Environmental Handbook

USAG Fort Wainwright

LOYALTY DUTY RESPECT SELFLESS SERVICE HONOR INTEGRITY PERSONAL COURAGE

Report On-Base Emergencies to:	Phone
Fire-Related Emergencies	911
Spills of Petroleum, Oil and Lubricants, Hazardous Substances or Wastes	907-353-7535

Environmental Points of Contact	Phone
Environmental Office	(907) 361-9686
Hazardous Waste Center	(907) 356-2023

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Environmental Fact Sheets

FWA Environmental Vision Statement:

Sustain the environment to enable the U.S. Army Alaska mission now and into the future.

FWA Environmental Mission Statement:

Establish environmental compliance and conservation strategies that are effective, sustainable, and support mission readiness.

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1. The FWA Environmental Handbook

This Fort Wainwright (FWA) Environmental Handbook is a simple and informational "how-to" guide for environmental compliance on FWA. This document does not represent policy and is not meant to be a Standard Operating Procedure or other form of operational control; it is informational only and intended to help personnel manage environmental concerns and situations they may encounter.

The FWA Environmental Handbook is directed at the following users:

- All Soldiers, organizations, tenants, contractors and activities located on FWA.
- Any outside organizations conducting activities or training on FWA other than Military Family Housing. Residents should contact the Housing Services Office at (907) 353-1190.

Disclaimer: It is noted that some waste management or disposal procedures specified in this guide may not apply to certain contractors and installation tenants based on contractual relationships, support agreements and scopes of work. Please contact the Hazardous Waste Center 356-2023, if you have questions about your unit/activity's tenant agreement with FWA.

HOW TO USE THIS GUIDE

Use the Table of Contents to find the topic heading you are looking for and refer to the corresponding fact sheet number to find the page you need. If the Information you are looking for is not contained in this handbook, do not hesitate to contact Public Works Environmental (PWE) personnel listed in the Point of Contact directory of this handbook for assistance.

2. Introduction

FWA manages approximately 1.6 million acres of cantonment area, training lands and impact areas. The cantonment area is comprised of 13,500 acres. FWA supports a total population of nearly 11,000 that includes over 6,000 warriors and mission tenants, and over 1,000 civil service employees.

The Department of Defense (DoD) addresses sustainability in its operations as a systematic framework aimed at building an enduring future (from DoD Strategic Sustainability Performance Plan, FY 2011):

"The Department's vision of sustainability is to maintain the ability to operate into the future without decline – either in the mission field or in the natural and manufactured systems that support it."

The FWA PWE is tasked with supporting the FWA mission through environmental sustainability.

3. Environmental Laws and Regulations

3.1 The Law

Numerous, and increasingly stringent, state and federal environmental laws and regulations have been enacted and amended in the past 45 years. They affect almost every operation on FWA, including training in the field, engineering and housing, logistics, and test evaluation strategies. Issues such as water discharge, sewage treatment, power plant operations, noise abatement, air quality control, hazardous material waste management, national historic preservation, land and forest area management, and protection of migratory birds are regulated. Through sustainable management, we can meet these requirements to enable the mission.

The major statutes applicable to military operations in Alaska include:

- Bald and Golden Eagle Protection Act
- Clean Water Act
- Clean Air Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Emergency Planning and Community Right-to-Know Act
- Endangered Species Act
- Federal Insecticide, Fungicide and Rodenticide Act
- Federal Facilities Compliance Act
- Fish and Wildlife Coordination Act
- Forestry Sales Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Migratory Bird Protection Act
- National Environmental Policy Act
- National Historic Preservation Act

- Occupational Safety and Health Act
- Resource Conservation and Recovery Act
- Sikes Act
- Superfund Amendments and Reauthorization Act
- State of Alaska Oil and Hazardous Substance Pollution Statutes and Regulations
- Toxic Substance Control Act
- Wild and Scenic Rivers Act

Environmental law is also interpreted through executive orders (EO) from the President of the United States. EOs serve to direct federal agencies to implement certain environmental policies to support environmental laws and regulations. Examples include: EO 12856, which requires federal compliance with worker right-to-know laws and pollution prevention requirements; EO 12873, which requires federal agencies to establish "buy recycled," recycling, and waste prevention programs; and EO 11990, which mandates the protection of wetlands. All military and civilian personnel are personally responsible for compliance and need to understand the requirements of the laws as they apply to their activities. If you have questions, contact your Unit Commander or PWE.

3.2 Regulations

Federal and state administrative agencies implement laws passed by the U.S. Congress or the State Legislature through regulations. Laws and regulations can be changed by the legislative body or administrative agency that wrote them and are interpreted by the courts when disputes arise.

In addition to federal, state, and local environmental rules and regulations, the Department of Defense (DoD) and the Army have written numerous environmental regulations, policies, and directives to help ensure compliance with the law.

All DoD and Army-written environmental directives must meet or exceed federal, state, and local environmental laws. Complacency can result in

potential danger to human health and the environment, and may also result in significant enforcement actions and penalties by regulatory agencies.

Primary federal enforcement agencies include:

- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USF&WS)
- National Marine Fisheries Service (NMFS)

Primary state enforcement agencies:

- Alaska Department of Environmental Conservation (ADEC)
- Alaska Department of Fish and Game (ADF&G)
- Alaska Department of Natural Resources (ADNR)

If you have questions or concerns about regulations or the agencies responsible for enforcing them, contact your Unit Commander or PWE.

3.3 Penalties for Non-Compliance

Penalties for non-compliance are severe (up to $50,000 per day per violation) and can be levied against both the Installation and those individuals knowingly involved. In addition to substantial personal fines for environmental violations, *an individual may be imprisoned for two to five years and military personnel are subject to further prosecution under the Uniform Code of Military Justice.* Ignorance of the law is not a legal defense.

3.4 Citizen Suits

The public has the right to sue under many statues when proponent's fail to comply with environmental statues. Citizen suits can stop an activity or project as well as compel compliance, and violators can face costly assessments.

3.5 Environmental Compliance Incentives

Through the Army Suggestion Program, both military and civilian employees can receive cash incentive awards for their suggestions, inventions, or scientific achievements that result in environmental protection or pollution prevention.

Your ideas are essential to improving environmental compliance at installations and protecting the environment. Ask your Unit Commander for information.

4. Environmental Compliance Section

The Army is committed to maintaining total environmental compliance. All military and civilian personnel must ensure that the environmental activities for which they are responsible are conducted in compliance with all federal, state, and local laws as well as Army rules and regulations.

Inspections by enforcing agencies and Army assessors used to determine if you and FWA are in compliance with regulations. *Advance notice is not required. Always be prepared!* Should a state or federal inspector appear at your unit/activity, provide them access if safe to do so and immediately inform PWE of their presence.

Self-regulation is critical to compliance and can prevent unnecessary harm to human health and the environment.

You have a responsibility to:

- Maintain compliance with applicable environmental regulations.
- Correct any environmental deficiencies or violations.
- Report spills of oil and hazardous substances, illegal dumping of hazardous substances, and other acts of non-compliance.
- Receive required environmental training.

FWA maintains compliance regulations through numerous management programs, including but not limited to the following:

- Environmental Officers
- Hazardous Waste Management Program
- Hazardous Material Management Program
- Spill Prevention and Response
- Pollution Prevention
- Integrated Solid Waste Management Plan
- Air Quality Program

Anyone handling hazardous materials or waste as part of his or her job, including tenants and contractors, must receive proper environmental training.

4.1 Environmental Officer

The Environmental Officer (EO) organizes training for personnel assigned as primary or alternate hazardous material/waste managers within their units. EOs identify requirements for accumulation areas to be established for hazardous waste and/or hazardous materials that will be recycled, reclaimed, or burned for energy recovery.

EOs inspect waste accumulation and hazardous material storage areas and assist individual managers with compliance issues or concerns. EOs are the primary liaison between FWA units and the PWE.

4.2 Environmental Restoration

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is responsible for the identification and cleanup of sites on FWA that have been contaminated in the past. Through the Installation Restoration Program, the Military Munitions Response Program, and the Contaminated Sites Program, the Restoration Section of PWE supports the FWA mission by managing contaminated soils and groundwater to comply with cleanup requirements and prepare FWA lands for future beneficial use.

Land Use Controls (LUC) have been established on FWA to prevent exposure to contaminated soil and water and are based on agreements between the Army, US Environmental Protection Agency and the Alaska Department of Environmental Conservation. The process and responsibilities for the management of and compliance with LUCs on FWA are contained in Garrison Policy Letter #38. FWA

personnel, tenants or contractors whose projects or activities require excavation must comply with all LUCs and the requirements in 673 ABWI 32-1007, Safeguarding Utilities from Damage. The current LUC for areas on FWA can be found on the Environmental Restoration map that may be obtained from PWE.

4.3 Hazardous Waste Management

Hazardous waste is harmful and may cause immediate physical harm or adverse health effects that show up years later. The Resource Conservation and Recovery Act (RCRA) gives the Environmental Protection Agency the authority to control hazardous waste from the "cradle-to-grave."

This includes the generation, transportation, storage, treatment, and disposal of hazardous waste. The 1984 amendments to RCRA that focus on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases.

FWA is regulated as a large quantity generator of hazardous waste. Every effort should be made to minimize the generation of all wastes. When waste is generated, it must be properly characterized, managed, and disposed. All generators of hazardous waste need to be aware of and operate in compliance with hazardous waste regulations and management procedures. For guidance on hazardous waste management, contact your Hazardous Waste Manager, Unit Environmental Officer, or the Hazardous Waste Center at 356-2023.

4.4 Hazardous Material Management

Hazardous material (HAZMAT) includes all items with a Safety Data Sheet (SDS). HAZMAT does not include munitions or hazardous waste. HAZMAT is managed in accordance with the FWA Hazardous Materials Management Program (HMMP). HAZMAT must be procured through the Logistics Readiness Center (LRC) that operates the FWA Hazardous Material Control Point (HMCP).

All HAZMAT (e.g., POL, paint, solvents, fuel, etc.) must be stored and used in such a manner as to prevent spills and releases. Any unused or partially used HAZMAT that are the property of a contractor shall be removed from the installation and disposed of at the contractor's expense.

4.5 Spill Prevention and Response

Spill prevention is one of the most important aspects of the environmental program. FWA was required to prepare and implement a Spill Prevention, Control, and Countermeasures (SPCC/C) Plan in order to reduce or eliminate oil discharges. There is also a state requirement for FWA to have an Oil Discharge Prevention and Contingency Plan (ODPCP). The two plans have been integrated and are renewed every 5 years per the state and federal requirements.

The goal is to ensure that proper training, planning, and resources are in place for all industrial activities to minimize the potential of any harmful releases from occurring. The Plan establishes best management practices to prevent spills and releases as well as response actions to minimize the effect of a release should one occur.

Updated regularly, the Plan reflects the changing processes and activities at FWA and includes training exercises to assess the effectiveness of response procedures.

4.6 FWA Pollution Prevention Program

The Pollution Prevention (P2) Program at FWA includes concepts and practices necessary to reduce the use of hazardous materials and the release of pollutants. By using fewer hazardous materials, decreasing the release of pollutants, and improving resource use, P2 provides FWA with the opportunity to reduce or eliminate harmful discharges to the air, land, and water. A proactive management approach is necessary to incorporate P2 throughout the varied installation programs.

The P2 Manager is responsible for organizing, implementing, managing, and monitoring the methods and programs that enact P2 principles. The P2 Manager coordinates efforts with media area managers to achieve P2 goals. Media area managers must plan, implement, check, and revise P2 activities regularly to make these goals a reality.

4.7 Solid Waste

FWA is required by Executive Order to divert from landfill disposal at least 50 percent of non-hazardous solid waste, including food waste, compostable material, and construction and demolition debris annually while reporting this diversion in accordance to the Integrated Solid Waste Management Plan.

To achieve the established diversion goal, the primary methods of managing non-hazardous solid waste includes diversion through recycling and reuse, and burning waste-to-energy as a renewable energy. Land disposal should be the last resort.

4.8 Air Quality

In the United States, the Clear Air Act (CAA) provides the primary framework for air quality management, which is focused on controlling the amount of pollution emitted into the atmosphere. Numerous activities at Fort Wainwright generate air pollution. While some *air-pollutant-emitting activities* are unique to the military, many are widespread and common to everyday living (e.g. automobile exhaust, flue gas from heating boilers, or dust generated by driving on a dirt road). FWA is required to track how much pollution is generated by the installation. This information is necessary to evaluate compliance with numerous state and federal air quality control regulations. Most air quality regulations applicable to FWA, and a list of regulated activities are compiled in the Installation's air quality operating permit. Significant changes to the inventory of sources (e.g. diesel fired generators, painting operations, open burning) or activity levels (how much air pollution is actually generated) may require a new permit or a permit modification prior to startup. Permit requirements are administratively controlled using operating and reporting procedures, routine site visits and inspections. However, there are several permit requirements that apply broadly to everyone; Soldiers and Civilians, on the Installation.

With few exceptions, the open burning of anything other than raw vegetation is prohibited. Open burning of any material that generates *black smoke* is prohibited. And open burning during an air quality advisory is prohibited.

You can view air quality advisories via this link: http://dec.alaska.gov/Applications/Air/airtoolsweb/Advisories.
Ref: 18 AAC 50.065 & Condition 74 of Fort Wainwright's permit.

Air Quality Advisory Link

Activities that generate excessive amounts of dust are often viewed as a nuisance. Alaska regulations requires anyone engaging in an activity that will generate excessive amounts of dust to take *reasonable precautions to prevent particulate matter from being emitted into the ambient air.* Ref: 18 AAC 50.045 & Condition 70 Fort Wainwright's permit.

Personnel who handle refrigerants or service refrigeration equipment must be aware of the Environmental Protection Agency's rules governing refrigerants (i.e. ozone depleting compounds or substances). This work typically requires a certified technician. And venting refrigerant into the atmosphere is strictly prohibited. Ref: 40 CFR Part 82 & Condition 59 of Fort Wainwright's permit.

Note: please contact PWE for additional information, clarification, and possible exceptions to the regulatory policy.

4.9 Storm Water

All storm water runoff from FWA goes untreated (unlike water that enters the sanitary sewer system). When it rains or the snow melts, oil, antifreeze, detergents, pesticides, pet waste, grass clippings, and other pollutants get washed from driveways, backyards, parking lots, and streets into storm drains or ditches. The drains and ditches direct storm water to swales leading to the Chena River.

It is critical that we all do our part in preventing pollutants from entering the storm water system. Polluted runoff is the nation's greatest threat to clean water. At FWA, we have three (3) different permits that regulate storm water discharges: the Construction General Permit (CGP); the Multi-Sector General Permit (MSGP); and the Municipal Separate Storm Sewer System (MS4) Permit.

Construction Activities (Contractors)

This CGP managed by the state and must be obtained by any construction project that disturbs one acre or more. For each GCP, a storm water pollution prevention plan (SWPPP) must be developed

and be site specific. The requirements of the plan are clearly identified within the CGP and must show what engineering controls the contactor has put in place to ensure that sediment is managed on a site and what actions will be taken if sediment leaves the site. It also must address management of all other potential pollutants on the project site (fuels, oils, solvents, etc.). A permit must be obtained by the prime contractor and/or the entity responsible for making changes to the project plans. All SWPPPs must be reviewed and approved by the PWE Water Program Manager BEFORE a notification of intent (NOI) is filed with the state.

Additionally, all projects smaller than one acre that still have the potential to impact stormwater discharges must complete an Erosion and Sediment Control Plan (ESCP). A copy of the ESCP Form B is available at PWE

Multi-Sector General Permit (Mission Support Activities)

A majority of the facilities that support airfield operations and military vehicle maintenance are covered under our MSGP program. Specific activities (refueling aircraft, washing vehicles, repairing equipment, deicing airplanes), as defined by the EPA, fall under this program because of the HAZMAT involved and the potential for it to be released to storm water. Key individuals at these facilities are trained to understand the regulatory requirements and their specific role in protecting our waterways. For specific details on which buildings are included, sampling and monitoring requirements, and what you can do to help, contact PWE.

Municipal Separate Storm Sewer System Permit

As with every small community, each individual has a responsibility to make sure that waste gets disposed of correctly and that we protect all streams, creeks and waterways.

Everybody on FWA is responsible for protecting storm water. Here are a few common ways that you can help:

- Keep your vehicle free of leaks and spills
- Clean up after your pet
- Practice safe lawn and garden habits
- Properly dispose of hazardous materials and waste
- Report all hazardous material and waste spills

For more details about storm water and what you can do to help, visit http://dec.alaska.gov/water/wnpspc/stormwater/sw_municipal.htm.

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5. Environmental Conservation Section

The Environmental Conservation Section is responsible for the sound management and protection of FWA's environmental resources. As administrator of these lands, the Army is obligated to be a good steward and manage these lands and resources in support of the military mission. Forest, wetlands, migratory birds, and cultural resources management are major components of FWA's Environmental Conservation Programs.

5.1 Wetlands Management

Wetlands provide essential breeding, spawning, nesting and wintering habitats for a major portion of Alaska's fish and wildlife species. Wetlands also protect the quality of surface waters by hindering the erosive forces of moving water and by trapping sediments and pollutants. Wetlands are critical in buffering and sustaining connectivity within and between watersheds and facilitating the transport, availability, and purity of potable groundwater sources. Wetlands aid in the prevention of flooding and other natural processes which may threaten human lives and property.

Wetlands are of critical importance to a myriad of living resources. They provide essential breeding, spawning, nesting and wintering habitats for a major portion of the nation's fish and wildlife species. Wetlands also protect the quality of surface waters by hindering the erosive forces of moving water and by trapping sediments and pollutants. Wetlands are critical in buffering and sustaining connectivity within and between watersheds and facilitating the transport, availability, and purity of potable groundwater sources. Wetlands aid in the prevention of

flooding and other natural processes which may threaten human lives and property. Wetlands provide critical habitat and support the highest vegetative diversity of any other habitat type.

The Clean Water Act of 1972 protects wetlands from filling and dredging. Filling, or impeding the function of wetlands on FWA could result in fines and penalties to the Army. FWA policy is to protect existing wetlands by avoiding impacts and rehabilitate or mitigate for damaged wetlands when avoidance is not possible.

Environmental Conservation staff support project planning for actions that will occur within training and operational areas where wetlands may be temporarily or permanently affected, either directly or indirectly. When direct or indirect impacts are not avoidable, staff can assist in wetland mitigation and restoration.

5.2 Forest Management

Maintaining good forest health to support Army training is the primary objective of the FWA forestry management program. The FWA Integrated Natural Resource Management Plan sets the policy, procedures and responsibilities for the conservation, management and restoration of renewable natural resources.

FWA contains a rich diversity of trees and plants that are crucial to the health and welfare of the natural ecosystem that provides the missionscape to support diversified training. Extra care should be given during cross-country training to avoid mechanical damage to tree trunks and roots. Live trees greater than 6 inches in diameter shall not be cut or damaged during training. Destruction of trees and vegetation should be avoided unless required to achieve training objectives and should never be carried out without concurrence from the DPW Environmental Conservation Office.

FWA makes available commercial and personal-use wood cutting permits. Commercial sales focus on project sites in support of training. Commercial sale units can be purchased by contacting PWE. Personal-use firewood cutting permits are issued by PWE through the USARTRAK website at https://usartrak.isportsman.net/woodcutting.aspx.

As a part of wildland fire prevention, missionscaping, and maintaining good forest health, PWE and Integrated Training Area Management (ITAM) conduct prescribed burns and other wildland fire mitigation practices in conjunction with the Bureau of Land Management. For more information on forest management, contact PWE.

5.3 Outdoor Recreation

FWA provides opportunities for a variety of recreational activities including: hunting, trapping, fishing, wood cutting, camping, hiking and wildlife viewing that may conflict with Army training. Only designated portions of FWA may be used for recreation purposes.

Recreation access is authorized only after the individual obtains a Recreation Access Permit (RAP) on the USARTRAK website at https://usartrak/isportsman.net. The RAP is required by everyone 16 years of age or older. RAP holders must check in the day before or the day of their outing for up to 14 days. Check in can be done by phone at 1-877-250-9781 or on the USARTRAK website.

In addition to the RAP, people who wish to cut firewood, bear bait, or trap must acquire special permits on USARTRAK for these activities. The Public Affairs Office coordinates access for external group recreational requests on FWA. Designated impact areas are off-limits for all activities except those associated with military training.

Hunting, fishing and trapping are described and regulated through state hunting and fishing regulations. Seasonal licenses and other requirements are published by the ADF&G and can be found online at http://www.adfg.alaska.gov/.

For additional information contact the FWA Outdoor Recreation Center at 361-6349.

Recreation Regulations

USARTRAK

5.4 Cultural Resources Management

Humans have been utilizing Fort Wainwright-managed lands for over 14,000 years. The resulting cultural resources left behind by these people are now identified and managed by the PWE Cultural Resources Management program in compliance with Federal laws and Army regulations. The CRM program supports the Army mission by investigating and protecting archaeological sites; promoting the preservation, conferring on the maintenance, and encouraging adaptive reuse of historic buildings; and consulting with traditional users regarding culturally significant sites on lands the Army manages.

Ground disturbing activities, military training, and facility construction and maintenance represent potential threats to cultural resources and must be managed in compliance with the Integrated Cultural Resources Management Plan (ICRMP). CRM staff work closely with Range Control, ITAM, Mastering Planning, and Engineering personnel to ensure training and facility development occurs in compliance with CRM regulations.

There are over 700 known archaeological sites and 6 archaeological districts on the Army's 1.6 million acres.

Archaeological surveys by qualified staff must be undertaken whenever projects or training activities include ground disturbance. Archaeologists evaluate the significance of found sites and investigate their context and structure to piece together prehistoric lifeways. Personnel can assist with the management of these sites and prevent damage by observing Range Control direction for avoidance and by conveying discoveries of artifacts to CR staff with GPS coordinates when possible. The removal of artifacts from FWA lands is prohibited and punishable by fines and imprisonment in accordance with the Archaeological Resources Protection Act.

Fort Wainwright is home to 36 historic structures and 2 historic districts, the Ladd Field National Historic Landmark and Ladd Air Force Base Cold War Historic District, which are included on or eligible for inclusion on the National Register of Historic Places. Projects impacting historic buildings or districts require environmental review. Unauthorized work can result in costly mitigation, project delays, and enforcement action by regulators and stakeholders concerned with Fort Wainwright's history.

5.5 Fish and Wildlife Management

It is FWA's intention to avoid conflicts between military training and wildlife. USARAK Regulation 350-2 prohibits Soldiers from intentionally targeting fish and wildlife when conducting firing activities, and from harassing fish and wildlife during their maneuver activities. Contact PWE for questions about laws and regulations. Do not feed wildlife. Secure all food waste, including food wrappers and used cooking oil, from wildlife.

Birds

It is illegal to deliberately kill birds or destroy active nests containing eggs or juveniles in them. Once eggs are laid, nests can only be moved or destroyed under a take permit. Incidental Take of Migratory Birds is permitted during Military Readiness activities; Intentional Take is not. If incidental take occurs during a military readiness activity it should be reported to PWE.

Keep 660 feet (~200 meters) in all directions away from active eagle nests. It is illegal to destroy eagle nests without a permit.

If sandhill cranes are present in the Delta River area of Donnelly Training Area from 25 April – 15 May and 1 – 30 September, contact PWE before commencing activities.

Fish

Essential Fish Habitat Consultation with NMFS and a permit from ADF&G may be needed before changing the flow or bed of a stream that has resident or anadromous fish, (a permit from the Army Corps of Engineers may also be needed if placing fill into a stream). An anadromous stream is a stream that has fish that use both salt and fresh water, such as salmon. Please contact the PWE for more details.

Bison

Do not conduct activities or operations within 500 meters of any bison during any time of year to minimize the impacts on bison.

Caribou

Do not conduct indirect fire or bombing operations within 8000 meters of caribou from 1 May – 31 May.

Moose

Moose cows are especially protective of their calves, particularly right after calving in May or June, and can potentially be very dangerous. Attacks are rare, but do happen. Avoid moose and give them plenty of space. If encountered on a trail or in the field, make a wide detour around it. If you are unable to detour, wait until it leaves the area. If a moose appears curious or stressed, leave the area immediately, or run.

When a moose charges, it is a good idea to run away because they often won't chase you very far. Get under or behind something solid. If a moose knocks you down it may continue running or start stomping and kicking with all four feet. Curl up in a ball, protect your head with your hands, and hold still. Don't move or try to get up until the moose moves a safe distance away or it may renew its attack.

Bears

Both black and brown bears occur on FWA lands. When working in bear country, pay attention to your surroundings for signs of bear including scat, tracks, and claw marking on trees. Make noise to let bears know where you are in the area. Travel in groups. Keep your camp clean from food waste to prevent attracting bears. Avoid preparing and consuming food in the same area you plan to sleep in.

If you make contact with a bear slowly retreat as you talk to the bear. If a bear attacks, you may need to shoot the bear or use bear spray to deter the bear.

If a **brown bear attacks defensively** and makes contact and you are unable to use a firearm or bear spray, play dead by lying flat on your stomach with legs spread wide. If you have a backpack keep it on. If a **black bear or predacious brown bear attacks**, get physical and fight back.

You may kill a bear in defense of life or property. If a bear is killed, you must notify PWE and your local ADF&G Wildlife Conservation Office or Alaska Wildlife Troopers immediately. You are required to fill out and submit a Defense of Life or Property Report Form questionnaire concerning the circumstances within 15 days to ADF&G.

Addressing Common Bear Myths – Know Your Facts!	
MYTH	FACT
Bears always avoid people.	Bears will not always try to avoid people. A bear may approach people because it is curious, testing dominance, habituated, food-conditioned or potentially predatory.
Bears are blood-thirsty animals that want to kill people.	Bear attacks are rare, but do occur for both defensive and non-defensive reasons. A bear may defend itself or may approach people because it is curious, testing dominance, habituated, food-conditioned or potentially predatory.
When a bear stands up, it is threatening.	A bear may stand on its hind legs to get a better look or to pick up your scent if it cannot tell what you are.
You should avoid making eye contact in a bear encounter.	It's important to watch the bear so you can assess the situation. In non-defensive situations, look at the bear, stand tall and maintain an air of confidence.
Climb a tree to increase the distance between you and a bear.	Both black and grizzly bears can and will climb trees.
Using ammonia or moth balls can prevent bears from getting into garbage.	Household products such as these don't work.
Women who are menstruating are in greater danger of bear attack.	There has been no evidence linking menstruating women and bear attacks, but consider used menstrual products a potential attractant and keep secure from bears.
Fight a black bear, play dead with a brown bear.	Your response should be based on the motivation of the bear. You must pay attention to the bear's behavior and know how to respond.
When you encounter a bear, lie down and play dead.	Laying down is a last resort when a defensive bear makes contact with you. It's rarely necessary.
Bears defend territories.	Bears defend space. Your goal is to give bears plenty of space.

6. National Environmental Policy Act

The Army regulation implementing the National Environmental Policy Act (NEPA) is promulgated at Title 32 Code of Federal Regulations (C.F.R.) Part 651 – Environmental Analysis of Army Actions (AR 200-2). NEPA Establishes policies and goals for the protection and enhancement of the environment. NEPA requires all federal agencies, including the Army, prepare an analysis outlining a proposed action's potential environmental impacts prior to initiating action affecting the environment.

The NEPA process allows the military to make informed decisions that take into account both potential environmental consequences and public opinion. Early NEPA analysis prevents costly delays and provides for decisions to meet mission timelines and requirements.

Always check with PWE's concerning potential NEPA requirements well in advance of a new project as some environmental analyses can take multiple years to complete.

6.1 Environmental Planning

Following a planning and decision making model as outlined in NEPA ensures that consideration is given to applicable areas of environmental concern and that the Army is incorporating mitigations to resolve environmental impacts from proposed actions. PWE staff actively advise Garrison project proponents of their responsibilities with regard to environmental compliance and sustainability. PWE also advises U.S. Army Alaska Soldiers and range personnel, tenants, and contractors regarding Army projects occurring on FWA controlled lands. The planning process generally includes the following steps:

1. Identification of the purpose and need for the proposed action,
2. Identification of reasonable alternatives to the proposed action,

3. Identification of anticipated environmental impacts from the proposed action and alternatives,
4. Identification of steps taken to avoid, minimize, or mitigate the environmental impact,
5. Issuance of a decision document outlining the alternative to be implemented and applicable mitigations.

*Input for the proposed action and alternatives is sometimes sought from interested Agencies, Alaska Native Tribes and the Public.

6.2 NEPA Review Process

The NEPA process is broken out into three levels of environmental analysis. These are:

- *Categorical Exclusion (CX):* These are categories of actions that have been determined not to have the potential for significant individual or cumulative effects on the quality
  - It should be noted that the proponent must still make oneself aware of and adhere to applicable environmental laws and regulation even if further NEPA analysis (EA/EIS) is not required. The fact that and EA/EIS may not be warranted does not relieve the proponent of their responsibilities under the law.
- *Environmental Assessment (EA):* An EA is prepared for those actions that do not fit within a CX but do not have the potential to significantly affect the quality of the human environment. An EA will result in preparation of a Finding of No Significant Impact (FNSI). A mitigated FNSI can be used to reduce environmental impacts to below the significant threshold. This process resolves potential significant environmental impacts. This level of analysis requires the EA and FNSI be released to the public and agencies for comment prior to signing the FNSI and implementing the proposed action. An EA and FNSI generally takes about one year to prepare.

- *Environmental Impact Statement (EIS):* An EIS is required where the proposed action has the potential to significantly affect the quality of the human environment. An EIS will result in a Record of Decision (ROD) announcing the decision on the proposed action (e.g., the alternative selected) to the public as well as any mitigations to resolve environmental impacts. This level of analysis requires the involvement of the public and agencies through comment periods during preliminary, draft and final stages of the analysis as well as multiple public meetings. An EIS generally takes two or more years to prepare.

6.3 Fort Wainwright NEPA Procedures

For Army actions occurring on or off Fort Wainwright controlled lands, the proponent should follow these steps to ensure compliance with NEPA:

Step 1: Before initiating work on the proposed action, the proponent should consult with PWE by either calling or submitting a Work Order Request Form to the DPW. For guidance on the Work Order Request Process, please contact 907-361-7069.

Step 2: The NEPA Office will advise the proponent on the level of analysis required and assist the proponent in development of the required NEPA documentation.

Step 3: Provide the results of the analysis, comments received, and steps taken to mitigate environmental impacts to the decision-maker for decision.

Step 4: Implement the decision and monitor the action's progress for adherence to the scope of the project. If the scope changes, reinitiate consultation with the NEPA Office to ensure environmental compliance on any potential impacts.

Step 5: Retain records of all project coordination and documentation that support the analysis and NEPA determination as part of the administrative record. Review of the administrative record is a critical component if the action is litigated.

7. Resource Use

Resource conservation is a balance between what we need to perform our jobs and live healthy, comfortable lives without being wasteful of our resources.

7.1 FWA Energy Usage

Energy conservation relies on two factors: human behavior and efficient technologies. Please make a concerted effort to reduce energy consumption both on the job and at home by turning off lights when not in use, powering down office equipment at the end of the day, and making sure no windows are open while the heat or air conditioning is on.

FWA is making a concerted effort to build its new facilities and retrofit its older facilities to ensure that technologically advanced energy systems are installed and operating as efficiently as possible in accordance with Leadership in Energy and Environmental Design standards whenever possible.

7.2 FWA Fuel Usage

Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, calls for a reduction of petroleum product consumption by 2 percent annually, to increase the total fuel consumption that is non-petroleum based by 10 percent annually, and to purchase or use plug-in hybrid vehicles when they are available at comparable prices to gas powered vehicles.

The following tips will help conserve fuel:

Reduce Idling – Turn off your engine if your vehicle will be idling in an off-street area for more than 2 minutes.

Tune Your Vehicle – A well maintained vehicle is more fuel efficient and produces less greenhouse emissions. Follow your monthly General Services Administration vehicle maintenance and oil change schedule and keep tires fully inflated.

Give Your Vehicle a Break – Carpool, share rides to meetings and combine trips whenever possible to cut down on driving time.
Travel Light – Don't haul extra weight in your vehicle. A heavier vehicle uses more gasoline.
Drive Smart – Avoid quick starts and hard stops, so slow down.
Time it Right – Leaving for work earlier in the morning or later at night will reduce fuel burned in bumper-to-bumper traffic.
Walk or Bike When You Can – Zero emissions are the best way to go and it's a good way to stay in shape.
Plug in Your Vehicle – At temperatures of 20°F or colder plug in your vehicle to conserve fuel and reduce warm-up time.

7.3 FWA Paper Usage

The following practices will help conserve paper:

- Don't print unless absolutely necessary.
- Set your computer to default to two-sided (duplex) printing.
- Use the print preview feature before printing.
- Avoid unnecessary pages by adjusting the margins.
- Share reports and other documents electronically.
- Save electronically.
- Run a sample copy and inspect before copying or printing big jobs.
- Set up desk-side paper collection and have employees sort their paper into the requisite containers by their desk.

Environmental Fact Sheets

Hazardous Material (HAZMAT)

General Information

Hazardous Material is any material, liquid or solid, that can cause harm to humans or the environment or any material that is required to have a safety data sheet (SDS). All Hazardous material must be approved to be used in the Enterprise Environmental, Safety, and Occupational Health Management Information System (EESOH-MIS) and procured through the Logistics Readiness Center's Hazardous Material Control Point (HMCP).

Potential Hazards

Improper management of Hazardous material could pose a threat to unit personnel and the environment and result in fines by the EPA and OSHA.

Handling and Disposal Procedures

Step	Procedure
1	All hazardous materials must first be requested to be used on FWA through the LRC or EESOH-MIS. If the material is authorized, it will be added to the unit's Authorized Use List and ordered through the LRC.
2	Anyone who uses hazardous material as part of their normal duties must have Hazardous Communications (HAZCOM) training. For more information on what HAZCOM training should entail contact the PWE at 361-4219.
3	Personnel responsible for hazardous material storage area should have hazardous material manager training. Hazardous material manager training is put on by the Environmental section every month. Shops that have very dangerous material or large quantities of hazardous material may have additional record keeping requirements that are spelled out in the FWA OPLAN 19-3

HAZMAT, continued

4	All hazardous material on FWA should be tracked on inventory lists and have a SDS readily available and accessible by all personnel who work in the area. See SDS section for more information on SDSs.
5	When a material is no longer needed the material should be turned back into HMCP if it is still usable. If the material is opened and NOT still usable, it can be turned into the HWC for disposal.

Hazardous Material Management Program (HMMP)

HMMP Overview

The purpose of a **Hazardous Material Management Program (HMMP)** is to integrate accountability and safe handling procedures for hazardous materials (HM) into day-to-day decision-making, planning, operations, and compliance across all Army missions, activities, and functions on an installation.

Scope of a HMMP

- Reduce or eliminate harm to human health and the environment from the use of HM and release of pollutants to the environment.
- Utilize HMMP policy and procedures to reduce risks and pollution at the source.
- Review processes to identify the need and use of hazardous materials to ensure sound mission, environmental and industrial health management practices.
- Identify training, protection, and facility requirements (for example, proper storage) and aid in identification of possible material substitutes.
- The scope of the HMMP does not specifically address munitions, pesticides, asbestos, radiological, and HM used in the treatment of patients at medical facilities or in medical protocols at medical research facilities. Separate programs currently address these areas. However, their incorporation under HMMP doctrine is a possibility as enterprise resource planning software capabilities and policies evolve. Contact DPW-Environmental for more information regarding tracking of munitions chemical, pesticides, and/or HM used at medical facilities.

General Overview of HMMP Roles and Responsibilities

Role	Responsibility
Garrison DPW	• Ensure all parties participate in the HMMP • Audit and inspect activity tenants for compliance • Advise Garrison commander on HM policies and procedures • Conduct all reporting (e.g. EPCRA)
LRC	• Manage all HM ordering, receiving, issuing, and shelf-life extensions
Activity Tenants	• Participate in the installation's HMMP and complete all required training • Maintain HM within compliance requirements

INSTALLATION MANAGEMENT COMMAND

HAZARDOUS MATERIAL MANAGEMENT PROGRAM

HMMP, continued

HAZARDOUS MATERIALS

What is a Hazardous Material?

A product that requires special management due to hazardous characteristics (Toxicity, Reactivity, Ignitability, Corrosivity (TRIC)) that could pose dangers to human health or the environment

Word clues to the hazardous nature of a product

Toxic *Reactive*

Flammable *Corrosive*

Ways to determine if a product is a hazardous material:

1. It has a Safety Data Sheet (SDS)
2. It has a National Stock Number (NSN) with an appropriate Federal Supply Class
3. It has a NSN with "Y" HIC Code in Fedlog
4. It has a label bearing one or more of the cautionary words:

Caustic	Poison
Danger	Warning
Caution	Corrosive
Flammable	Volatile

NFPA Form 704M

Information needed from the product container to obtain a SDS:

- Name of Product
- The responsible party (manufacturer, distributor, etc.)
- Part number, product code, product identifier
- National or local stock number
- Container size (unit of measure)
- Batch/lot number

SDS must match the age of the product; must be on hand for each material stored or in use; and must be available to all personnel

INSTALLATION MANAGEMENT COMMAND

HAZARDOUS MATERIAL MANAGEMENT PROGRAM

HMMP, continued

PURCHASING HAZARDOUS MATERIALS

Action	Who
Verify that a HM is approved	Supply division HMMP point of contact, any tracking system operator, environmental office, safety office, fire department
Verify that a current SDS is in the HMMP database	Supply division HMMP point of contact, any tracking system operator, environmental office, safety office, fire department
Identify activities that have a particular product	Supply division HMMP point of contact or any tracking system operator
Create a HM due-in from vendor or manufacturer	Supply division tracking system operator

Authorized Use List (AUL)

Developed and updated by the HMMP committee

Installation Authorized Use List (IAUL)

Lists HM items authorized for use by the entire installation

Unit Specific Authorized Use List (USAUL)

Lists additional HM items authorized specifically for use at your unit/activity

Per Army policy (DA Pam 710-7), all organizations that use hazardous materials on this installation must comply with AUL requirements

Purchasing HM on a government credit card is NOT authorized

- Authorization is only granted for emergency purchases or in the event that the LRC/HMCC is unable to make the purchasing action
- A GC signed authorization memorandum is required for each credit card purchase; copy is furnished to the applicable GPC oversight manager and the Environmental Assessment Team

INSTALLATION MANAGEMENT COMMAND

HAZARDOUS MATERIAL MANAGEMENT PROGRAM

HMMP, continued

Storage of Hazardous Materials

Action	Who
Extending the Shelf-life	Units receive guidance from Supervisor then report to Supply operations branch supervisor

When storing HazMat ensure they are stored properly according to the manufacturers instructions and the SDS.

NO STOCKPILING

Maintain only 7 to 15 day stock requirement

Flammable/Corrosive Locker(s):
Before selecting a location for these lockers, contact the Fire Inspector to ensure proper placement.

ED Storage Sheds:
White for Hazardous Waste
Blue for Hazardous Material

C-Sheds
Storage of Hazardous Material ONLY

Store Cylinders Properly:
- Must be Secured and protected from inclement weather
- Properly labeled, separated and protective caps in place

INSTALLATION MANAGEMENT COMMAND
HAZARDOUS MATERIAL MANAGEMENT PROGRAM

HMMP, continued

Issue and Return/Reissue of Hazardous Materials

Issue:

Action	Who
Issue HM	Supply division HMCP operators
Prepare outstanding material query	Supply division HMCP point of contact

Return/ Reissue:

Action	Who
Record disposition of HM (use, return, loss, spill)	Supply division tracking system operators
Transfer HM to waste (coordinated with HW office)	Tracking system operators and HW office

Procedures for Turn-In of Unwanted Hazardous Materials

- **Your Environmental Advisor is your first call concerning ANY Hazardous Materials questions or concerns**
- **Advisors will assist you with turn in of any excess or expired HM**
  - Advisors will set up a time to come to your location
  - Screen your materials and
  - Assist/advise on actions to be taken; re-distribute, free issue, shelf-life extension

DO NOT BRING YOUR UNWANTED HAZARDOUS MATERIALS TO THE HMCP

Installation Management Command

Hazardous Materials Management Program

HMMP, continued

SAFETY AND TRAINING

Five Environmental Principles	1. Everyone is responsible 2. Provide training 3. Aggressively prevent violations 4. Meet and exceed requirements 5. Do it right the first time

Supervisors should ensure that all personnel handling or have exposure to HM receive and are current in required training. This includes training personnel required to wear PPE in the use of the PPE, issuing the PPE, and ensuring PPE serviceability.

Environmental Compliance Officer Tasks:

- Conduct/Coordinate and document organization training
- Conduct and document internal facility inspections
- Maintain organization Environmental Program Continuity Book

Activity Tenants and Units:

- Ensure that all personnel exposed to HS in the course of their work receive proper training and ensure that proper and adequate PPE is stocked, maintained, and issued to personnel.
- Coordinate environmental and safety training with the environmental office and respective safety offices.
- Ensure that all personnel are made aware of and comply with this program.

OSHA Title 29 CFR, section 1910.1200, the 'Right to Know' Law

You have the right to know what chemicals you work with
And how to work safely with those chemicals

INSTALLATION MANAGEMENT COMMAND

Hazardous Waste Generation

General Information

Hazardous waste such as paints, solvents, gasoline (MUR), or other regulated materials must be stored in correctly labeled containers acquired from the FWA Hazardous Waste Center (HWC). However, used dirty rags contaminated with small amounts of oils (not saturated), fuel, grease, and antifreeze may be laundered for reuse. Call the FWA HWC at 356-2023 for disposal options and guidance prior to storing any kind of hazardous waste.

Potential Hazards

Hazardous wastes may be flammable and/or toxic; use the proper personal protective equipment (PPE) while handling these items.

Waste Characterization

Hazardous wastes must be turned in to the HWC for disposal and SHALL not be disposed of in trash cans.

Handling and Disposal Procedures

Step	Procedure
1	Use/Re-use absorbent rags or pads to their fullest extent without becoming saturated (dripping) during the same shift. They must be stored in a correctly labeled container at the end of each shift.
2	Place used absorbents that will be laundered into a clos- able metal container labeled “Dirty Rags” every day before COB.
3	When absorbents are no longer usable, place them in a clear plastic bag and take them to the Hazardous Waste Center in Building 3489 for disposal the same day they are generated.

Drip Pans

General Information

Leaks and spills from vehicles and equipment are a large contributor to industrial sources of storm water pollutants. Fort Wainwright prescribes and implements best management practices (BMP) to reduce or prevent pollutants in industrial storm water discharges by limiting contact of storm water with source materials (fuel, oil, chemicals, solvents, etc.). The proper placement and management of drip pans under vehicles is vital to meeting this requirement.

All drip pans shall be appropriately labeled or marked for their use by means of stenciling the words “USED OIL.” The FWA Hazardous Waste Program manager can grant approval to label the flat sheet pans under aircraft as “JP-8.” Antifreeze and other petroleum, oil, or lubricants may be placed in a Used Oil drip pan as long as the drip pan is wiped clean prior to and after each specific use. All drip pans shall be emptied as soon as the maintenance technician finishes up with the vehicle. Do not leave drip pans unattended unless an absorbent is in the bottom.

Drip Pans, continued

Potential Hazards

Vehicles and equipment that are parked in motor pools on the installation have the potential to leak fluids onto ground surfaces that may lead to the storm water system. Failure to properly use drip pans to prevent releases to the environment could lead to storm water contamination as well as violations and monetary fines by regulatory agencies.

Waste Characterization

Drip pans under vehicles may contain petroleum, oil, and lubricants referred to as POL products, water, coolant, or a mixture of all three products. Any used oil products in drip pans must be managed as USED OIL (see Used Oil fact sheet).

Handling and Disposal Procedures

Step	Procedure
1	Label all drip pans with the words "Used Oil."
2	Drip pans should be placed below engines and other potential areas of leakage on vehicles and equipment that are parked or stored outside and/or exposed to storm water.
3	Water in drip pans should be visually inspected for oil or other contaminants prior to being emptied out.
4	Do not pour oily water into USED OIL collection drums. Remove any POL from the water using a white oil-only absorbent pad until no POL sheen is visible. Water with no POL sheen can be discarded. Place used absorbent pads in the dirty POL rag container.
5	A routine inspection by the Unit Environmental Coordinator (UEC) should be conducted to ensure that drip pans are being used and kept clean. Drip pans outside should also be inspected after heavy rains.

E-Waste (Electronic Waste)

General Information

Electronic waste, e-waste, e-scrap, or Waste Electrical and Electronic Equipment describe loosely discarded, surplus, obsolete, or broken electrical or electronic devices. These products contain hazardous or toxic materials that can pollute the environment and threaten human health. Computers, laptops, monitors and peripheral equipment (i.e., keyboards, scanners, printers, cables, digital photo and music devices, DVD/VCR players) are recyclable and should not be discarded in the trash. All government-owned office electronics must be turned in according to your unit turn-in procedures for processing.

Waste Characterization

Modern electronics contain up to 60 different elements – many valuable, some hazardous, and some both. When disposed of improperly, obsolete electronics can leave behind lead, cadmium, mercury and hazardous flame retardant toxic chemicals that can contaminate the environment. Recycling of these materials (referred to as "e-cycling") involves the process of collecting, disassembling, repairing, reusing, reprocessing, or recycling any hazardous materials in an environmentally responsible manner. Electronic equipment also contains glass, plastics and chemical compounds that are highly recoverable, recyclable and reusable.

Handling and Disposal Procedures

- For government-owned obsolete electronics, take them to your supporting unit turn-in location.
- When buying new electronic products make sure they are energy efficient and Electronic Product Environmental Assessment Tool certified.
- For personal e-waste, contact the manufacturer or a local retailer for recycling instructions.

Filters – Fuel

General Information

Military fuel filters are generally used with Jet Propulsion 8 (JP-8) and diesel fuel. However, some specialty vehicles or equipment utilize MUR (gasoline).

Potential Hazards

Fuel filters have volatile organic compounds in varying levels based on the type of fuel they are used with. Refer to the fuel specific SDSs for specific hazards. Fuel filters are fuel specific and may contain benzene (a listed hazardous waste) and must be treated differently than other types of filters.

Waste Characterization

Military-type fuel filters used with JP-8 or diesel fuel are NON-REGULATED WASTE once they have been properly drained. Filters used with MUR may be HAZARDOUS WASTE. Contact the FWA HWC at 356-2023 for assistance with these filters.

Handling and Disposal Procedures

Step	Procedure
1	Used fuel filters must be drained into the appropriate container and the used filter must be placed into the 'Used Fuel Filter Container.'
2	MUR filters should be placed in a container marked "Hazardous Waste MUR Filters" and placed in the Satellite Accumulation Area or Hazardous Waste Accumulation Area.
3	Contact the FWA HWC at 356-2023 to schedule a pickup.

Filters – Oil

General Information

Metal oil filters are recyclable and should never be thrown into the dumpster.

Potential Hazards

Oil filters have volatile organic compounds in varying levels. Refer to the oil specific SDSs for specific hazards. Used oil filters that are not properly drained and thrown in the trash can release oil into the environment. Just one quart of oil can affect an area the size of three football fields and one gallon can pollute 250,000 gallons of water.

Waste Characterization

Used oil filters shall be drained in the appropriate container, and the used filter be placed in the “Used Oil Filter Container.” Used oil filters are never to be thrown in the trash.

Handling and Disposal Procedures

Empty the oil filter into the drip pan, transfer the oil into the USED OIL CONTAINER, and place the filter into the OIL FILTER CONTAINER

Light Tubes and Light Bulbs

General Information

Mercury containing light bulbs include compact fluorescent lights (CFLs), fluorescent light tubes, neon/argon lamps and high intensity discharge (HID) bulbs. HID bulbs include mercury vapor bulbs, metal halide, and high pressure sodium. All of the lights/lamps just mentioned are considered "lamps" by EPA.

Lamp waste is regulated under the Resource Conservation and Recovery Act (RCRA), Universal Waste Rule (UWR) and Subtitle C hazardous waste regulations.

Used lamps become a waste on the date the generator/handler permanently removes it from its fixtures. Unused lamps becomes a waste on the date the handler decides to discard it. Lamps that will no longer be used must be immediately placed in a waste container labeled "Universal waste - waste lamps." For proper disposal, containers must be closed, structurally sound and compatible with the contents of the lamps. The container must have no evidence of leak- age, spillage or any damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

Potential Hazards

Improper management of mercury containing light bulbs could pose a threat to unit personnel and the environment and result in fines by the Environmental Protection Agency.

Light Tubes and Light Bulbs, continued

Management Procedures

Step	Procedure
1	Locate a Hazardous Waste Accumulation Area that has a container for the type of lamp that is being disposed of. Alternatively, you can drop the lamps off at the FWA HWC.
2	If the lamp is the first waste placed in the container make sure to date the container and inspection log at that time.
3	Hazardous waste containers located in the HWAA must be moved to the HWC within 90 days.

Light fixtures must not be thrown in dumpster: both light PCB-containing ballast and bulbs should be disposed of through the FWA HWC.

Meals Ready to Eat (MRE) and Flameless Ration Heaters (FRH)

General Information

Meals Ready to Eat (MRE) contain Flameless Ration Heaters (FRHs) which consist of a plastic bag containing a piece of fiberboard and powdered magnesium or magnesium alloys along with other materials.

Potential Hazards

Powdered magnesium is a water reactive chemical. Never store MREs in closed CONEXs, MILVANs or TRICONS.

Waste Characterization

Every MRE contains a flameless ration heater (FRH) with water reactive chemicals that heat up the meal. If an individual chooses not to use the FRH to heat a meal, the individual may throw the FRH into the regular trash. This is allowable under provisions of the Household Hazardous Waste regulations. However, bulk quantities of

MRE and FRH, continued

FRHs may not be disposed of in the trash and must be turned into the FWA Hazardous Waste Center. A best management practice is to use the FRHs for their intended purpose or to collect all FRHs and turn them in to the FWA HWC.

Handling and Disposal Procedures

Step	Procedure
1	Whenever possible, use the FRH to heat the MRE.
2	All unused FRHs should be collected by the unit's Hazardous Waste Manager and turned in to the HWC.
3	All FRHs used to heat the MRE can be disposed of as solid waste.
4	All damaged FRHs should be collected by the unit's Hazardous Waste Manager and managed as a HAZARDOUS WASTE.
5	Excess cases of MREs may be turned in to Defense Logistics Agency/Disposition Services.

Pallets (Wood)

General Information

Wood pallets are reusable. If you have wood pallets in good condition, return them back to Logistics Readiness Command.

Waste Characterization

Wood pallets that are in good condition and considered usable can be reused. Contact your supply office for unwanted, reusable pallets. Broken or otherwise unusable wood pallets are disposed as SOLID WASTE. Do not throw wood pallets in dumpsters.

Handling and Disposal Procedures

Usable wood pallets should be neatly stacked and stored for reuse. Unusable pallets should be disposed of. Contact FWA Solid Waste Program Manager at 361-9195 for disposal guidance.

Unknown Materials

General Information

Every effort should be made to properly mark/label containers of hazardous substances.

Potential Hazards

Unmarked/unlabeled containers and chemicals pose a great risk to personnel and the environment. Unmarked/unlabeled containers are violations of safety and environmental regulations and may result in safety and environmental violations and fines.

Waste Characterization

Chemical identification/characterization must be made prior to proper disposal. Analytical testing of unknown materials is expensive. Every effort must be made to properly identify the contents of any unmarked/unlabeled containers to avoid this unnecessary expense. Unknown materials must be managed as a HAZARDOUS WASTE until proper identification can be made.

Handling and Disposal Procedures

Step	Procedure
1	Make every safe attempt possible to identify possible contents without putting yourself or others at risk.
2	If unable to identify the material/chemical, manage the material as a hazardous waste and contact the FWA HWC at 356-2023 for guidance.

Hazardous Waste Area Checklists

When Area is Left Unattended:

- ☐ Are the materials put away?
- ☐ Are all containers closed?
- ☐ Are flammable materials stored in a Flammable Locker?
- ☐ Are corrosive materials stored in Corrosive Locker?
- ☐ Are drip pans being used?
- ☐ Are drips and leaks cleaned up?
- ☐ Are rags and absorbents being put in appropriate containers?
- ☐ Are containers closed except when adding waste?
- ☐ Are flammable waste in metal drums, grounded, and protected from sources of ignition?
- ☐ Is the area secure?
- ☐ Are containers cleaned off?
- ☐ Store with protective caps in place.

When turned into Hazardous Waste Center:

- ☐ Does liquid waste have 10% headspace?
- ☐ Is container log signed and dated?
- ☐ Have funnels been replaced with lids?
- ☐ Are container lids closed?
- ☐ Are containers clean?

When POC or Alternate Position Has Changed:

- ☐ Do your Emergency contact list and accumulation signs have current POC and alternate with correct phone numbers?

When New Material is Acquired:

- ☐ Do you have Safety Data Sheets (SDS) for each material?
- ☐ Has your inventory been updated?

When Used:

- ☐ Are rags and debris kept out of solvent tanks?

Hazardous Waste Area Checklists, continued

Daily:

- ☐ Are all materials compatible and stored in correct locker?
- ☐ Are labels (including Hazards) easy to read?
- ☐ Are corrosive acids and corrosive bases segregated?
- ☐ Do drip pans say “used oil” and are facing outward?

Weekly:

- ☐ Have eyewash/showers near accumulation points been inspected weekly and documented?
- ☐ Has weekly inspection been done and documented?
- ☐ Are secondary containers free of spills?
- ☐ Are expired/unneeded material turned in?
- ☐ Does the label correctly reflect container contents?
- ☐ Are the spill response equipment/PPE maintained and adequate for material/waste in area?
- ☐ Are container logs accurately annotating volume/type of waste?
- ☐ Are all battery terminals taped?
- ☐ Are batteries segregated by type and by broken/intact?
- ☐ Are lamps segregated by type?
- ☐ Are compressed has cylinders segregated by hazard class?
- ☐ Tag/mark empty cylinders?

Monthly:

- ☐ Are fire extinguishers near the accumulation points charged, have the pin secured, and inspected monthly and documented
- ☐ Is spill pallet large enough for the liquid waste on it?

Quarterly:

- ☐ Are solvent tanks being used at least every 89 days?
- ☐ Have you completed and documented a spill drill?

Annually:

- ☐ Update and submit SOPs to PWE Hazardous Waste Program Manager.
- ☐ Submit updated inventory of Hazardous Material to PWE Hazardous Waste Program Manager.

Cultural Resources

General Information

The USAG FWA Cultural Resources Management Program supports the mission by ensuring the regulatory compliance of actions related to archaeological sites, historic structures, and locations of cultural significance.

Threats to FWA's Cultural Resources

Cultural resources are non-renewable and once lost they can never be replaced. Natural occurrences and human activities threaten fragile archaeological sites and historic properties. New facility construction, vegetation management, military training, recreational activities, training land fires, maintenance neglect, and vandalism all pose threats to cultural resources.

Sullivan's Roadhouse

Preservation Procedures

Step	Procedure
1	Work with Range Control or CRM staff to identify sensitive areas that should be avoided. Obey any "dig/no dig" maps.
2	Do not collect human altered objects from training lands. You may be committing a felony.
3	If sensitive areas are marked with signage, stay at least 50 meters away from the signage with vehicles or digging.
4	If cultural or paleontological material is discovered during digging, STOP all activity, secure the area, and contact Range Control and CRM staff immediately.
5	Submit work orders for facility to work to enable CRM staff review and legal compliance.
6	Before doing any self-help project on facilities, ensure the building is not historic or work will be done in accordance with the Secretary of the Interior's Treatment Guidelines.

Vegetation

Protection

Protection of native vegetation assists in the control of flooding, soil erosion, dust, water filtration, and helps maintain aesthetic values and control invasive species.

Clearing of vegetation (trees, shrubs, turn or any other surface vegetation) is limited to the construction area only as outlined on an approved site plan. All vegetation outside of the development area shall be maintained and protected from direct and/or indirect impacts of activities including, but not limited to, construction, training, and/or recreational uses. Areas to be preserved shall be protected by placing a highly visible fence around the perimeter of the area and instructing users to avoid activities that would impact the area, such as driving ATCs or other equipment, staging materials or soils used for construction or road maintenance, digging, mowing, cutting, or plowing soil and herbaceous or woody vegetation. Temporary, accidental, or incidental impacts to vegetation shall be restored to its prior condition and composition, free of invasive weeds, upon completion of site activities.

Regulations

Protection of existing vegetation, structures, equipment, utilities and improvements by military contractors is outlined in 48 Code of Federal Regulation 52.236-9. Further, Executive Order 13112, *Invasive Species,* requires all federal agencies to prevent the introduction of invasive species, to provide for their control, and to minimize economic, ecological, and human health impacts the invasive species may cause.

Noxious Weeds List

Planting

Parties needing to plant surface vegetation on FWA need to coordinate with the FWA ENV Office at 361-3551 to ensure that invasive plant species are not planted on FWA. The State of Alaska Noxious Weed List may be found at http://plants.usda.gov.

Vegetation, continued

Potential Hazards and Risks

Failure to maintain an adequate vegetative mat may lead to erosion and pollutants entering water bodies. Sediment trapped in storm drain catch basins will need to be cleaned out more often, which leads to additional costs.

- Damaged or destroyed vegetation will need to be replaced, which leads to additional cost.

Invasive species can be a threat to natural resources, impact local economies, and adversely affect the military mission.

Wetlands

Definition

Wetlands are defined as “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soil conditions.” To be classified as a wetland, the area must meet all three wetland criteria:

1. Hydrology: Soil must be saturated to the surface (within 12 inches) for at least 5% of the growing season.

2. Soils: Soils must contain unique characteristics indicating the presence of water, such as having a thick dark, organic layer, or discolorations in the soil indicating prolonged saturation.

3. Vegetation: Vegetation must be dominated by wetland species that are specifically adapted to prolonged saturation in wet soils.

Wetlands provide important ecological and economic benefits to the human, biological, and physical environment. The functions and values of wetlands include habitat for fish and wildlife, protection of water quality, support for groundwater recharge and discharge, protection from erosion into lakes and streams, stabilization of shorelines, recreation space, and protection from flooding. It is in recognition of these functions and values that wetlands are protected by federal law.

Regulations

Protection of wetlands and waters is mandated by federal law. Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 require that any necessary discharge of fill materials into waters of the U.S., their tributaries, or wetlands

Wetlands, continued

must be authorized by the U.S. Army Corps of Engineers. Discharge of wetlands include a temporary or permanent application of fill materials, including incidental discharge, such as (but not limited to) soil, rock, dredge sediment, concrete, etc. Executive Order 11990 requires a finding of No Practical Alternative for all construction activity in a wetland regardless of jurisdictional status.

Clearing of vegetation (trees, shrubs, turf or any other surface vegetation) above the soil surface is not regulated by the Act, but is limited to the construction area only as outlined on an approved site plan. All vegetation outside of the development area shall be maintained and protected from direct and/or indirect impacts of activities including but not limited to construction, training, and/or recreational uses. Temporary, accidental, or incidental impacts to wetlands shall be restored to their prior condition-including topographical elevation, slope, aspect, and contour and free of invasive weeds, upon completion of site activities.

Project Planning

Projects that are unable to avoid wetland impacts will be required to have a wetland delineation and functional assessment performed by a qualified wetland scientist, have a Jurisdictional Determination completed by the Corps of Engineers, demonstrate all efforts to avoid and minimize direct and indirect temporary and permanent impacts to wetlands, and provide a plan for mitigating the effect of the project on wetlands, including provision of compensatory wetland mitigation if required. Parties with concerns regarding project impacts to wetlands on FWA need to coordinate with the FWA ENV Office at 361-9686, for guidance on project planning around wetlands on FWA.

Potential Hazards and Risks

Failure to protect wetlands may lead to erosion and pollutants entering water bodies, loss of critical plant and animal habitat, damage from flooding, and/or loss of public values; in addition to potential action by the U.S. Environmental Protection Agency for Clean Water Act violations.

Damaged or destroyed wetlands may be subject to legal action by the U.S. EPA. Avoidable impacts may require restoration, will need to be replaced, which leads to additional cost.

Table 1. Unit Chart.

American Linear Units		American to Metric Units		American Capacity	
12 inches (in)	1 foot (ft)	1 inch	2.540 centimeters	8 fluid ounces	1 cup
3 feet	1 yard (yd)	1 foot	0.305 meter	16 fluid ounces	2 cups
36 inches	1 yard	1 yard	0.914 meter	2 cups	1 pint (pt)
63,360 inches	1 mile (mi)	1 mile	1.609 kilometer	16 fluid ounces	1 pint
5,280 feet	1 mile	1 gallon	3.785 liters	2 pints	1 quart (qt)
1,760 yard	1 mile	1 quart	0.95 liter	4 quarts	1 gallon
Weight and Mass		1 pound	0.45 kilogram	8 pints	1 gallon
1 Ton (T)	2,000 pounds	1 ounce	28.35 grams (g)	32 fluid ounces	1 quart
1 pound (lb)	16 ounces (oz)	1 fluid ounce	29.57 mL	8 fluid ounces	1 fluid ounce
1 ton	32,000 ounces	1 gram	0.035 ounce (oz)	3 teaspoons (tsp)	1 tablespoon
1 metric ton (t)	2,000 kilogram	1 teaspoon (tsp)	5 mL	6 teaspoons	1 fluid ounce
16 grams	1 pound	1 fluid ounce	6 mL	2 tablespoons (tbsp)	1 fluid ounce
Converting American Units		1 tablespoon (tbsp)	15 mL	1 tbsp (gill)	1 teaspoon
Larger unit + smaller unit	Multiply	1 pint (pt)	500 mL (approx)	16 tbsp	1 fluid ounce
Smaller unit + larger unit	Divide	1 quart (qt)	1000 mL (1 liter)	48 tbsp	1 teaspoon
		1 pound (lb)	450 grams	16 ounces	1 fluid ounce

Metric Units											
meter (M)	*	*	kilo (K)	hector (H)	deka (Da)	Unit (Unit)	deci (d)	centi (c)	milli (m)	*	*	micro (mi)

When going from smaller units to larger units move decimal to the right

When going from larger units to smaller units move decimal to the left

Time		Temperature Reference		Temperature Formulas	
1 day	24 hours	40° Fahrenheit	-40° Celsius		
1 hour (hr)	60 minutes (min)	32° Fahrenheit	0° Celsius	$C = \frac{(F-32)}{1.8}$	$F = 1.8 \cdot C + 32$
1 minute	60 seconds (sec)	212° Fahrenheit	100° Celsius		
1 year	12 months (mo)	0° Fahrenheit	-17.7° Celsius		
1 week	7 days	0° Celsius	32° Fahrenheit		
1000 seconds	1 hour	20° Celsius	68° Fahrenheit		
Stones		30° Fahrenheit	-1.1° Celsius	**Medical Application (Micrograms)**	
1 stone (st)	14 lb	100° Fahrenheit	37.7° Celsius	1,000,000 micrograms (mcg)	1 gram
				1,000,000 micrograms	1 kilogram (kg)

Table 2. Unit Conversion Chart.

ENGLISH TO METRIC CONVERSION TABLE					
MULTIPLY	BY	TO GET	MULTIPLY	BY	TO GET
acres	0.404 687 3	hectares	ounce(force)	0.278 013 9	newtons=N
board feet	0.002 359 74	cubic meter	pint(liq.)	0.473 176	liters=l
cubic ft.	0.028 316 85	cubic meter	pint(dry)	0.550 61	liters=l
cubic yd.	0.764 554 9	cubic meter	pound(wt.)	0.453 592 37	kilogram
feet	0.304 8	meters	pound(force)	4.448 222	newtons=N
footcandles	10.763 91	lux=lumens/m^2	pound/sq.ft	47.880 26	pascal=N/m^2
ft.-lb_f	1.355 818	N·m=joule	pound/sq.in	6.894 757	kilopascals
gallon (US)	3.785 412	liters	quart(liq.)	0.946 352 9	liters
horsepower*	745.699 9	watt=J/sec	sq. feet	0.092 903 04	sq. meter
* horsepower=550 ft-lb_f/sec			sq. in.	645.16	sq. mm
inch	25.4	millimeters	sq. mile	258.998 8	hectares
inch-pound$_f$	0.112 984 8	N·m=joule	sq. mile	2.589 988	sq. km
kips	4.448 222	kilonewton	sq. yard	0.836 127 4	sq. meter
kips/in^2	6.894 757	megapascal	ton(short)	0.907 184 7	metric ton
miles (US)	1.609 347	kilometer	ton(short)	907.184 7	kilogram=kg
ounce (wt.)	28.349 52	grams	ton(short)	8896.444	newtons=N
ounce(liq.)	29.573 53	ml	yards	0.914 4	meters=m

Used with Permission from Kelly & Hays Electrical Supply.

Table 4. Wind Chill Chart

Wind Chill Chart

Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Calm																		
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Table 5. Alaskan Tree Key

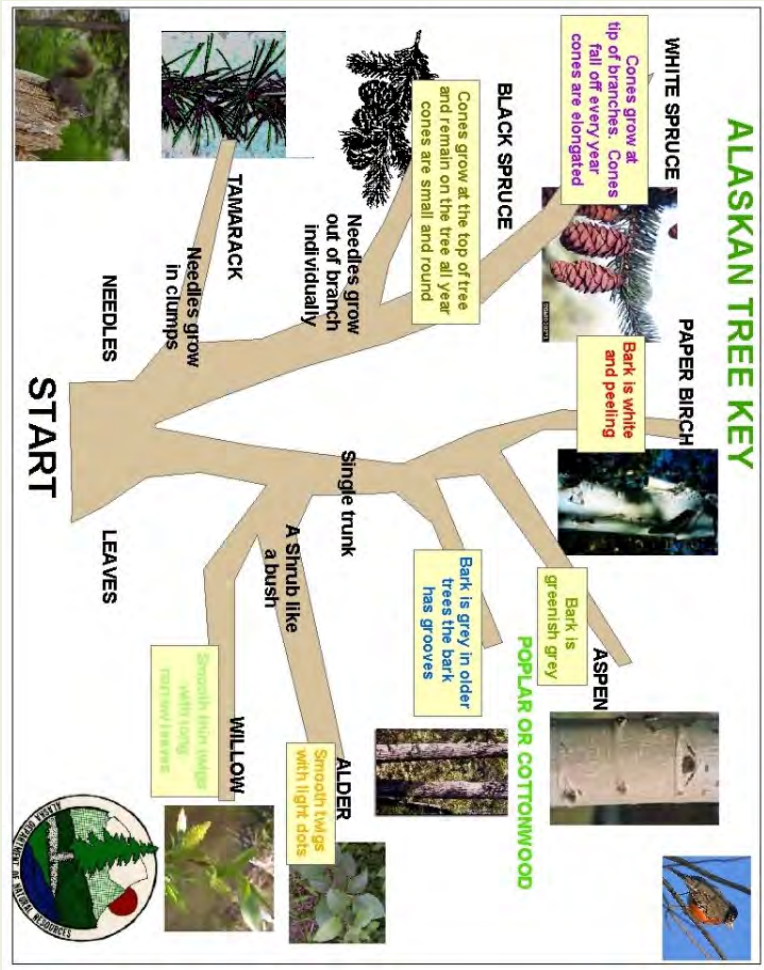


Table 6. Firewood BTU Comparison Chart.

Firewood BTU Comparison Charts			
Common Name	**Species Name**	**Pounds/Cord**	**MBTU/Cord**
Birch, White (Paper)	Betula papyrifera	3,230	20
Tamarack (Larch)	Larix laricina	3,145	19.5
Pine, Lodgepole	Pinus contora latifola	2,465	15.3
Hemlock	Pinaceae tsua	2,465	15.3
Spruce, Black	Picea mariana	2,465	15.3
Sitka Spruce	Picea sitchensis	2,380	14.8
Alder, Red	Alnus rubra	2,380	14.8
Willow	Salix	2,295	14.2
Aspen, American (Poplar)	Populus tremuloides	2,210	13.7
Cottonwood (Poplar)	Populus trichorpa	2,040	12.6

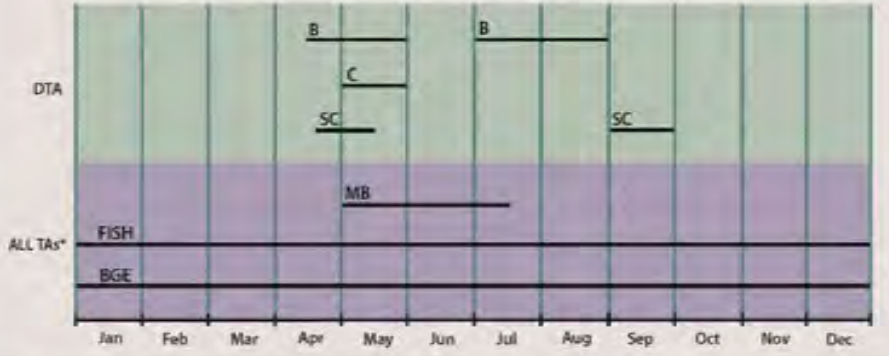
Weight and Heat content figures are based on seasoned wood at 20% moisture content, as 85 cu. Ft. of wood per cord. A cord of wood is defined as a stack 4 ft. high, 4 ft. deep and 8 ft. long, which comes to 128 cu. ft., but air space from between wood pieces is deducted.

MBTU – one million British thermal units

Compiled from data found at http://www.chimneysweeponline.com

Table 7. Wildlife Concerns on Army Training Table.

Wildlife Concerns on Army Training



MB - Migratory Birds: consultation with DPW Environmental required.

SC - Sandhill Crane Roosting Area: consultation with DPW Environmental and Alaska Department of Fish & Game required prior to conducting military activities (25 April - 15 May, 1 - 30 September).

B - Delta Bison Area: if bison are within 500 meters for activities and opeations and 2 kilometers for indirect fire, military activities are not permitted year round. Consultation with DPW Environmental and Alaska Department of Fish & Game required during restricted timeframes.

C - Delta Caribou Calving and Post-Calving Areas: if caribou are present consultation with DPW Environmental is required during restricted time frame. No indirect fire or bombing permitted within 8 kilometers of caribou year round.

FISH - Consultation with DPW Environmental and Alaska Department of Fish & Game required for water crossing and use.

BGE - Bald and Golden Eagles: activities must be suspended when within 660ft (in all directions) of Bald and Golden Eagle Nests.

*All TAs include: PWA, YTA, TFTA, DTA, BRTA, WCTA, and GFTA

For questions regarding nest locations and consultation, contact the DPW ENV Office: 361-9686.

Table 8. Commonly Issued Permits.

Alaska Construction General Permit*	7 days
Storm Water Pollution Prevention Plan	7 days
Dig Permit	7-21 days
Field Screening Plan	7 days
ENV Work Plan/Sampling Analyses Plan	90 days
Erosion and Sediment Control Plan	3-5 days
Temporary Water Use Permit	7-10 days
Gray Water Disposal	Contact DPW ENV
Individual Permit (Wetland)	30 days
Regional General Permit (Wetland)	30-45 days
National Wide Permit (Wetland)	30-45 days
Clean Air Act Title V Permit Modification	90 days
Clean Air Act Minor Permit	4 months
Clean Air Act Major Permit	24 months
NEPA Categorical Exclusion	1 month
NEPA Environmental Assessment	1-2 years
NEPA Environmental Impact Statement	3 years

*Storm Water Pollution Prevention Plan (SWPPP) must be completed before permit application.

Table 9. Black Bear Identification.

Table 10. Brown Bear Identification.

Table 11. Dall Sheep Identification.

Table 12. Moose Identification.

Table 13. Caribou Identification.

Table 14. Plains Bison Identification.

Acronyms

ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AR	Army Regulation
CAA	Clean Air Act
CATEX	Categorical Exclusion
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
DoD	Department of Defense
DPW	Directorate of Public Works
DLA	Defense Logistics Agency
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ENV	Environmental
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
FNSI	Finding of No Significant Impact
FRH	Flameless Ration Heater
FWA	Fort Wainwright, Alaska
HAZMAT	Hazardous Material
HW	Hazardous Waste
HWC	Hazardous Waste Center
ITAM	Integrated Training Area Management Plan
LUC	Land Use Controls
MRE	Meals Ready to Eat
NEPA	National Environmental Policy Act of 1969
ODPCP	Oil Discharge Prevention and Contingency Plan
P2	Pollution Prevention
POL	Petroleum, Oil and Lubricants
PPE	Personnel Protective Equipment
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
ROD	Record of Decision
SDS	Safety Data Sheet
SPCC	Spill Prevention, Control, and Countermeasures
SWPPP	Storm Water Pollution Prevention Plan
USF&WS	U.S. Fish and Wildlife Service

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