate washing where water cannot discharge to storm water conveyance channels, storm drain inlets, and Waters of the U.S.

- Treat all wash water in a sediment basin or use alternative control measures that provide equivalent or better treatment prior to discharge.
- To comply with the prohibition in Part 11.J.4.6.4 of the MSGP, the discharge of soaps and solvents used in equipment and vehicle washing is strictly prohibited.

· *Fueling and Maintenance Areas*: If fueling and/or maintenance activities are conducted for equipment and vehicles at the site the following requirements must be complied with:

- Designate areas to be used for fueling and/or maintenance of equipment and vehicles and conduct such activities only in these areas (the designated area may move from one location to another on linear projects).
- Locate such activities, to the extent practicable, away from storm water conveyance channels, storm drain inlets and Waters of the U.S.
- Minimize the exposure to precipitation and storm water or use secondary containment structures designed to eliminate the potential for spills or leaked chemicals.
- To comply with the prohibition in Part 11.J.4.6.3 of the MSGP:
  - § Clean up spills or contaminated surfaces immediately.
  - § Ensure adequate clean up supplies are available at all times to handle spills, leaks, and disposal of used liquids.
  - § Use drip pans or absorbents under or around leaky equipment and vehicles.
  - § Dispose of liquid wastes or materials used for fueling and maintenance in accordance with Part 11.J.4.11 of the MSGP.

<u>Staging and Material Storage Areas</u>

If staging and material storage areas are maintained at the site the following requirements must be complied with:

· Designate areas to be used for staging and material storage areas.

· Locate such activities, to the extent practicable, away from storm water conveyance channels, storm drain inlets, and Waters of the U.S.

· Minimize the exposure to precipitation and storm water and vandalism for all chemicals, treatment chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment.

Washout of Applicators/Containers used for Paint, Concrete, and Other Materials

If washing of applicators and/or containers used for paint, concrete, and other materials is conducted at the site, the following requirements must be complied with:

- Designate areas to be used for washout.
- Locate such activities, to the extent practicable, away from storm water conveyance channels, storm drain inlets, and Waters of the U.S.
- Direct all concrete, paint, and other material washout activities into a lined, watertight container or pit to ensure there is no discharge into the underlying soil and onto the surrounding areas.
- Dispose of liquid wastes in accordance with Part 11.J.4.11 of the MSGP.
- For concrete washout areas, remove hardened concrete waste when it has reached one-half the height of the container or pit and dispose of in accordance with Part 11.J.4.11 of the MSGP.

Fertilizer or Pesticide Use

USAG Alaska maintains an Integrated Pest Management Plan (IPMP) and Pesticide Use Plan. Any entity applying pesticides must have approval to use a particular chemical, comply with the IPMP, and report quantities to the DPW Environmental office. If fertilizers or pesticides are used the following requirements must be complied with:

- Apply fertilizers and pesticides in a manner and at application rates that will minimize the loss of chemical to storm water runoff. Manufacturers' label requirements for application rates and disposal requirements must be followed.
- Use pesticides in compliance with federal, state and local requirements.

Storage, Handling, and Disposal of Construction Waste

If construction waste is stored, handled and/or disposed of at the site, the following requirements must be complied with:

- Locate areas dedicated for management or disposal of construction waste, to the extent practicable, away from storm water conveyance channels, storm drain inlets, and Waters of the U.S.
- Dispose of all collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other domestic wastes according to federal, state and local requirements.

- Store hazardous or toxic waste in appropriate sealed containers and dispose of these wastes in accordance with manufactures recommended method of disposal or federal, state or local requirements.

- Provide containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water. Clean or replace sanitation facilities and inspect them regularly for leaks and spills.

Winter Considerations

- *Winter Shutdown*: If construction temporarily ceases for the winter and plans to resume the next summer winter shutdown must be planned for. Anticipated dates of fall freeze-up and spring thaw (as defined in Appendix C of the MSGP) must be anticipated for the site and these dates must be used to plan for winter shutdown. For the purpose of planning ahead frozen ground by itself is not considered an acceptable control measure for stabilization. The following must be provided prior to, during, and at the conclusion of winter shutdown:

  - Temporary or permanent stabilization for conveyance channels

  - Temporary or permanent stabilization for disturbed slopes, disturbed soils, and soil stockpiles

  - Erosion and sediment control measures in anticipation of spring thaw

- *Winter Construction*: In several areas of Alaska, winter construction provides opportunities for construction not available during summer months. Permit coverage is not required for the construction of ice roads or the placement of sand or gravel on frozen tundra with no excavation or potential to pollute Waters of the U.S. The MSGP does address those construction activities that have the potential for erosion or sediment runoff during spring thaw and summer rainfall. Appropriate control measures to minimize erosion or sediment runoff during spring thaw and summer rainfall must be planned for use during winter construction activities. The Alaska Storm Water Guide[19], Chapters 3 and 4, provide guidance on the selection, design, and installation of winter construction practices and controls.

- *Late Winter Clearing*: The cutting of trees and brush while the ground is frozen, without disturbing the vegetative mat, for the purpose of clearing in accordance with the U.S. Fish & Wildlife Service “Recommended Time Periods for Avoiding Vegetation Clearing” is allowed prior to the submittal of a project notice of intent (NOI). If the cutting occurs after the onset of spring thaw (as defined in Appendix C of the MSGP), conditions that consist of above freezing temperatures that cause melting of snow, then a SWPPP must

[19] The document can be found here: https://dec.alaska.gov/water/wnpspc/stormwater/Guidance.html

be developed and an NOI filed, and authorization for coverage under this permit from ADEC must be received, and the terms of this permit must otherwise be complied with prior to such clearing.

- *Maintenance of Control Measures*: All control measures, good housekeeping measures, and other protective measures must be maintained in effective operating condition. If site inspections required by Part 6 of the MSGP identify control measures, good housekeeping measures, or other protective measures that are not operating effectively, corrective actions must be implemented in accordance with Part 8 of the MSGP. If existing control measures need to be modified or if additional control measures are necessary for any reason, corrective actions must be completed in accordance with Part 8.3 of the MSGP.

  Sediment from silt fences, check dams, berms or other controls must be removed before the accumulated sediment reaches one-half the distance up the above-ground height (or it reaches a lower height based on manufacturer's specifications) of the control measure. For sediment traps or sediment ponds, accumulated sediment must be removed when the design capacity has been reduced by fifty percent.

7.1.4.2 Inspection of Clearing, Grading, and Excavation Activities

(See also Part 6 of the MSGP.)

- *Inspection Frequency*: Inspections must be conducted either at least once every seven calendar days or at least once every 14 calendar days and within 24 hours of the end of a measurable storm event (see Part 7.1.3 of the MSGP). If the entire site is temporarily stabilized, inspection frequency may be reduced to at least once every month and within two business days of the end of a measurable storm event at actively staffed sites which resulted in a discharge from the site (pursuant to Part 11.J.4.15.2 of the MSGP). Once active mining has begun, those areas comply with inspections according to Part 11.J.7 of the MSGP.

- *Winter Shutdown*: If the exploration and construction phase is undergoing winter shutdown inspections may be stopped 14 calendar days after the anticipated fall freeze-up and must resume inspections at least 21 calendar days prior to the anticipated spring thaw. The winter shutdown period shall be identified in the project SWPPP based upon the definitions of fall freeze-up and spring thaw.

- *Location of Inspections*: Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to Waters of the U.S., where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such

inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

- *Inspection Reports*: For each inspection required above, an inspection report must be completed. At a minimum, the inspection report must include the information required in Part 6.1 of the MSGP.

7.1.4.3 Requirements for Cessation of Clearing, Grading, and Excavation Activities

- *Inspections and Maintenance*: Inspections and maintenance of control measures, including any BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area or until the commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining.

- *Temporary Stabilization of Disturbed Areas*: Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after exploration and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Anticipated dates of fall freeze-up and spring thaw must be identified (see Appendix C of the MSGP) for the site and those dates used to plan for winter shutdown. For the purpose of planning ahead, frozen ground by itself is not considered an acceptable control measure for stabilization. Where temporary stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable following the actual spring thaw. Until temporary vegetative stabilization is achieved, interim measures (e.g., surface roughening or a surface cover, including but not limited to, establishment of ground vegetation, application of mulch, or surface tackifiers with an appropriate seed base) must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

- *Final Stabilization of Disturbed Areas*: Stabilization measures should be initiated immediately in portions of the site where mining, exploration, and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has

permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures must be used.

7.1.5 Additional Measures Required for Sector J Activities

7.1.5.1 Employee Training

(See also Part 4.2.9 of the MSGP.) Conduct employee training at least annually at active and temporarily inactive sites.

7.1.5.2 Good Housekeeping Measures

(See also Part 4.2.2 of the MSGP.) As part of the good housekeeping program, implement the following, as practicable: use sweepers and covered storage, watering haul roads to minimize dust generation, and conserving vegetation (where possible) to minimize erosion.

7.1.5.3 Preventive Maintenance

(See also Part 4.2.3 of the MSGP.) Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, and hydraulic fluid to prevent leaks due to deterioration or faulty connections.

7.1.5.4 Storm Water Controls

Apart from the control measures implemented to meet the control measures in Part 4 of the MSGP, implement the following control measures at the facility as practicable. The potential pollutants identified in Part 11.J.5.5 of the MSGP shall determine the priority and appropriateness of the control measures selected. If a storm water control other than one described below is selected or developed, it shall be described in the SWPPP.

- *Storm Water Diversions*: Divert storm water away from potential pollutant sources. Implement the following options, as practicable: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and water bars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.
- *Velocity Dissipation Devices*: Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) as practicable, along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.

- *Down-Slope Sediment Controls*: Establish and use down-slope sediment controls (e.g., silt fence or temporary diversion dike) for any portion of the down-slope and side-slope perimeter where storm water will be discharged from disturbed areas of the site.
- *Stabilized Construction Vehicle Access and Exit Points*: Establish stabilized vehicle access and exit points. Off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.
- *Capping*: When capping is necessary to minimize pollutant discharges in storm water, identify the source being capped and the material used to construct the cap.
- *Treatment*: If treatment of storm water (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. All permanent storm water treatment devices shall receive engineering plan approval per 18 Alaska Administrative Code 72.600. Passive and/or active treatment of storm water runoff is encouraged where practicable. Treated runoff may be discharged as a storm water source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).

7.1.5.5 Certification of Discharge Testing

(See also Part 5.2.4.4 of the MSGP.) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-storm water discharges such as discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 436). Alternatively (if applicable), keep a certification with the SWPPP consistent with Part 11.J.6.5 of the MSGP.

7.1.5.6 Overburden, Waste Rock, and Raw Material Piles

Overburden, topsoil, and waste rock, as well as raw material and intermediate and final product stockpiles, should be located a minimum of 25 feet away from surface water, other sources of water, and from geologically unstable areas as practicable.

7.1.6 Additional SWPPP Requirements

The requirements in Part 11.J.6 of the MSGP are applicable for sites undergoing exploration and construction, active mineral mining facilities, temporarily inactive mineral mining facilities, and sites undergoing reclamation. The requirements in Part 11.J.6 of the MSGP are not applicable to inactive mineral mining facilities.

7.1.6.1 Nature of Industrial Activities

(See also Part 5.2.3 of the MSGP.) Document in the SWPPP the mining and associated activities that can potentially affect the storm water discharges covered by this permit, including

a general description of the location of the site relative to major transportation routes and communities.

7.1.6.2 Site Map

(See also Part 5.2.3 of the MSGP.) The permittee must document in the SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each storm water outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual APDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage dewatering or other process water; heap leach pads; off-site points of discharge for mine dewatering and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

See figures in Appendix A for Sector J map features.

7.1.6.3 Potential Pollutant Sources

(See also Part 5.2.4 of the MSGP.) For each area of the mine or mill site where storm water discharges associated with industrial activities occur, document in the SWPPP the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. For example, phosphate mining facilities will likely need to document pollutants such as selenium, which can be present in significant amounts in their discharges. Consider these factors: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with storm water; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock drainage.

7.1.6.4 Storm Water Controls

To the extent that any of the control measures in Part 11.J.5.4 of the MSGP are used, document them in the SWPPP pursuant to Part 5.2.5 of the MSGP. If control measures are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in the SWPPP.

7.1.6.5 Certification of Permit Coverage for Commingled Non-Storm Water Discharges

If it is possible to certify, consistent with Part 11.J.5.5 of the MSGP, that a particular discharge composed of commingled storm water and non-storm water is covered under a separate APDES permit, and that permit subjects the non-storm water portion to effluent limitations prior

to any commingling, such certification must be retained with the project SWPPP. This certification must identify the non-storm water discharges, the applicable APDES permit(s), the effluent limitations placed on the non-storm water discharge by the permit(s), and the points at which the limitations are applied.

7.1.6.6 Dewatering

Mine dewatering discharges composed entirely of storm water or ground water seepage from mines located within fifteen hundred feet of an ADEC-identified contaminated site are required to have additional discharge authorization under ADEC's Excavation Dewatering General Permit (AKG002000), or most current version. The NOI application for authorization to discharge mine dewatering which may influence a contaminated area can be completed through ADEC's online application system at: https://dec.alaska.gov/water/wastewater/stormwater/apdesenoi/.

7.1.7 Additional Inspection Requirements

Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, which are subject to Part 11.J.4.14.1 of the MSGP, sites must be inspected at least quarterly unless adverse weather conditions make the site inaccessible. Part 11.J.8.1 of the MSGP discusses inspection requirements for inactive and unstaffed sites. If the facility is inactive and unstaffed, the permittee is waived from the requirement to conduct quarterly visual assessments and routine facility inspections if the following conditions are adhered to:

- If circumstances change and the permittees facility becomes active and/or staffed, this exception no longer applies and the permittee must immediately begin complying with the applicable benchmark monitoring requirements as if they were in their first year of permit coverage, and the quarterly visual assessment requirements; and
- DEC retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above a WQS, including designated uses.

The permittee is not waived from conducting the comprehensive site inspection and should inspect the site more frequently after severe weather or natural disasters are suspected to impact control measures (See also Parts 6.1 and 11.J.4.14 of the MSGP.)

7.2 Sector L – Landfills, Land Application Sites, and Open Dumps

7.2.1 Sector L at Fort Wainwright

A landfill operated by Fort Wainwright DPW is located north of the Chena River at the base of Birch Hill. The CHPP's coal ash, which includes bottom and fly ash, is disposed of at the landfill

as are small quantities of friable asbestos-containing material, and small quantities of construction debris. The debris is stored in different sections of the active landfill area. Fly ash and uncontaminated soils from construction activities on post are used to cover the landfill face. Uncontaminated soil and fly ash are dropped and spread over the face as needed. The landfill includes Building 1191, which is periodically used for storage and performing light maintenance on equipment. Outside of the building is an AST containing diesel for fueling equipment. Control measures implemented at the facility that address these activities are discussed in Section 4 of this SWPPP.

7.2.2 Covered Storm Water Discharges

The requirements in Subpart L of the MSGP apply to storm water discharges associated with industrial activity from Landfills and Land Application Sites and Open Dumps as identified by the Activity Code specified under Sector L in Table D-1 of Appendix D of the MSGP.

7.2.3 Industrial Activities Covered by Sector L

The MSGP may authorize storm water discharges for Sector L facilities associated with waste disposal at landfills, land application sites, and open dumps that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA. (The MSGP does not cover discharges from landfills that receive only municipal wastes, since such landfills are not required to obtain an industrial storm water discharge permit.)

7.2.4 Limitations on Coverage

7.2.4.1 Prohibition of Non-storm Water Discharges

The following discharges are not authorized by the MSGP: leachate, gas collection condensate, drained free liquids, contaminated groundwater, laboratory wastewater, and contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility. Discharges from open dumps as defined under RCRA are also not authorized under the MSGP.

7.2.5 Definitions

Contaminated Storm Water

Storm water that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated storm water include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

Drained Free Liquids

Aqueous wastes will be drained from waste containers (e.g., drums) prior to disposal in the landfill.

Landfill Wastewater

As defined in 40 CFR Part 445 (Landfills Point Source Category), landfill wastewater includes all wastewater associated with, or produced by, landfill activities except for sanitary wastewater, non-contaminated storm water, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated storm water; and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

Leachate

Liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

Non-contaminated Storm Water

Storm water that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated storm water includes storm water that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

7.2.6 Sector-Specific Control Measures

The following sections discuss control measures specific to Sector L that are required by the 2015 MSGP. The majority of this discussion is taken directly or paraphrased from the MSGP. This approach ensures that members of the pollution prevention team are aware of applicable and potentially applicable permit requirements as the facilities may change over time. This approach also allows the pollution prevention team members to exercise judgment in determining the best means to prevent pollution of storm water runoff from the facility.

7.2.6.1 Preventive Maintenance Program

(See also Part 4.2.3 of the MSGP.) As part of the preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems to prevent commingling of leachate with storm water; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary) to minimize the effects of settlement, sinking, and erosion.

7.2.6.2 Erosion and Sedimentation Control

(See also Part 4.2.5 of the MSGP.) Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open

dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

7.2.6.3 Storm Water Diversions

Divert storm water away from potential pollutant sources. Implement the following options, as practicable: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

7.2.6.4 Velocity Dissipation Devices

Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.

7.2.6.5 Unauthorized Discharge Test Certification

(See also Part 5.2.4.4 of the MSGP.) The discharge test and certification must also be conducted for the presence of leachate and vehicle wash water.

7.2.7 Additional SWPPP Requirements

7.2.7.1 Drainage Area Site Map

(See also Part 5.2.3 of the MSGP.) Document in the SWPPP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

See the *Cantonment Landfill Cells* and *Cantonment Landfill Slope* maps in Appendix A.

7.2.7.2 Summary of Potential Pollutant Sources

(See also Part 5.2.4 of the MSGP.) Document in the SWPPP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application

areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

Temporary cover material is primarily composed of bottom and fly ash from the CHPP, operated by Doyon Utilities. The bottom and fly ash is delivered to the landfill in dump trucks with sealed covers to reduce fugitive dust during transport. Some soil is used for both temporary and final cover, and is hauled to the landfill from a nearby stockpile location off River Road. At the time of SWPPP preparation, fertilizer, herbicides, and pesticides were not in use at the landfill. Waste hauling is not anticipated to be a storm water concern because materials are contained during transport.

7.2.8 Additional Sector-Specific Inspection Requirements

The inspection requirements described below are in addition to those required by Part 6 of the MSGP.

7.2.8.1 Inspections of Active Sites

Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every seven days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

7.2.8.2 Inspections of Inactive Sites

Inspect inactive landfills, open dumps, and land application sites at least quarterly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

7.2.9 Additional Post-Authorization Documentation Requirements

7.2.9.1 Recordkeeping and Internal Reporting

Keep records with the SWPPP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

7.2.10 Sector-Specific Benchmarks

Sector L specific benchmark requirements are discussed in the Analytical Monitoring section (Section 8) of this SWPPP.

7.2.11 Effluent Limitations Based on Effluent Limitations Guidelines

ELGs specific to Sector L are discussed in Section 8.3 of this SWPPP.

7.3 Sector P – Land Transportation and Warehousing

The sector-specific control measures in this section apply to storm water discharges associated with industrial activity from land transportation and warehousing facilities identified by the SIC Codes specified under Sector P in Table D-1 of Appendix D of the 2020 MSGP. As previously mentioned in the Inventory of Industrial Facilities (Section 1.3.1), Sector P SIC codes do not exactly describe the Fort Wainwright facilities that are designated as Sector P in this SWPPP. However, the activities conducted at these facilities, such as vehicle and equipment maintenance, lubrication, fueling, washing, outdoor storage, loading and unloading, and warehousing, are similar to those that occur at land transportation and warehousing facilities. Because there is the potential to contaminate storm water during these activities, applicable facilities on the installation have been designated Sector P.

7.3.1 Sector P at Fort Wainwright

Table 1 lists which facilities are designated Sector P.

7.3.2 Limitation on Coverage

(See also Part 1.2.4 of the MSGP.) The 2020 MSGP prohibits the discharge of vehicle/equipment/surface wash water, including tank-cleaning operations. Such discharges must be authorized under a separate APDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or recycled onsite.

7.3.3 Additional Technology-Based Effluent Limits

7.3.3.1 Good Housekeeping Measures

(See also Part 4.2.2 of the MSGP.) In addition to the Good Housekeeping requirements in Part 4.2.2 of the MSGP, the following control measures must be implemented (unless indicated as recommended):

- *Vehicle and Equipment Storage Areas*: Minimize the potential for storm water exposure to leaky or leak-prone vehicles/equipment awaiting maintenance. Implement the following (or other equivalent measures), as practicable: use of drip pans under vehicles/equipment, indoor storage of vehicles and equipment, installation of berms or dikes, use of absorbents, roofing or covering storage areas, and cleaning pavement surfaces to remove oil and grease.
- *Fueling Areas*: Minimize contamination of storm water runoff from fueling areas. Implement the following (or other equivalent measures), as practicable: Covering the

fueling area; using spill/overflow protection and cleanup equipment; minimizing storm water run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected storm water runoff.

- *Material Storage Areas*: Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of storm water and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.). Implement the following (or other equivalent measures), as practicable: storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of storm water to the areas; using dry cleanup methods; and treating and/or recycling collected storm water runoff.

- *Vehicle and Equipment Cleaning Areas:* Minimize contamination of storm water runoff from all areas used for vehicle/equipment cleaning. Implement the following (or other equivalent measures), as practicable: performing all cleaning operations indoors; covering the cleaning operation, ensuring that all wash water drains to a proper collection system (i.e., not the storm water drainage system); treating and/or recycling collected wash water, or other equivalent measures.

- *Vehicle and Equipment Maintenance Areas*: Minimize contamination of storm water runoff from all areas used for vehicle/equipment maintenance. Implement the following (or other equivalent measures), as practicable: performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to storm water drainage systems; using dry cleanup methods; treating and/or recycling collected storm water runoff, minimizing run on/runoff of storm water to maintenance areas.

- *Locomotive Sanding (Loading Sand for Traction) Areas*: Implement the following (or other equivalent measures), as practicable: covering sanding areas; minimizing storm water run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by storm water.

Activities, associated pollutants, and activity-specific control measures implemented to address Sector P facilities at Fort Wainwright are discussed in Sections 5 and 6 of this SWPPP.

7.3.3.2 Employee Training

(See also Part 4.2.9 of the MSGP.) Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; and used battery management.

Storm water pollution prevention training at Fort Wainwright is discussed in Section 6.8 of this SWPPP.

7.3.4 Additional SWPPP Requirements

7.3.4.1 Drainage Area Site Map

(See also Part 5.2.3 of the MSGP.) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

See figures in Appendix A. Vehicles and equipment awaiting maintenance (with actual or potential leaks) may be present at the yards and parking areas at all vehicle and equipment maintenance facilities identified in this SWPPP.

7.3.4.2 Potential Pollutant Sources

(See also Part 5.2.4 of the MSGP.) Assess the potential for the following activities and facility areas to contribute pollutants to storm water discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the storm water conveyance system(s); and fueling areas. Describe these activities in the SWPPP.

Activities, associated pollutants, and activity-specific control measures implemented to address Sector P facilities at Fort Wainwright are discussed in Sections 5 and 6 of this SWPPP; identifying and addressing non-storm water discharges, including illicit connections is discussed in Section 5.3.

7.3.4.3 Description of Good Housekeeping Measures

The SWPPP must document good housekeeping measures chosen for implementation, consistent with Part 11.P.3 of the MSGP.

See Section 6.2 of this SWPPP.

7.3.4.4 Vehicle and Equipment Wash Water Requirements

If applicable, attach to or reference in the SWPPP, a copy of the APDES permit issued for vehicle/ equipment wash water; if an APDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, attach a copy to the SWPPP. In any case, implement all non-storm water discharge permit conditions or pretreatment conditions in the SWPPP. If wash water is handled in another manner (e.g., hauled offsite), describe the disposal method and attach all pertinent documentation/ information (e.g., frequency, volume, destination, etc.) in the plan.

Washing of vehicles, equipment, and aircraft is discussed in Sections 5.1.3 and 6.14 of this SWPPP.

7.3.5 Additional Inspection Requirements

(See also Part 6.1 of the MSGP.) Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas, loading/unloading areas, and any petroleum bulk fuel storage areas. Quarterly visual assessment of the bulk fuel storage areas should focus on identifying any potential leaks in tanks, pipelines, valves, etc. and implementing temporary spill containment measures until permanent corrective actions can be made.

7.3.6 Sector-Specific Benchmarks

There are no sector-specific benchmark monitoring requirements under Sector P.

7.3.7 Sector-Specific Effluent Limitation Guidelines

There are no sector-specific monitoring requirements for ELGs under Sector P.

7.4 Sector S – Air Transportation

The sector-specific control measures in this section apply to storm water discharges associated with industrial activity from air transportation facilities identified by the SIC Codes specified under Sector S in Table D-1 of Appendix D of the 2015 MSGP. Those SICs Codes are 4512 through 4581, which comprise SIC Major Group 45. Major Group 45 includes “establishments engaged in furnishing domestic and foreign transportation by air and also those operating airports and flying fields and furnishing terminal services.”

7.4.1 Sector S at Fort Wainwright

Table 1 lists the facilities designated Sector S. These facilities primarily provide maintenance and fueling support for aviation operations at Ladd Army Airfield. Activities conducted at these facilities may include vehicle, equipment, and aircraft fueling, maintenance, and washing, industrial waste management, loading and unloading, outdoor storage, and liquid storage in tanks. Applicable control measures implemented during these activities are discussed in Section 6 of this SWPPP.

Sector S activities and associated pollutants are discussed in Section 5 of this SWPPP. Sector-specific requirements for Sector S facilities are discussed below.

7.4.2 Covered Storm Water Discharges

The requirements below apply to storm water discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes specified under Sector S in Table D-1 of Appendix D of the 2020 MSGP.

7.4.3 Limitation on Coverage and Prohibition of Non-storm Water Discharges

The 2020 MSGP authorizes storm water discharges from those portions of the air transportation facility that are involved in vehicle and/or equipment maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), and vehicle and/or equipment cleaning operations.

The MSGP does not authorize the discharge of aircraft, ground vehicle, runway and equipment wash waters; nor the dry weather discharge of deicing chemicals. Such discharges must be permitted separately under APDES.[20]

7.4.4 Sector-Specific Control Measures

The following sections discuss control measures specific to Sector S that are required by the 2015 MSGP. Most of this discussion is taken directly or paraphrased from the MSGP. This approach ensures that members of the pollution prevention team are aware of applicable and potentially applicable permit requirements as the facilities may change over time. This approach also allows the pollution prevention team members to exercise judgment in determining the best means to prevent pollution of storm water runoff from the facility.

7.4.4.1 Deicing

Runway deicing[21] activities do not occur at Ladd Army Airfield at the time of preparation of this SWPPP. The Garrison command and PWE established a control measure to address icing conditions involving pre-warming aircraft in hangars prior to flight operations. The MSGP places much emphasis on and devotes many pages of discussion to control measures for deicing operations at Sector S facilities. Because no deicing occurs at the Fort Wainwright airfield, discussion of MSGP control measures for deicing operations has not been included in this

[20] A discharge resulting from snowmelt is not considered a dry weather discharge under the MSGP.

[21] Note: The MSGP states that “deicing” is generally used to imply both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

SWPPP. [22] Should that condition change, Fort Wainwright must implement all applicable requirements detailed in Subpart 11.S of the permit.

7.4.4.2 Good Housekeeping

(See also Part 4.2.2 of the MSGP.) Implement control measures (as described in Parts 11.S.4.1.1 through 11.S.4.1.7 of the MSGP – each list is not exclusive) where determined to be practicable and that accommodate considerations of safety, space, operational constraints, and flight considerations.

- *Aircraft, Ground Vehicle, and Equipment Maintenance Areas:* Minimize the contamination of storm water runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following control measures: performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the storm water runoff from the maintenance area and providing treatment or recycling.
- *Aircraft, Ground Vehicle and Equipment Cleaning Areas:* Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of storm water runoff from cleaning areas.
- *Aircraft, Ground Vehicle and Equipment Storage Areas:* Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of storm water runoff from these storage areas. Consider the following control measures, including any BMPs: store aircraft and ground vehicles indoors; use drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.
- *Material Storage Areas:* Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of storm water. Also plainly label the vessels (e.g., “used oil,” “Contaminated Jet A,” etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures: store materials indoors; store waste materials in a centralized location; and install berms/dikes around storage areas.
- *Airport Fuel System and Fueling Areas:* Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations

[22] Parts 11.S.4.1.6 – 11.S.4.2 (and Tables 11.S.7-1 and 11.S.8-1) of the MSGP contain the bulk of the permit’s deicing requirements; many are not discussed in this SWPPP because the activities do not occur at Fort Wainwright.

conducted in support of the airport fuel system. Consider the following control measures: implement spill and overflow practices; use only dry cleanup methods; and collect storm water runoff.

The control measures implemented at Sector S facilities to address the requirements listed above are described in Section 6 of this SWPPP.

7.4.5 Additional SWPPP Requirements

An airport authority and tenants of the airport are encouraged to work in partnership in the development of a SWPPP. If an airport tenant obtains authorization under this permit and develops a SWPPP for discharges from his own areas of the airport, prior to authorization, that SWPPP must be coordinated and integrated with the SWPPP for the entire airport.[23] Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in storm water discharges associated with industrial activity.

7.4.5.1 Drainage Area Site Map

(See also Part 5.2.3 of the MSGP.) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

See the *Fort Wainwright Cantonment* map in Appendix A. Vehicles, equipment, and/or aircraft awaiting maintenance may be present outside aircraft maintenance hangars identified in this SWPPP.

7.4.5.2 Potential Pollutant Sources

(See also Part 5.2.4 of the MSGP.) In the inventory of exposed materials, describe in the SWPPP the potential for the following activities and facility areas to contribute pollutants to storm water discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If deicing chemicals are used, a record of the types (including the MSDSs) used and the monthly quantities must be recorded, either as measured or, in the absence of metering, as estimated as accurately as possible. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-

[23] See Part 11.S.3 of the MSGP for requirements pertaining to multiple operators at Air Transportation facilities.

based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

The potential for the pollutant sources above to contaminate storm water, and control measures implemented at Fort Wainwright to address them are presented in Sections 5 and 6 of this SWPPP.

7.4.5.3 Vehicle and Equipment Wash Water Requirements

Attach to, or reference in the SWPPP, a copy of the APDES permit issued for vehicle/equipment wash water or, if an APDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in the SWPPP. In any case, if subject to another permit, describe the control measures for implementing all non-storm water discharge permit conditions or pretreatment requirements in the SWPPP. If wash water is handled in another manner (e.g., hauled off-site, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in the SWPPP.

Vehicle, aircraft, and equipment washing is discussed in Sections 5.1.3 and 6.14 of this SWPPP; Fort Wainwright does not have separate APDES permit coverage for washing activities.

7.4.5.4 Documentation of Control Measures Used for Management of Runoff

Document in the SWPPP the control measures used for collecting or containing contaminated melt-water from collection areas used for disposal of contaminated snow.

These measures can be found in the Fort Wainwright SPCC Plan.

7.4.6 Additional Inspection Requirements

7.4.6.1 Inspections

Additional inspection requirements under Sector S pertain to deicing activities. If Fort Wainwright implements a deicing program at the Ladd Army Airfield, ensure requirements detailed in Part 11.S.6 of the MSGP are satisfied.

7.4.7 Sector-Specific Benchmarks

Sector S benchmark requirements are comprised of deicing related parameters. Until such time that deicing activities occur at Ladd Army Airfield or there is a change in requirements, Fort Wainwright will not be required to conduct benchmark sampling for Sector S activities.

7.4.8 Sector-Specific Effluent Limitation Guidelines

There shall be no discharge of airfield pavement deicers containing urea, unless there is monitoring. To comply with this limitation, any existing point source must certify annually that it does not use airfield-deicing products that contain urea or alternatively, airfield pavement discharges at every discharge point must achieve the numeric limitations for ammonia in Table 11.S.8-1 of the MSGP, prior to any dilution or commingling with any non-deicing discharge. The certification statement must be maintained in the SWPPP and signed in accordance with Appendix A, Part 1.12 of the MSGP. Monitor per the requirements in Table 11.S.8-1 of the MSGP. Section 1.0 SWPPP Certification includes language that for the current year, the garrison does not use airfield-deicing products that contain urea.

8.0 SCHEDULES AND PROCEDURES FOR MONITORING

8.1 Monitoring Procedures

Part 5.2.6.2 of the MSGP states that the SWPPP must document procedures for conducting the four types of analytical monitoring specified by this permit, where applicable to the facility, and describes what must be documented. Part 7 of the permit describes required monitoring and procedures.

The four types of analytical monitoring are:

- Benchmark monitoring
- Effluent limitations monitoring
- Impaired waters monitoring
- Other monitoring required by ADEC

This section describes analytical monitoring requirements of the MSGP applicable to Fort Wainwright. Fort Wainwright's analytical monitoring program for compliance with the MSGP is summarized in Table 5, at the end of this section. See Part 9 of the MSGP for reporting and record keeping requirements, including those regarding monitoring. At the time this SWPPP was prepared, Fort Wainwright did not intend to utilize the "substantially identical outfall" monitoring exception discussed in Part 7.2.2.2 of the MSGP.

8.2 Benchmark Monitoring

Part 7.2.1 of the MSGP details benchmark sampling requirements, and states the following:

> *Benchmark monitoring data are primarily for the* [*sic*] permittees *use to determine the overall effectiveness of the* [*sic*] *permittees control measures and to assist the permittee in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 4. The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. However, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation. At the permittee's discretion, more than four samples may be taken during separate runoff events and used to determine the average benchmark parameter concentration for facility discharges. These extra samples may be taken in any quarter of the permittees' choice.*

Five industrial sectors have been identified at Fort Wainwright: Sectors J, L, P, and S.

8.2.1 Benchmark Parameters and Control Values

Sector J

Fort Wainwright quarries that must be covered by an industrial storm water permit include Subsector J1 (sand and gravel mining). The following benchmark parameters and benchmark monitoring concentrations for these parameters apply to Subsector J1.

Nitrate plus Nitrite Nitrogen	0.68 mg/L
TSS	100 mg/L

Sector L

Benchmark monitoring for Sector L is only required for those discharges that are *not* subject to ELGs in 40 CFR 445 Subpart B; benchmark parameters for Sector L include TSS and total iron. However, because there is no point source discharge from the active portion of the installation landfill to Waters of the U.S., benchmark monitoring does not apply at Fort Wainwright.

Sector P

No benchmark monitoring is required under Sector P.

Sector S

Since Fort Wainwright does not deice the airfield with deicing chemicals, there are no applicable sector-specific benchmark requirements at this time. However, if Fort Wainwright performs deicing at the flight line in the future, benchmark monitoring may become necessary.

8.2.2 Summary of Required Benchmark Monitoring

Benchmark monitoring was not conducted at Fort Wainwright. If Sector J activities in the future expand to discharge into the MS4 or to Waters of the U.S., or if airfield-deicing is conducted in the future, USAG Alaska will perform benchmark monitoring as applicable.

8.2.3 Benchmark Monitoring Schedule

Should activities and/or drainage at Fort Wainwright change that benchmark monitoring becomes necessary to comply with the MSGP, see MSGP Part 7.2.1.2 for a discussion on the benchmark monitoring schedule.

8.3 Effluent Limitations Monitoring

8.3.1 Effluent Parameters and Limits

Table 7-1 of the MSGP lists those sectors subject to numeric storm water-specific ELGs. That table includes the following sectors present at Fort Wainwright: Sectors J, L, and S. The sector-

specific sections of the MSGP detail the monitoring required to comply with applicable numeric effluent limits set forth in the MSGP.

Sector J

The following numeric effluent limits apply to mine dewatering discharges from Sector J quarries/pits at Fort Wainwright:

pH	6.5 – 8.5[24]

However, Fort Wainwright does not perform mine dewatering activities, per se. Water is occasionally drawn from Badger Pit for wetting dirt roads for dust suppression (see Sections 5.4.2.1 and 7.1.1.1), but these events were not associated with mining activity. If Fort Wainwright were mining sand for purposes other than construction, the effluent limit for TSS would apply. If mine dewatering events occur at Badger Pit, Fort Wainwright would be required to conduct effluent limitations monitoring for Sector J. At the time this SWPPP was written, effluent limitations monitoring for Sector J does not apply.

Sector L

Table 11.L.10-1 of the MSGP identifies the following numeric effluent limits for Sector L discharges:

BOD_5	140 mg/L, daily maximum
	37 mg/L, monthly average maximum
TSS	88 mg/L, daily maximum
	27 mg/L, monthly average maximum
Ammonia	10 mg/L, daily maximum
	4.9 mg/L, monthly average maximum
Alpha Terpineol	0.033 mg/L, daily maximum
	0.016 mg/L monthly average maximum
Benzoic Acid	0.12 mg/L, daily maximum
	0.071 mg/L, monthly average maximum
p-Cresol	0.025 mg/L, daily maximum
	0.014 mg/L, monthly average maximum
Phenol	0.026 mg/L, daily maximum

[24] See discussion of State of Alaska monitoring requirements later in this in section. Note: these State of Alaska values are more stringent than EPA's under the previous MSGP.

	0.015 mg/L, monthly average maximum
Total Zinc	0.20 mg/L, daily maximum
	0.11 mg/L, monthly average maximum
pH	6.5 – 8.5 s.u.

Because there is no point source discharge from the active portion of the installation landfill to Waters of the U.S., effluent limitations monitoring does not apply at Fort Wainwright.

Sector P

The MSGP does not require monitoring for ELGs at Sector P facilities.

Sector S

Monitoring for ELGs is required at existing and new primary airports with 1,000 or more annual jet departures that discharge wastewater associated with airfield pavement deicing that contains urea commingled with storm water. As Fort Wainwright does not meet these criteria, ELG monitoring at Fort Wainwright does not apply.

8.3.2 Summary of Required Effluent Monitoring

ELG monitoring is not applicable to Fort Wainwright activities.

8.3.3 Schedule

Should activities and/or drainage at Fort Wainwright change that ELG monitoring becomes necessary to comply with the MSGP, see MSGP Part 7.2.2.1 for a discussion on the ELG monitoring schedule.

8.4 Impaired Waters Monitoring

The MSGP defines impaired waters as those which have been listed pursuant to Section 303(d) of the CWA and states that if the permittee discharges to an impaired water body, each pollutant for which the water body is impaired must be monitored (if there is a standard analytical method for that parameter). The Chena River, which receives storm water discharges from Fort Wainwright facilities, has been listed as an impaired water body.

8.4.1 Chena River Impaired Status

Previously, a segment of the Chena River in the vicinity of Fairbanks was listed by EPA and the State of Alaska as an impaired water body due to sediment; However, the sediment impairment for the Chena River was proposed for removal from the Section 303(d)/Category 5 list and placement in Category 2 in the 2014-16 Integrated Report.

The State of Alaska had not established a TMDL for sediment in the Chena River before it was removed.

8.4.2 Summary of Required Impaired Waters Monitoring

The MSGP states that ADEC may impose additional storm water discharge monitoring requirements upon the permittee. At such time that ADEC specifies additional industrial storm water monitoring requirements for Fort Wainwright, this SWPPP will be updated to reflect those additional requirements.

At this time ADEC has not specified any additional monitoring for Fort Wainwright to comply with the MSGP.

8.5 Monitoring Responsibilities and Procedures

8.5.1 Monitoring Periods

Quarterly monitoring (e.g., benchmark monitoring), must occur at least once in each of the following two-month intervals, which are modified based on the climate of irregular storm water runoff in accordance with Part 7.1.6 of the MSGP:

- March 1 – April 30
- May 1 – June 30
- July 1 – August 31
- September 1 – October 31

Fort Wainwright's monitoring requirements will begin in the first full quarter following the date of discharge authorization, which follows submittal of the NOI. That quarter is expected to be the fourth quarter of calendar year 2020 (September 1 – October 31, 2020).

8.5.2 Responsible Staff

The Fort Wainwright Water Program Manager will ensure that all monitoring is performed in compliance with the MSGP.

8.5.3 Sampling and Analysis Procedures

Sampling and analysis will be conducted in accordance with 40 CFR 136 and follow the guidelines described in EPA's "Industrial Stormwater Monitoring and Sampling Guide."[25] Sampling will be performed by PWE or a PWE contractor following EPA approved methods for

[25] EPA 832-B-09-003, March 2009

sample collection. All samples will be analyzed by a laboratory qualified in 40 CFR 136 methods.

8.5.4 Sampling Logistics

One or more grab samples will be taken from the industrial outfalls within 30 minutes of a discharge resulting from a measureable storm event as detailed in Part 7 of the MSGP. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample will be collected as soon as practicable after the first 30 minutes and documentation kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples will be taken during a period with a measurable discharge.

8.5.5 Adverse Weather Conditions

When adverse weather conditions as described in MSGP Part 7.1.5 prevent the collection of samples as scheduled, a substitute sample will be obtained during the next qualifying storm event. Adverse weather does not exempt the permittee from having to file a benchmark monitoring report in accordance with the sampling schedule. The permittee must report any failure to monitor as specified in Part 9.1 of the permit indicating the basis for not sampling during the usual reporting period.

8.5.6 Climates with Irregular Storm Water Runoff

Fort Wainwright is located in a semi-arid climate where limited rainfall occurs during parts of the year and freezing conditions prevent runoff from occurring for extended periods. As such, required monitoring events may be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge. Section 8.5.1 of this SWPPP describes the modified monitoring periods. The required number of samples must still be collected.

8.5.7 Exception for Inactive and Unstaffed Sites

The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. This exception may apply during certain times of the year to some of Fort Wainwright's quarries/pits, as described in the following paragraphs quoted from the MSGP:

"*11.J.8.1 Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark Monitoring*. As a Sector J facility, if the permittee is seeking to exercise a waiver from either the routine inspection, quarterly visual assessment or the benchmark monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), they are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to storm water" in Parts 6.2.3 and 7.2.1.6, respectively. Additionally, if the permittee is seeking to reduce their

required quarterly routine inspection frequency to a once annual comprehensive inspection, as is allowed under Part 6.1.3, the permittee is also conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to storm water." This exemption is conditioned on the following:

- If circumstances change and the permittees facility becomes active and/or staffed, this exception no longer applies and the permittee must immediately begin complying with the applicable benchmark monitoring requirements as if they were in their first year of permit coverage, and the quarterly visual assessment requirements; and
- ADEC retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an in-stream excursion above a WQS, including designated uses.

Subject to the two conditions above, if the permittee's facility is inactive and unstaffed, they are waived from the requirement to conduct quarterly visual assessments and routine facility inspections. The permittee is not waived from conducting the Part 6.3 comprehensive site inspection. The permittee is encouraged to inspect their site more frequently where they have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges."

8.6 Storm Water Monitoring Summary

Table 4 summarizes Fort Wainwright's analytical monitoring program for compliance with the MSGP; Table 5 summarizes the monitoring by outfall.

Table 4. Fort Wainwright Analytical Monitoring Program

INDUSTRIAL SECTOR	MONITORING LOCATION (OUTOFALLS*)	BENCHMARK MONITORING		EFFLUENT MONITORING		IMPAIRED WATERS MONITORING	
		Schedule	Analytical Parameters	Schedule	Analytical Parameters	Schedule	Analytical Parameters
J	NA[26]	Four consecutive quarters is discharge to MS4 occurs; more if exceed benchmark	Nitrate plus nitrite nitrogen, TSS	Annually, if discharge to MS4 occurs	pH (only if mine dewatering occurs, otherwise, NA)	NA	NA
L	NA	NA	NA	NA	NA	NA	NA
P	1,2,3,4,7	NA	NA	NA	NA	NA	NA
S	4,5,7,8a, 8b,12,13	NA	NA	NA	NA	NA	NA

* Monitoring is generally conducted at the outfall, where the storm sewer system discharges to waters of the U.S. Some outfalls are up gradient of the Chena River bank. In those cases, the storm sewer conveyance terminates before reaching the Chena River. However, during flood conditions, waters of the Chena River reach the terminus of the storm sewer conveyance.

[26] Sector J discharges to Badger Pit, which is not a water of the U.S. If the gravel pit is expanded and a discharge to the MS4 is created, an outfall will be established and sampled.

Table 5. Storm Water Monitoring at Fort Wainwright

Sampling Location	Sector(s)	Outfall Monitoring at Fort Wainwright (to commence 4rd quarter, September 1 - October 31)									
		Visual Inspection	Benchmark*	Effluent Limit Guidelines	Impaired Waters	Analytes	Analysis Method	Discharge/Monitoring Location	Number of Site Visits	Notes	Outfall Naming Information
FWA-001	P	Conduct quarterly every year of MSGP coverage; samples should be visually inspected for color, odor, clarity, solids (floating, settled, suspended), foam, oil sheen, and any other obvious indicators of storm water pollution.	N/A	N/A	N/A	N/A	N/A	Chena River	All outfalls must undergo visual inspection at least four times per year; other monitoring (benchmark and impaired waters) should be done when visual inspections occur. Monitoring Periods: 1st Quarter: 01 MAR - 30 APR 2nd Quarter: 01 MAY - 30 JUN 3rd Quarter: 01 JUL - 31 AUG 4th Quarter: 01 SEP - 31 OCT MSGP Part 6.2.3 states: "In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, as described in Part 7.1.3, taking into account the exception described above for climates with irregular storm water runoff."	This outfall is included in the MS4 monitoring program	Referred to previously as Outfall "1"
FWA-002	P										Referred to previously as Outfall "2"
FWA-003	P										Referred to previously as Outfall "3"
FWA-004	P,S									This outfall is included in the MS4 monitoring program	Referred to previously as Outfall "4"
FWA-005	S										Referred to previously as Outfall "12"
FWA-006	S										Referred to previously as Outfall "5"
FWA-007	P,S									This outfall is included in the MS4 monitoring program	Referred to previously as Outfall "7"
FWA-008	S										Referred to previously as Outfall "8a"
FWA-009	S									This outfall is included in the MS4 monitoring program	Referred to previously as Outfall "13"
Chena River	N/A										

* If conditions prevent obtaining four samples in four consecutive quarters, continue monitoring until the four samples required for calculating the benchmark monitoring average are obtained.

9.0 INSPECTIONS

9.1 Routine Facility Inspections

Part 6.1.1 of the MSGP requires routine facility inspections be conducted at the following areas of industrial facilities:

- Areas where industrial materials or activities are exposed to storm water
- Areas identified in the SWPPP and those that are potential pollutant sources (see Part 5.1.3)
- Areas where spills and leaks have occurred in the past three years
- Discharge points
- Control measures used to comply with the effluent limits contained in this permit

Routine storm water inspections must be conducted quarterly at a minimum, though the permit states that in some cases more frequent inspections may be appropriate, at *"areas of the facility with significant activities and materials exposed to stormwater."*

The following routine facility inspection requirements must be implemented at Fort Wainwright facilities:

- The inspections must occur while the facility is in operation.
- At least one quarter's inspection (each year) must be conducted when a storm water discharge is occurring.[27]
- The inspections must be conducted by qualified personnel.[28]
- At least one member of the Fort Wainwright storm water pollution prevention team must participate in each quarterly inspection.

[27] Alaska has unpredictable weather, and it may be too logistically challenging to satisfy this requirement. However, the spring inspection is scheduled with the best intention of occurring during breakup, when there is typically a significant amount of runoff from snowmelt, and the likelihood of a discharge. If the formal inspections do not coincide with discharge events, an additional inspection will occur during the next storm water discharge event if PWE considers it practicable to do so.

[28] "Qualified Personnel" is defined in MSGP Appendix C (Definitions) as: "Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at your facility, and who can also evaluate the effectiveness of control measures."

- Inspector(s) must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

Routine storm water inspections are conducted quarterly by PWE or a PWE contractor, and inspection findings are documented on forms and summary spreadsheets maintained by PWE. Corrective actions required as a result of a routine inspection must be performed consistent with Part 8 of the MSGP.

Part 6.1.2 of the MSGP requires the following documentation for each routine facility inspection:

- The inspection date and time
- The name(s) and signature(s) of the inspector(s)
- Weather information
- All observations relating to the implementation of control measures at the facility, including:
  - A description of any discharges occurring at the time of the inspection
  - Any previously unidentified discharges of pollutants from the site
  - Any evidence of, or the potential for, pollutants entering the drainage system
  - Observations regarding the physical condition of, and around, all outfalls including any flow dissipation devices, and evidence of pollutants in discharge and/or the receiving water
  - Any control measures needing maintenance, repairs, or replacement
- Any additional control measures needed to comply with the permit requirements
- Any observed incidents of noncompliance observed

A copy of the inspection forms used at Fort Wainwright for quarterly inspections is provided in Appendix F. Facility criteria are provided on one form and outfall criteria on another.

9.2 Quarterly Visual Assessment of Storm Water Discharges

Part 6.2 of the MSGP states the following:

“Once each calendar quarter for the entire permit term, the permittee must collect a storm water sample from each outfall (except as noted in Part 6.2.3) and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the storm water discharge. If no discharge occurs during the quarterly visual

assessment period, the permittee must still report no discharge for this monitoring period and follow the requirements of Part 7.1.6."

The schedule for distribution of quarters, for irregular storm water runoff under Part 6.2.3 of the MSGP, is listed in section 8.5.1 of this SWPPP.

9.2.1 Quarterly Visual Assessment Procedure

The visual assessment must be made:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area.
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and the permittee must document why it was not possible to take samples within the first 30 minutes; in the case of snowmelt, samples must be taken during a period with a measurable discharge from the site.
- For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour storm interval does not apply if the permittee documents that less than a 72-hour interval is representative for local storm events during the sampling period.

The samples must be visually inspected for the following water quality characteristics:

- Color
- Odor
- Clarity ([sic] diminished)
- Floating solids
- Settled solids
- Suspended solids
- Foam
- Oil sheen
- Other obvious indicators of storm water pollution

9.2.2 Quarterly Visual Assessment Documentation

Results of these visual assessments must be documented and maintained with this SWPPP.

Documentation must include:

- Sample location(s)
- Sample collection date and time, and visual assessment date and time for each sample
- Personnel collecting the sample and performing visual assessment, and their signatures
- Nature of the discharge (i.e., runoff or snowmelt)
- Results of observations of the storm water discharge
- Probable sources of any observed storm water contamination
- If applicable, why it was not possible to take samples within the first 30 minutes

Quarterly Visual Assessment Documentation must be signed and certified in accordance with Appendix A, Subsection 1.12 of the MSGP.

9.2.3 Exceptions to Quarterly Visual Assessments

The following exceptions to conducting quarterly visual assessments are provided in Part 6.2.3 of the MSGP. At Fort Wainwright, *Adverse Weather Conditions, Climates with Irregular Storm Water Runoff,* and *Areas Subject to Snow* are directly applicable.

- *Adverse Weather Conditions*: When adverse weather conditions prevent the collection of samples during the quarter, the permittee must take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with the SWPPP records as described in MSGP Part 5.8. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions.
- *Climates with Irregular Storm Water Runoff*: If the facility is located in an area where limited rainfall occurs during many parts of the year (e.g., arid or semi-arid climate) or in an area where freezing conditions exist that prevent runoff from occurring for extended periods, then the samples for the quarterly visual assessments may be distributed during seasons when precipitation runoff occurs.
- *Areas Subject to Snow*: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, as described in MSGP Part 7.1.3, taking into account the exception described above for climates with irregular storm water runoff.
- *Inactive and Unstaffed Sites*: The requirement for a quarterly visual assessment does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. To invoke this exception, the permittee must maintain a statement in the SWPPP as required in MSGP Part 5.2.6.2 indicating

that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with MSGP Appendix A, Subsection 1.12. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and the permittee must immediately resume quarterly visual assessments. If the permittee is not qualified for this exception at the time they are authorized under this permit, but during the permit term they become qualified because their facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to storm water, then the permittee must include the same signed and certified statement as above and retain it with their records pursuant to MSGP Part 5.8.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the "no industrial materials or activities exposed to storm water" standard to be eligible for this exception from quarterly visual assessment, consistent with the requirements established in MSGP Parts 11.G.8.4, 11.H.8.1, and 11.J.8.1.

- *Substantially Identical Outfalls*: If a permittees facility has two or more outfalls that discharge substantially identical effluents, as documented in MSGP Part 5.2.6.2, the permittee may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that the permittee performs visual assessments on a rotating basis of each substantially identical outfall throughout the period of coverage under this permit.

  If storm water contamination is identified through visual assessment performed at a substantially identical outfall, the permittee must assess and modify their control measures as appropriate for each outfall represented by the monitored outfall. At the time this SWPPP was prepared, Fort Wainwright did not intend on exercising the allowance for substantially identical outfalls.

9.3 Comprehensive Site Inspections

The comprehensive site inspections include inspections of each facility and associated grounds covered by the MSGP and the installation-wide storm water management system, to evaluate the overall effectiveness of Fort Wainwright's SWPPP. Part 6.3.1 of the MSGP requires comprehensive inspections be conducted by qualified personnel, with at least one member of the storm water pollution prevention team participating. A PWE contractor is typically responsible for conducting these inspections.

Comprehensive site inspections must occur annually, during each of the following inspection periods beginning with the period the permittee is authorized to discharge under this permit:

Year 1: Permit effective date – December 31, 2020

Year 2: January 1, 2021 – December 31, 2021

Year 3: January 1, 2022 – December 31, 2022

Year 4: January 1, 2023 – December 31, 2023

Year 5: January 1, 2024 – December 31, 2024

9.3.1 Comprehensive Site Inspection Procedures

The MSGP requires the following components be examined for the comprehensive site inspections:

- Areas where spills and leaks have occurred in the past three years
- Industrial materials, residue, or trash that may have or could come into contact with storm water
- Leaks or spills from industrial equipment, drums, tanks, and other containers
- Off-site tracking of industrial or waste materials, or sediment where vehicles enter or exit the site
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas
- Control measures needing replacement, maintenance, or repair

These inspections must also include a review of monitoring data collected in accordance with Part 7.2 of the MSGP. Inspectors must consider the results of the previous year's visual and analytical monitoring in addition to the elements described above.

9.3.2 Comprehensive Site Inspection Documentation

Findings must be documented for each comprehensive site inspection and maintained with this SWPPP. In addition, documentation must be submitted in an annual report as required in Part 9.2 of the MSGP. At a minimum, this documentation must include the following:

- The date of the inspection
- The name(s) and title(s) of the personnel making the inspection

- Findings from the examination of areas of the facility identified in Part 6.3.1 including inspections of the individual industrial sectors within a facility under a single permit which have been noted as having no exposure in the SWPPP
- All observations relating to the implementation of control measures including:
  - Previously unidentified discharges from the site
  - Previously unidentified pollutants in existing discharges
  - Evidence of, or the potential for, pollutants entering the drainage system
  - Evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring
  - Additional control measures needed to address any conditions requiring corrective action identified during the inspection
- Any required revisions to the SWPPP resulting from the inspection
- Any incidents of noncompliance observed or a certification stating the facility is in compliance with this permit (if there is no noncompliance)
- A statement, signed and certified in accordance with Appendix A, Subsection 1.12 of the MSGP

Any corrective action required as a result of the comprehensive site inspections must be performed consistent with Part 8 of the MSGP.

10.0 REPORTING AND RECORD KEEPING

10.1 Reporting Monitoring Data to ADEC

All monitoring data collected pursuant to MSGP Parts 7.2 and 7.2.2.3 must be submitted to ADEC no later than 30 days (email date or postmark date) after Fort Wainwright has received the complete laboratory results for all monitored outfalls for the reporting period. Paper reporting forms must be submitted by the deadline to the appropriate address identified in MSGP Part 9.6. ADEC requires the use of the Industrial Discharge Monitoring Report (MDMR) (included in Appendix F of this SWPPP). For benchmark monitoring, note that Fort Wainwright is required to submit sampling results to ADEC no later than 30 days after receiving laboratory results for each quarter that are required to collect benchmark samples, in accordance with Part 7.2.1.2 of the MSGP. If multiple samples are collected in a single quarter (e.g., due to adverse weather conditions, climates with irregular storm water runoff, or areas subject to snow), all sampling results must be submitted to ADEC within 30 days of receiving the laboratory results. If no discharge occurs during the benchmark monitoring period, Fort Wainwright must still report no discharge for this monitoring period.

10.2 Annual Report

Fort Wainwright must submit an Annual Report to ADEC that includes the findings from the comprehensive site inspection (MSGP Part 6.3) and any corrective action documentation as required in Part 8.4 of the MSGP. If corrective action is not yet completed at the time of submission of this Annual Report, Fort Wainwright must describe the status of any outstanding corrective action(s). In addition to the information required in MSGP Parts 8.4 (Corrective Action Report) and 6.3.2 (Comprehensive Site Inspection Documentation), Fort Wainwright must include the following information with the Annual Report:

- Facility name
- APDES permit tracking number
- Facility physical address
- Contact person name, title, and phone number

ADEC requires permittees to submit this report using the Annual Reporting Form (included in Appendix F of this SWPPP). The Annual Report may be submitted electronically through the ADEC Online Application System (OASys) located at http://dec.alaska.gov/water/oasys/index.html. By February 15th of the year following the reporting year, permittees must submit the Annual Report to ADEC to the address identified in Appendix A, Part 1.1.1 of the MSGP or via OASys.

10.3 Noncompliance Notification for Numeric Effluent Limits

If follow-up monitoring pursuant to Part 7.2.2.3 of the MSGP exceeds a numeric effluent limit, the permittee must submit a Noncompliance Notification Form (see http://dec.alaska.gov/water/Compliance/permittee.html) to ADEC no later than 30 days after they have received their lab results. The permittee's report must include the following:

- APDES permit tracking number
- Facility name, physical address and location
- Name of receiving water
- Monitoring data from this and the preceding monitoring event(s)
- An explanation of the situation - what the permittee has done and intend to do (should their corrective actions not yet be complete) to correct the violation
- An appropriate contact name and phone number

10.4 Additional Reporting

- Fort Wainwright is subject to the standard permit reporting provisions of Appendix A, Subsection 3.0 of the MSGP.
- Where applicable, Fort Wainwright must submit, and ADEC must receive, the following reports at the appropriate address in MSGP Part 9.6. If the facility discharges through an MS4, the permittee must also submit these reports to the MS4 operator (identified pursuant to Part 5.2.3):[29]
    - 24-hour reporting (see Appendix A, Subsection 3.4 of the MSGP) – Fort Wainwright must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.
    - Five-day follow-up reporting to the 24 hour reporting (see Appendix A, Subsection 3.4 of the MSGP) – A written submission must also be provided within five days of the time the permittee becomes aware of the circumstances.
    - Reportable quantity spills (see MSGP Part 4.2.4) – A permittee must provide notification, as required under Part 4.2.4 of the MSGP, as soon as they have

[29] Since Fort Wainwright is both the industrial discharger and the MS4, this requirement is not applicable.

knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity.

- Where applicable, Fort Wainwright must submit, and ADEC must receive, the following reports at the appropriate address in Part 9.6 of the MSGP:
  - Planned changes (see Appendix A, Subsection 2.1 of the MSGP) – A Permittee must give notice to ADEC as soon as possible of any planned physical alterations or additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged.
  - Anticipated non-compliance (see Appendix A, Subsection 2.2 of the MSGP) – A Permittee must give advance notice to ADEC of any planned changes in the permitted facility or activity which they anticipate will result in noncompliance with permit requirements.
  - Transfer of ownership and/or operation – The new permittee must submit a complete and accurate NOI in accordance with the requirements of Appendix F of the MSGP and by the deadlines specified in MSGP Table 2-1.
  - Compliance schedules (see Appendix A, Subsection 2.4 of the MSGP) – Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the MSGP must be submitted no later than 14 days following each schedule date.
  - Other non-compliance (see Appendix A, Subsection 3.5 of the MSGP) – A permittee must report all instances of non-compliance not reported in their monitoring report (pursuant to MSGP Part 9.1), compliance schedule report, or 24-hour report at the time monitoring reports are submitted.
  - Other information (see Appendix A, Subsection 2.5 of the MSGP) – A permittee must promptly submit facts or information if they become aware that they failed to submit relevant facts in their NOI, or that they submitted incorrect information in their NOI or in any report.

10.5 Record Keeping

Fort Wainwright must retain copies of this SWPPP (including any modifications made during the term of the 2020 MSGP), additional documentation requirements pursuant to Part 5.8 of the MSGP (including documentation related to corrective actions taken pursuant to MSGP Part 5), all reports and certifications required by the MSGP, monitoring data, and records of all data used to complete the NOI to be covered by the 2020 MSGP, for a period of at least three years from the date that Fort Wainwright's coverage under the 2020 MSGP expires or is terminated. Because the most of the MSGP facilities are located within the Fort Wainwright MS4, records will be maintained for five years to meet MS4 Permit requirements.

10.6 Addresses for Reports

NOI, NOI modification, Notice of Termination (NOT), No Exposure Certificate, and SWPPP should be submitted using ADEC's Electronic NOI (eNOI) system (http://dec.alaska.gov/water/wastewater/stormwater/APDESeNOI/) or sent to the address in Appendix A, Part 1.1.1 of the MSGP. Paper copies of any reports required in MSGP Parts 7 through 9, not otherwise submitted electronically via ADEC's eNOI system must be sent to the address in Appendix A, Part 1.1.2 of the MSGP.

10.7 Request for Submittal of Records

ADEC may request copies of all, or a portion of, the information collected and maintained in this SWPPP. Fort Wainwright must provide a response to written request for records to ADEC within 30 calendar days of receipt of a written request.

11.0 TERMINATING COVERAGE

11.1 Submitting a Notice of Termination

To terminate permit coverage, a permittee must submit a complete and accurate NOT using the paper NOT form included in Appendix F of the MSGP, to the address listed in MSGP Part 9.6. A permittee's authorization to discharge under the 2015 MSGP terminates at midnight of the day that a valid NOT is signed. (If a permittee submits a NOT without meeting one or more of the conditions identified in Part 10.2 of the MSGP, then a permittee's NOT is not valid.) The permittee is responsible for meeting the terms of the MSGP until their authorization is terminated.

11.2 When to Submit an NOT

A permittee must submit an NOT within 30 calendar days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the facility.
- The permittee has ceased operations at the facility, there are not or no longer will be discharges of storm water associated with industrial activity from the facility, and the permittee has already implemented necessary sediment and erosion controls as required by Part 4.2.5 of the MSGP.
- The permittee is a Sector G, H, or J facility and has met the applicable termination requirements.
- The permittee has obtained coverage under an individual or alternative general permit for all discharges required to be covered by an APDES permit, unless ADEC has required that they obtain such coverage under authority of Part 2.8.1 of the MSGP, in which case coverage under this permit will terminate automatically.

APPENDICES

A Figures

B 2020 Multi-Sector General Permit

C Summary of Spills and Leaks

D Non-Storm Water Discharge Certification

E DPW Clean Soil Stockpile Environmental Compliance Guidelines

F Forms

Appendix A

Figures

- General Location Map: Fort Wainwright Cantonment and Vicinity
- Fort Wainwright Cantonment MSGP Locations
- Fort Wainwright Municipal Separate Storm Sewer System Drainage Basins
- Fort Wainwright Sub-catchment Drainage Basins
    - D04
    - D11
    - D15
    - D19
    - D21
    - D22
    - D23
    - D27
    - D28
    - D29
    - D34
    - D36
- Significant Spills and Leaks in the Fort Wainwright Cantonment Area
- Cantonment Landfill Slopes
- Cantonment Landfill Cells

Appendix B

2020 Multi-Sector General Permit

Appendix C

Summary of Spills and Leaks at Fort Wainwright: January 2017 through June 2020

Appendix D

Non-Storm Water Discharge Certification

[PWE to insert.]

Appendix E

DPW Clean Soil Stockpile Environmental Compliance Guidelines

Appendix F

Forms

- Quarterly Inspection Form
- Outfall Inspection Form
- ADEC MSGP Industrial Discharge Monitoring Report
- ADEC MSGP Annual Reporting Form
- ADEC MSGP Corrective Action Form