

4.0 ENVIRONMENTAL CONSEQUENCES.....	4-1		
4.1 INTRODUCTION.....	4-1		
4.2 NO-ACTION ALTERNATIVE	4-2		
4.2.1 AIR QUALITY.....	4-3		
4.2.2 AIRSPACE	4-9		
4.2.3 BIOLOGICAL RESOURCES	4-14		
4.2.4 CULTURAL RESOURCES	4-21		
4.2.5 GEOLOGY AND SOILS	4-27		
4.2.6 HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT.....	4-32		
4.2.7 HEALTH AND SAFETY	4-39		
4.2.8 LAND USE AND AESTHETICS	4-44		
4.2.9 NOISE.....	4-50		
4.2.10 SOCIOECONOMICS	4-57		
4.2.11 TRANSPORTATION.....	4-61		
4.2.12 UTILITIES	4-67		
4.2.13 WATER RESOURCES	4-73		
4.2.14 ENVIRONMENTAL JUSTICE	4-79		
4.2.15 SUBSISTENCE.....	4-83		
4.3 PROPOSED ACTION	4-86		
4.3.1 GROUND-BASED INTERCEPTOR.....	4-86		
4.3.1.1 Air Quality	4-88		
4.3.1.2 Biological Resources	4-109		
4.3.1.3 Cultural Resources	4-123		
4.3.1.4 Geology and Soils	4-132		
4.3.1.5 Hazardous Materials and Hazardous Waste Management	4-138		
4.3.1.6 Health and Safety	4-161		
4.3.1.7 Land Use and Aesthetics.....	4-180		
4.3.1.8 Noise.....	4-189		
4.3.1.9 Socioeconomics.....	4-202		
4.3.1.10 Transportation	4-222		
4.3.1.11 Utilities	4-232		
4.3.1.12 Water Resources.....	4-243		
4.3.1.13 Environmental Justice.....	4-254		
4.3.1.14 Subsistence.....	4-258		
4.3.2 BMC2	4-261		
4.3.3 IFICS DATA TERMINAL	4-263		
4.3.3.1 Air Quality	4-264		
4.3.3.2 Biological Resources	4-267		
4.3.3.3 Cultural Resources	4-270		
4.3.3.4 Geology and Soils	4-272		
4.3.3.5 Hazardous Materials and Hazardous Waste Management	4-273		
4.3.3.6 Health and Safety.....	4-276		
4.3.3.7 Land Use and Aesthetics	4-278		
4.3.3.8 Noise	4-280		
4.3.3.9 Water Resources	4-282		
4.3.3.10 Environmental Justice	4-284		
4.3.3.11 Subsistence	4-285		
4.3.4 X-BAND RADAR	4-286		
4.3.4.1 Air Quality.....	4-286		
4.3.4.2 Airspace.....	4-298		
4.3.4.3 Biological Resources	4-308		
4.3.4.4 Cultural Resources.....	4-321		
4.3.4.5 Geology and Soils.....	4-328		
4.3.4.6 Hazardous Materials and Hazardous Waste Management	4-333		
4.3.4.7 Health and Safety.....	4-350		
4.3.4.8 Land Use and Aesthetics	4-378		
4.3.4.9 Noise	4-385		
4.3.4.10 Socioeconomics	4-394		
4.3.4.11 Transportation.....	4-402		
4.3.4.12 Utilities	4-409		
4.3.4.13 Water Resources	4-417		
4.3.4.14 Environmental Justice	4-427		
4.3.4.15 Subsistence	4-429		
4.3.5 FIBER OPTIC CABLE LINE.....	4-430		
4.3.5.1 Alaska.....	4-433		
4.3.5.2 North Dakota	4-454		
4.4 DECOMMISSIONING AND DISPOSAL.....	4-459		
4.5 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS	4-460		
4.6 RELATIONSHIP BETWEEN LOCAL SHORT- TERM USE OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	4-462		
4.7 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES FROM IMPLEMENTATION OF THE PROPOSED ACTION	4-462		
4.8 COMPATIBILITY OF THE PROPOSED ACTION AND NO-ACTION ALTERNATIVE WITH THE OBJECTIVES OF FEDERAL, REGIONAL, STATE, AND LOCAL LAND USE PLANS, POLICIES AND CONTROLS	4-462		



4.0 Environmental Consequences

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This chapter describes the potential environmental consequences associated with each location that may be affected by the No-action Alternative and the Proposed Action, along with the identification of potential cumulative impacts and mitigation measures. Consistent with Council on Environmental Quality regulations, the scope of the analysis presented in this section was defined by the range of potential environmental impacts that would result from implementation of the No-action Alternative and the Proposed Action. Resources that have a potential for impacts were considered in the analysis to provide the decisionmakers with sufficient evidence and analysis for evaluation of potential effects of the action. For this EIS, the environment is discussed in terms of 15 resource areas. Each resource area is discussed at each location unless the proposed activities at that location would not foreseeably result in an impact. The data presented are commensurate with the importance of the potential impacts.

Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency undertakes such actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. For this EIS, potential cumulative impacts are addressed for past, present, and future actions. Future actions were identified based on review of installation and regional land use plans and discussions with installation and regional planners. Section 2.6 provides an overview of those potential future activities. Additionally, combined NMD actions, such as locating multiple elements (i.e., GBI and BMC2) at the same location were analyzed for potential cumulative impacts. However, since many of the NMD locations are geographically separated and outside the ROI from another NMD deployment action, no cumulative impacts would be expected from deployment and operation of each individual NMD element combined with another in a different state or geographical region. The exception would be in North Dakota, where several NMD elements could be deployed in close proximity to the city of Langdon, which could potentially result in cumulative impacts and is, therefore, addressed in this EIS.

This chapter provides the analysis of the No-action Alternative, or baseline conditions, and the Proposed Action, which is deployment of the NMD system. The No-action Alternative is presented first to provide the decisionmaker with a baseline in which to compare potential impacts of the Proposed Action. For the Proposed Action, potential impacts to the environment at each location are addressed under the NMD element (e.g.,

GBI, BMC2, IFICS Data Terminal, and XBR) that would be deployed at that location. For example, under the GBI element, the potential impacts at each GBI deployment alternative location are addressed by environmental resource. This format would aid the decisionmaker in reviewing and comparing the potential environmental impacts of the deployment alternatives for each NMD element.

4.2 NO-ACTION ALTERNATIVE

For the potential sites being considered for potential NMD deployment, the No-action Alternative analysis evaluates the continuation of ongoing and future planned activities at each location.

The SRMSC in North Dakota consists of the Missile Site Radar, Remote Sprint Launch Sites 1, 2, and 4, and the Perimeter Acquisition Radar. With the exception of the Perimeter Acquisition Radar, which is located at Cavalier AFS, the SRMSC is closed, and only minor caretaker activities are currently ongoing. Cavalier AFS is an active facility operated by the Air Force.

There is a potential requirement for the dismantlement or destruction of these facilities in connection with the NMD program. For planning purposes, the USASMDC is preparing an EA to examine the environmental impacts of dismantlement or destruction of some or all of the SRMSC facilities. That EA is intended to support any potential decision to undertake dismantlement or destruction, regardless of whether it is in connection with, or independent of, the NMD program.

Since no specific dismantlement or destruction requirement or schedule has been established, the No-action Alternative in this EIS analyzes the current activities at the SRMSC sites. Because potential dismantlement or destruction activity could overlap with NMD construction, however, it is addressed under cumulative impacts of the Proposed Action.

4.2.1 AIR QUALITY

Under the No-action Alternative, there would be no change to air quality at any of the potential deployment locations as a result of the NMD program. Current activities and other potential future programs that present or could present air quality concerns under the No-action Alternative are described below.

4.2.1.1 Alaska Installations

4.2.1.1.1 Clear AFS—Air Quality

Under the No-action Alternative, there would be no significant increase in air pollution emission levels in the vicinity of Clear AFS. Air quality impacts due to the operation of the new solid state radar were addressed in the *Environmental Assessment for Radar Upgrade at Clear Air Station* (U.S. Department of the Air Force, 1997), which concluded that there would be no significant air quality impacts from the construction or operation of this radar. No other air quality issues have been identified at Clear AFS. It is anticipated that Clear AFS and the surrounding area would remain in attainment for the NAAQS and the Alaska AAQS under the No-action Alternative. It is also anticipated that operations at Clear AFS will have no visibility impact on Denali National Park Class I area under the No-action Alternative.

Cumulative Impacts

No other current or future programs that could contribute to cumulative air quality impacts have been identified at Clear AFS or within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.1.1.2 Eareckson AS—Air Quality

Under the No-action Alternative, there would be no increase in air pollutant emissions at Eareckson AS. There would be no changes to the power generators. Aircraft support levels would also remain at their current levels, with no increase in incidental emissions. As such, it is anticipated that there would be no air quality impacts and no change in attainment status due to the No-action Alternative.

Cumulative Impacts

No future programs have been identified that could contribute to a cumulative impact to air quality.

Mitigation Measures

No mitigation measures would be required.

4.2.1.1.3 Eielson AFB—Air Quality

There would be no long-term impact to air quality in the vicinity of Eielson AFB due to the No-action Alternative. There would be potential short-term impacts due to planned construction projects unrelated to the NMD program. However, all construction on Eielson AFB would be conducted in accordance with applicable regulations and permits. As such, no impacts to air quality are anticipated due to planned construction at Eielson AFB. Base operations would continue at current levels with accompanying air emissions, which are incorporated in the current Title V Air Permit.

It is anticipated that the current level of base operations at Eielson AFB would not impede progress toward attainment in the Fairbanks–North Pole non-attainment area. No change of attainment status would be anticipated for Eielson AFB under the No-action Alternative.

Cumulative Impacts

Construction programs unrelated to the NMD program are currently underway or planned in the near future at Eielson AFB. If more than one project were undertaken at the same time, there is a possibility of cumulative impacts. However, each project would be conducted in accordance with applicable regulations and permits, which would take into account other planned actions. Therefore, it is anticipated that planned construction projects would not cause any long-term cumulative impacts to air quality.

Mitigation Measures

No mitigation measures would be required.

4.2.1.1.4 Fort Greely—Air Quality

Under the No-action Alternative, it is anticipated that air pollutant emissions would remain at current levels. Activity levels and types would remain at current levels or slightly reduce as a result of realignment, and resulting air emissions would also decrease from current levels. Two construction projects have been identified in the Fort Greely area in the near future. Although both of these would cause temporary localized elevations of pollutants due to fugitive dust and exhaust emissions, all construction would be conducted according to applicable regulations and permits. Potential impacts of continued operations under the No-action Alternative were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army,

1999). This EIS concluded that there would be no impact to air quality in the region as a result of activities on Fort Greely. No change in attainment status for air quality standards in the Fort Greely area would be anticipated due to the No-action Alternative.

Cumulative Impacts

The construction of new power lines from the Richardson Highway to the Alascom Microwave site would result in temporary localized elevations of fugitive dust and exhaust emission levels. However, all construction would be carried out in accordance with applicable regulations and permits, which take into account other planned actions. Therefore, it is not anticipated that this construction project would have a cumulative impact to air quality. Once completed, it is not anticipated that this project would result in an increase in emissions from operations.

Mitigation Measures

No mitigation measures would be required.

4.2.1.1.5 Yukon Training Area (Fort Wainwright)—Air Quality

Under the No-action Alternative, there would be no long-term increase in air emissions in the Yukon Training Area. Current activity levels would be maintained, and minor infrastructure upgrades and construction projects in various portions of the Yukon Training Area would be undertaken. Two of the larger planned construction projects are the clearance and expansion of Mock Airfield in the Stuart Creek Impact Area and the construction of one new urban training area in an as yet undetermined location. Both of these projected construction projects would cause temporary localized increases in PM-10 levels due to ground disturbance and temporary increases in the emission of other criteria pollutants due to exhaust from heavy construction equipment usage. These emissions would be intermittent and would cease once construction was complete. Potential impacts of continued operations under the No-action Alternative were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). This EIS concluded that there would be no impact to air quality in the region as a result of activities on the Yukon Training Area. Air quality levels would be expected to remain at current levels and as such, no change in attainment status for air quality standards would be expected due to the No-action Alternative.

Cumulative Impacts

Other than the limited construction presented above, no future programs that could contribute to cumulative air quality impacts have been identified at the Yukon Training Area.

Mitigation Measures

No mitigation measures would be required.

4.2.1.2 North Dakota Installations

4.2.1.2.1 Cavalier AFS—Air Quality

Under the No-action Alternative, there would be no project-related impacts to air quality in the Cavalier AFS ROI. However, a variety of construction projects are planned at Cavalier AFS. All construction projects would be conducted in accordance with appropriate regulations and permits and would not be anticipated to cause long-term air quality impacts. None of the construction projected would be anticipated to result in an increase of air pollutant emissions after construction has been completed or require modification to the base Title V Air Permit (Fors, B., 1999—Personal communication, March 15). No change in attainment status of the air quality standards would be anticipated due to the No-action Alternative.

Cumulative Impacts

As noted above, several construction projects are planned at Cavalier AFS. If these are conducted simultaneously, the emissions may have a cumulative effect in the construction area and the areas adjacent to the construction sites. However, since all construction will be conducted in accordance with appropriate regulations and permits, it is not anticipated that a cumulative impact would occur. The intermittent nature of the emissions would also serve to mitigate any cumulative nature of the impacts. Once construction is completed, the associated emissions would cease. No other activities or projects have been identified that would have a cumulative impact to air quality in the Cavalier AFS ROI.

Mitigation Measures

No mitigation measures would be required.

4.2.1.2.2 Grand Forks AFB—Air Quality

Under the No-action Alternative, operations at Grand Forks AFB would remain at current levels, with the majority of the activities on the base associated with the air-refueling wing.

Some construction projects planned for the area will go forward regardless of the NMD program decision. On-base planned projects include both construction and renovation of various facilities on the base. Off-base, the repairs to the city due to flood damage will continue, as will restoration efforts as a result of Devils Lake flooding. The dismantlement

of the Minuteman III missile system will continue under the No-action Alternative.

Potential air quality impacts resulting from the dismantlement of the Minuteman III missile system were addressed in the *EIS for Minuteman III Missile System Dismantlement* (U.S. Department of the Air Force, 1999). This EIS concluded that air quality impacts would be short-term and would not be significant.

All other construction projects will be conducted in accordance with appropriate permits and regulations and are not anticipated to have long-term impacts to air quality in the area. No change in the current attainment status of the region would be anticipated due to the No-action Alternative.

Cumulative Impacts

No other programs have been identified that have or would have a cumulative air quality impact under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.1.2.3 Missile Site Radar—Air Quality

No activities occur at this site other than those required to maintain the caretaker status of the facility. Representative activities include periodic grounds maintenance, security patrol checks, and minor building upkeep. The site is not manned, and air pollutant emissions are negligible.

Cumulative Impacts

No activities have been identified that would cumulatively affect air quality at this site.

Mitigation Measures

No mitigation measures would be required.

4.2.1.2.4 Remote Sprint Launch Site 1—Air Quality

Potential impacts and mitigation measures to air quality under the No-action Alternative at Remote Sprint Launch Site 1 would be similar to those described for the Missile Site Radar.

4.2.1.2.5 Remote Sprint Launch Site 2—Air Quality

Potential impacts and mitigation measures to air quality under the No-action Alternative at Remote Sprint Launch Site 2 would be similar to those described for the Missile Site Radar.

4.2.1.2.6 Remote Sprint Launch Site 4—Air Quality

Potential impacts and mitigation measures to air quality under the No-action Alternative at Remote Sprint Launch Site 4 would be similar to those described for the Missile Site Radar.

4.2.2 AIRSPACE

This section addresses the No-action Alternative for airspace at XBR deployment locations. Because no change in airspace would occur at the GBI deployment sites, no impacts to airspace would occur at those locations under either the No-action Alternative or Proposed Action. Therefore, airspace is not addressed in detail below for potential GBI deployment locations.

4.2.2.1 Alaska Installations

4.2.2.1.1 Eareckson AS—Airspace

Eareckson AS on Shemya Island is currently the site of the COBRA DANE (AN/FPS-108) phased array radar. Formerly used as a strategic warning radar, it is now used primarily for tracking objects in space. It operates in the 1,175 to 1,375 megahertz frequency band. The Western Aleutian Islands Sectional Aeronautical Chart includes a radiation hazard notice for Shemya Island, that states there is a radio frequency radiation area from surface to 4,877 meters (16,000 feet) mean sea level in an area out to 5.6 kilometers (3 nautical miles) from a radar antenna on the northwest corner of Shemya (52° 44' N 174° 05' E) on a bearing of 250° thru 028°T. For aircraft equipped with electroexplosive devices, a radio frequency radiation area exists from surface to 4,877 meters (16,000 feet) mean sea level in an area out to 114.8 kilometers (62 nautical miles) of all quadrants of Shemya. These aircraft are advised to consult the Airport Facility section of Supplement Alaska. (National Ocean Service, 1997—Western Aleutian Islands)

Potential effects on airspace use in the Western Aleutian Islands ROI from the ongoing, continued operation of this radar are discussed in the following paragraphs.

Controlled and Uncontrolled Airspace

No new special use airspace proposal, or any modification to the existing special use airspace, is necessary to accommodate the continued operation of the COBRA DANE radar. Consequently, there would be no reduction in the amount of navigable airspace in the ROI, and thus no impacts to controlled and uncontrolled airspace would result.

Special Use Airspace

There is no special use airspace in the Western Aleutian Islands airspace ROI, and the continued operation of the COBRA DANE radar would not require the assignment of new special use airspace. Consequently, there would be no impacts to special use airspace.

Military Training Routes

There are no military training routes in the ROI; therefore, there would be no impacts to these routes from the continued operation of the COBRA DANE radar.

En Route Airways and Jet Routes

No change to an existing or planned instrument flight rules minimum flight altitude, a published or special instrument procedure, or an instrument flight rules departure procedure would be required, and no change to a visual flight rules operation from a regular flight course or altitude would be required as a result of the continued operation of the COBRA DANE radar. Consequently, there would be no impact to the ROI's en route airways and jet routes.

Airports and Airfields

The continued operation of the COBRA DANE radar would not restrict access to these or any airfield or airport available for public use, and would not change any airfield/airport arrival and departure traffic flows. Consequently, there would be no impact to the ROI's airports and airfields.

Air Navigation and Communications Facilities

A VHF omni-directional range/tactical air navigation facility is located at the western end of Eareckson AS. VHF omni-directional range/tactical air navigation facility aids operate within the 108.0 to 117.95 megahertz frequency band, at a lower frequency than the COBRA DANE radar, and thus would not normally experience any interference from the continued operation of the COBRA DANE radar. Consequently, there would be no impact to the ROI's air navigation and communications facilities.

Cumulative Impacts

No other future programs or changes in activities that could contribute to cumulative airspace impacts have been identified at Eareckson AS or within the region; therefore, no cumulative airspace impacts would occur.

Mitigation Measures

No mitigation measures would be required.

4.2.2.2 North Dakota Installations

4.2.2.2.1 Cavalier AFS—Airspace

The No-action Alternative would involve the continued operation of the Perimeter Acquisition Radar at Cavalier AFS. Formerly used as a strategic warning radar, it is now used primarily for tracking objects in space. The ongoing, continued operation of this radar would have the following potential effects on airspace use in the North Dakota ROI.

Controlled and Uncontrolled Airspace

No new special use airspace proposal, or any modification to the existing special use airspace, is necessary to accommodate the continued operation of the Perimeter Acquisition Radar. Consequently, there would be no reduction in the amount of navigable airspace in the ROI, and thus no impacts to the controlled and uncontrolled airspace would result.

Special Use Airspace

The continued operation of the Perimeter Acquisition Radar would not require modification of the existing special use airspace in the ROI, nor would it require the assignment of new special use airspace. Consequently, there would be no impacts to special use airspace.

Military Training Routes

Although there is one military training route, IR678, in the ROI, the continued operation of the Perimeter Acquisition Radar would not require a change to this existing route. Therefore, there would be no impacts to military training routes.

En Route Airways and Jet Routes

No change to an existing or planned instrument flight rules minimum flight altitude, a published or special instrument procedure, or an instrument flight rules departure procedure would be required, and no change to a visual flight rules operation from a regular flight course or altitude would be required as a result of the continued operation of the Perimeter Acquisition Radar. Consequently, there would be no impact to the ROI's en route airways and jet routes.

Airports and Airfields

The continued operation of the Perimeter Acquisition Radar would not restrict access to, or affect the use of, any airfield or airport available for public use, and would not affect airfield/airport arrival and departure traffic flows. Consequently, there would be no impact to the ROI's airports and airfields.

Air Navigation and Communications Facilities

The continued operation of the Perimeter Acquisition Radar would not cause an electromagnetic effect upon the operation of any air navigation facility or the signal used by aircraft, and thus there would be no impacts to air navigation and communications facilities in the ROI.

Cumulative Impacts

No other future programs or changes in activities that could contribute to cumulative airspace impacts have been identified at Cavalier AFS or within the region; therefore, no cumulative airspace impacts would occur.

Mitigation Measures

No mitigation measures would be required.

4.2.2.2.2 Missile Site Radar—Airspace

Under the No-action Alternative, the Missile Site Radar would remain in its decommissioned state with no impacts to controlled and uncontrolled airspace, special use airspace, military training routes, en route airways and jet routes, airports and airfields, and air navigation and communications facilities. Since ongoing activities would not restrict a clear view of runways, helipads, taxiways, or traffic patterns from any airport traffic control tower; decrease airport capacity or efficiency; affect future visual flight rules or instrument flight rules traffic; or affect the usable length of an existing or planned runway, they would also not constitute an obstruction to air navigation.

Cumulative Impacts

No other future programs or changes in activities that could contribute to cumulative airspace impacts have been identified at the Missile Site Radar or within the region; therefore, no cumulative airspace impacts would occur.

Mitigation Measures

No mitigation measures would be required.

4.2.2.2.3 Remote Sprint Launch Site 1—Airspace

Potential impacts to airspace under the No-action Alternative at Remote Sprint Launch Site 1 would be similar to that described for the Missile Site Radar.

4.2.2.2.4 Remote Sprint Launch Site 2—Airspace

Potential impacts to airspace under the No-action Alternative at Remote Sprint Launch Site 2 would be similar to that described for the Missile Site Radar.

4.2.2.2.5 Remote Sprint Launch Site 4—Airspace

Potential impacts to airspace under the No-action Alternative at Remote Sprint Launch Site 4 would be similar to that described for the Missile Site Radar.

4.2.3 BIOLOGICAL RESOURCES

Under the No-action Alternative, there would be no change to the risks to biological resources at any of the potential deployment locations resulting from the NMD program. Current activities that present risks to biological resources and other potential future programs that could add to these risks under the No-action Alternative are described below. Consultation with the USFWS and NMFS is provided in section 9.0 and appendix D.

4.2.3.1 Alaska Installations

4.2.3.1.1 Clear AFS—Biological Resources

Under the No-action Alternative, there would be no increase in risks to biological resources at Clear AFS. The existing Ballistic Missile Early Warning System radar would be decommissioned in mid-2000, and the new solid-state phased array radar would become operational. Impacts from the operation of this radar were addressed in the *Environmental Assessment for Radar Upgrade, Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997), which concluded that there would be no significant impacts to biological resources from the construction or operation of this radar. Mission activities would continue to be performed under the guidelines of the *Natural Resources Plan* (U.S. Department of the Air Force, 1998).

Cumulative Impacts

No other future programs that could contribute to cumulative biological resource impacts have been identified at Clear AFS or within the region. Analysis of the continued operation of the new phased-array radar concluded that there would be no long-term impacts from EMR (U.S. Department of the Air Force, 1997—EA for Radar Upgrade, Clear Air Station, Alaska).

Mitigation Measures

No mitigation measures would be required.

4.2.3.1.2 Eareckson AS—Biological Resources

Under the No-action Alternative, current mission activities, such as monitoring space and missile activities and refueling military flights, would continue at existing levels at Eareckson AS, and no mission changes are anticipated. Analysis of the continued operation of the COBRA DANE radar concluded that there would be no long-term impacts from EMR (U.S. Department of the Air Force, 1997—Final Installation-Wide Environmental Baseline Study). Mission activities would continue to be performed under the guidelines of the *Natural Resources Plan* (U.S. Air Force, 1995)

Cumulative Impacts

No major future programs that could contribute to cumulative impacts to biological resources have been identified at Eareckson AS or within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.3.1.3 Eielson AFB—Biological Resources

Under the No-action Alternative, the 354th Fighter Wing would continue to operate, maintain, and train combat forces, and operate and maintain an air-to-ground bombing range complex at existing levels at Eielson AFB. The 168th Air Refueling Group, Alaska Air National Guard would also continue to operate aircraft. No mission changes are anticipated. Eielson AFB would continue as a cooperating agency with the USFWS in monitoring American peregrine falcon nesting along the upper Yukon River and Charley River. The current program in place to reduce bird strikes by aircraft would continue to be implemented. Mission activities would continue to be performed under the guidelines of the *Natural Resources Plan* (Eielson AFB, 1998—Integrated Natural Resources Management Plan).

Cumulative Impacts

Several construction projects are planned at Eielson AFB during the next 5 years. These projects would be performed within the base boundary and would consider the intent of the base's management plan for natural resources. No additional impacts to biological resources are anticipated. Cumulative impacts from increased activity and loss of habitat in the area would be minimal.

Mitigation Measures

No mitigation measures would be required.

4.2.3.1.4 Fort Greely—Biological Resources

Under the No-action Alternative, the Fort Greely Cantonment area will be realigned and available for reuse. According to the *Final Reuse Plan for Fort Greely* (Delta/Greely Community Coalition, 1998), the preferred reuse would consist of a private correctional facility and a variety of industrial uses within the cantonment area. The remainder of the base would operate with mission activities and levels of operation similar to those currently taking place. There is no history of military or other activities causing any major damage to wildlife habitat (U.S. Department of the Interior and U.S. Department of Defense, 1994—Fort Greely

Proposed Resource Management Plan Final EIS). Potential impacts of continued operations under the No-action Alternative were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). This EIS concluded that there would be continued impacts to vegetation, wildlife, and wetlands in the region as a result of activities on Fort Greely. However, all actions undertaken by the U.S. Army are regulated to consider impacts to the environment and to avoid them when possible. Some irretrievable impacts to vegetation would occur in areas used frequently or developed for military training (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS).

Cumulative Impacts

Cumulative impacts to wildlife from noise and human presence are difficult to assess due to the lack of long-term research information available. Noise from aircraft and off-road vehicles, bombing, and artillery firing can adversely affect certain species of wildlife. However, the effect on general populations is unknown. If bison habitat is not altered, negative impacts will remain minimal. No severe impacts to wetlands are associated with military activities to date (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS). An anticipated future project could include construction of a new power line from the Richardson Highway to the Alascom Microwave site. Environmental effects are expected to be minor.

Mitigation Measures

Surveys are currently being conducted to identify raptor habitats and nest sites, neotropical birds, and small mammals. A Bird Air Strike Hazard Program has been implemented to minimize the potential for bird/aircraft strikes (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS). The other activities planned for the area have been designed to avoid and minimize effects to wetlands and important wildlife habitat. Best Management Practices such as stabilizing fill slopes from erosion and the use of hay bales to filter sediment from storm water runoff would be implemented. (U.S. Department of the Army, 1997—EA Construct Munitions Storage Facility Bolio Lake)

4.2.3.1.5 Yukon Training Area (Fort Wainwright)—Biological Resources

Under the No-action Alternative, current mission activities at the Yukon Training Area would continue at existing levels, and no mission changes are anticipated. Guidelines for minimizing damage caused by maneuvers are provided in the *Soldier's Guide for Terrain Protection* (U.S. Army Alaska, undated). The 6th Infantry Division (Light) is part of a

Cooperative Agreement with the USFWS and Alaska Department of Fish and Game and has developed fish and wildlife management programs to improve habitat (U.S. Department of the Interior and U.S. Department of Defense, 1994—Fort Wainwright, Yukon Maneuver Area, Proposed Resource Management Plan Final EIS). Mission activities would continue to be performed under the guidelines of the Natural Resources Management Plan (U.S. Department of the Interior and U.S. Department of Defense, 1994—Fort Wainwright, Yukon Maneuver Area, Proposed Resource Management Plan Final EIS). Potential impacts of continued operations under the No-action Alternative were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). This EIS concluded that there would be continued impacts to vegetation, wildlife, and wetlands in the region as a result of activities on the Yukon Training Area. However, all actions undertaken by the U.S. Army are regulated to consider impacts to the environment and to avoid them when possible. Some irretrievable impacts to vegetation would occur in areas used frequently or developed for military training (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS).

Cumulative Impacts

Cumulative impacts to wildlife from noise and human presence are difficult to assess due to the lack of long-term research information available. Noise from aircraft and off-road vehicles, bombing, and artillery firing can adversely affect certain species of wildlife. However, the effect on general populations is unknown. If bison habitat is not altered, negative impacts will remain minimal. No severe impacts to wetlands are associated with military activities to date (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS). Anticipated future projects include extension of power lines in various portions of the training area, minor road construction, construction of a new urban training area in several potential locations, and clearing and expansion of Mock Airfield in the Stuart Creek Impact Area. Cumulative impacts would include increased activity and loss of habitat and wetlands in the area. (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS)

Mitigation Measures

Surveys are currently being conducted to identify raptor habitats and nest sites, neotropical birds, and small mammals (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS). The other activities planned for the area will be designed to avoid and minimize effects to wetlands and important wildlife habitat. Best Management Practices such as stabilizing fill slopes from erosion and the use of hay bales to filter sediment from storm water runoff would be implemented.

4.2.3.1.6 Alaska—Fiber Optic Cable Line—Biological Resources

Under the No-action Alternative, no fiber optic cable line would be required for the NMD program. Fishing and other recreational activities in the region would continue and result in minor disturbance to marine species.

Cumulative Impacts

No other future programs that could contribute to cumulative biological resources have been identified within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.3.2 North Dakota Installations

4.2.3.2.1 Cavalier AFS—Biological Resources

Under the No-action Alternative, Cavalier AFS would continue its current early warning radar mission. The facility would remain fenced, thus keeping offsite the larger wildlife that could potentially be impacted by EMR from the existing radar system. Several construction projects are planned; however, these would only result in short-term disturbances to wildlife in the area and would not impact any sensitive vegetation.

Cumulative Impacts

No other major EMR sources exist within the area. Several construction projects are planned for the next 4 years. These projects would occur within the facility's boundary and would result in short-term impacts from noise. Removal of vegetation would not result in substantial impacts to wildlife since terrestrial and aquatic habitat on-base is very limited due to prior development, and the surrounding area provides habitat for any displaced wildlife. No other future programs have been identified that could contribute to cumulative impacts to biological resources.

Mitigation Measures

No mitigation measures would be required.

4.2.3.2.2 Grand Forks AFB—Biological Resources

Under the No-action Alternative, Grand Forks AFB would continue its present mission as the air-refueling wing for the Air Mobility Command. Activities associated with this mission would result in the continuing minor disturbances caused by ongoing operations and maintenance. Activities would be in compliance with guidelines described in the *Integrated Natural Resources Management Plan* (U.S. Department of the

Air Force, 1997). No increase in impacts to vegetation or wildlife is expected.

Cumulative Impacts

Several construction projects are planned for the next 5 years, including continued flood damage restoration of the cities of Grand Forks and Devils Lake. The other projects would occur within the facility's boundary and would result in short-term impacts from noise. Removal of vegetation would not result in substantial cumulative impacts to wildlife since terrestrial and aquatic habitat on-base is very limited due to prior development. No other future programs have been identified that could contribute to cumulative impacts to biological resources.

Mitigation Measures

No mitigation measures would be required.

4.2.3.2.3 Missile Site Radar—Biological Resources

Under the No-action Alternative, the Missile Site Radar site would remain under caretaker status with no additional impacts to biological resources.

Cumulative Impacts

The Missile Site Radar is currently inactive, and no additional projects in the immediate area have been identified that would contribute to cumulative impacts to biological resources.

Mitigation Measures

No mitigation measures would be required.

4.2.3.2.4 Remote Sprint Launch Site 1—Biological Resources

Potential impacts and mitigation measures to biological resources under the No-action Alternative at Remote Sprint Launch Site 1 would be similar to those described for the Missile Site Radar.

4.2.3.2.5 Remote Sprint Launch Site 2—Biological Resources

Potential impacts and mitigation measures to biological resources under the No-action Alternative at Remote Sprint Launch Site 2 would be similar to those described for the Missile Site Radar.

4.2.3.2.6 Remote Sprint Launch Site 4—Biological Resources

Potential impacts and mitigation measures to biological resources under the No-action Alternative at Remote Sprint Launch Site 4 would be similar to those described for the Missile Site Radar.

4.2.3.2.7 North Dakota—Fiber Optic Cable Line—Biological Resources

Under the No-action Alternative, no fiber optic cable line would be required for the NMD program. Current activities would continue with no additional impacts to biological resources.

Cumulative Impacts

No additional projects in the immediate area have been identified that could result in cumulative impacts to biological resources.

Mitigation Measures

No mitigation measures would be required.

4.2.4 CULTURAL RESOURCES

4.2.4.1 Alaska Installations

4.2.4.1.1 Clear AFS—Cultural Resources

Under the No-action Alternative, cultural resources would continue to be managed at Clear AFS in accordance with the *Cultural Resources Management Plan* (Northern Land Use Research, Inc., 1995) to ensure that no effects occur on historic properties.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified at Clear AFS or within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.4.1.2 Eareckson AS—Cultural Resources

Under the No-action Alternative, cultural resources would continue to be managed at Eareckson AS on a case-by-case basis under Section 106 of the NHPA to ensure that no effects occur on historic properties. A Cultural Resources Management Plan is currently being prepared and is expected to be finalized in the near future. Upon concurrence from the Alaska SHPO, potential effects on cultural resources at Eareckson AS will be managed in accordance with the final plan.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified at Eareckson AS or within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.4.1.3 Eielson AFB—Cultural Resources

Under the No-action Alternative, cultural resources would continue to be managed at Eielson AFB on a case-by-case basis under Section 106 of the NHPA to ensure that no effects occur on historic properties. A Cultural Resources Management Plan is currently being prepared. Upon concurrence from the Alaska SHPO, potential effects on cultural resources at Eielson AFB will be managed in accordance with the final plan.

Cumulative Impacts

A number of construction and runway repair projects have been identified for Eielson AFB between 1999 and 2003. However, because there are no NRHP-listed, potentially eligible, or eligible archaeological properties or traditional cultural properties located within the boundary of the installation, no cumulative impacts on these types of resources would occur (appendix D). Locations for the construction of new facilities have not as yet been finalized. If the facilities are to be located in the vicinity of identified historic properties, additional consultation with the SHPO may be required prior to final designs.

Mitigation Measures

No mitigation measures would be required for archaeological properties or traditional cultural properties. Standard mitigation measures for potential cumulative impacts resulting from modification of, or intrusion upon, historic buildings or structures typically include recordation through HABS/HAER.

4.2.4.1.4 Fort Greely—Cultural Resources

Under the No-action Alternative, cultural resources would continue to be managed at Fort Greely in accordance with the *Historic Preservation Plan for U.S. Army Lands in Alaska* (U.S. Army Corps of Engineers, 1986) to ensure that no effects occur on historic properties.

Cumulative Impacts

Several future projects are proposed for Fort Greely. Given the potential for archaeological properties and/or traditional cultural properties to occur in the Fort Greely area, cumulative impacts could occur from ground-disturbing activities. However, any potential cumulative impacts would be minimized by adhering to the guidance provided in an Integrated Cultural Resources Management Plan currently being prepared for Fort Greely by the U.S. Army Alaska, in cooperation with the Alaska SHPO (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS). There are 26 identified historic buildings and structures at Fort Greely, all of which will be managed in accordance with the Integrated Cultural Resources Management Plan currently being prepared for Fort Greely until stipulations of the Memorandum of Agreement developed between the Army and the Alaska SHPO have been fulfilled. Once HABS Level 1 recordation of the historic buildings has been completed, no further historic preservation efforts are required; therefore, no cumulative effects are expected.

Mitigation Measures

Potential cumulative impacts on historic properties would be minimized by employing the guidance provided in the Integrated Cultural Resources Management Plan currently being prepared for Fort Greely and by fulfilling the stipulations of the Memorandum of Agreement between the Army and the Alaska SHPO.

4.2.4.1.5 Yukon Training Area (Fort Wainwright)—Cultural Resources

Under the No-action Alternative, cultural resources will continue to be managed at the Yukon Training Area in accordance with the *Historic Preservation Plan for U.S. Army Lands in Alaska* (U.S. Army Corps of Engineers, 1986) to ensure that no effects occur on historic properties.

Cumulative Impacts

Several future construction projects are proposed for the Yukon Training Area. Given the potential for archaeological properties and/or traditional cultural properties to occur in this area, cumulative impacts could occur from ground-disturbing activities. However, these would be minimized by adhering to the guidance provided in an Integrated Cultural Resources Management Plan currently being prepared for Fort Wainwright by the U.S. Army Alaska, in cooperation with the Alaska SHPO. Guidance within the Integrated Cultural Resources Management Plan encompasses the Yukon Training Area. The Yukon Training Area is a large, open terrain maneuver area with few aboveground features. Therefore, there is little likelihood for cumulative impacts to occur on historic buildings or structures. In the event that future aboveground historic properties are identified in the vicinity of new projects, additional consultation with the SHPO would be required.

Mitigation Measures

Potential cumulative impacts on historic properties would be minimized by employing the guidance provided in the Integrated Cultural Resources Management Plan currently being prepared for Fort Wainwright and the Yukon Training Area.

4.2.4.1.6 Alaska—Fiber Optic Cable Line—Cultural Resources

Under the No-action Alternative, cultural resources would continue to be managed along the fiber optic cable line route either on a case-by-case basis under Section 106 of the NHPA or in accordance with plans or agreements established by the owners of the affected parcels.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified within the general region of the fiber optic cable line.

Mitigation Measures

No mitigation measures would be required.

4.2.4.2 North Dakota Installations

4.2.4.2.1 Cavalier AFS—Cultural Resources

Under the No-action Alternative, no mission changes are anticipated. The SRMSC, including the Perimeter Acquisition Radar building and its associated structures, has been determined to be eligible for listing in the NRHP. A Cultural Resources Management Plan for the entire SRMSC is in draft form and is expected to be finalized in the near future. Upon concurrence with the SHPO, potential effects to cultural resources will be managed in accordance with the final plan. New construction, facility modification, and demolition projects planned at Cavalier AFS would be conducted in accordance with cultural resource regulations; therefore, no impacts are anticipated under the No-action Alternative at Cavalier AFS.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified at Cavalier AFS.

Mitigation Measures

No mitigation measures would be required.

4.2.4.2.2 Grand Forks AFB—Cultural Resources

Under the No-action Alternative, mission activities would continue at current levels. Building 714 is the sole potentially eligible facility on Grand Forks AFB proper, and no future projects are scheduled that would have an effect on the facility. Grand Forks AFB has developed a Cultural Resources Management Plan to guide base personnel on historic preservation issues. Therefore, no effects to historic properties are expected.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified at Grand Forks AFB.

Mitigation Measures

No mitigation measures would be required.

4.2.4.2.3 Missile Site Radar—Cultural Resources

Under the No-action Alternative, the facility would remain in caretaker status. The tactical areas of the Missile Site Radar have been determined to be eligible for listing in the NRHP. A Cultural Resources Management Plan for the entire SRMSC is in draft form and is expected to be finalized in the near future. Upon concurrence with the SHPO, potential effects to cultural resources will be managed in accordance with the final plan. However, no new construction or facility modifications have been proposed under the No-action Alternative. Therefore, no effects on historic properties are expected.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified at the Missile Site Radar.

Mitigation Measures

No mitigation measures would be required.

4.2.4.2.4 Remote Sprint Launch Site 1—Cultural Resources

Under the No-action Alternative, Remote Sprint Launch Site 1 would remain in caretaker status. The SRMSC, including Remote Sprint Launch Site 1, has been determined to be eligible for listing in the NRHP. A Cultural Resources Management Plan for the entire SRMSC is in draft form and is expected to be finalized in the near future. Upon concurrence with the SHPO, potential effects to cultural resources will be managed in accordance with the final plan. However, no new construction or facility modifications have been proposed under the No-action Alternative. Therefore, no effects on historic properties are expected.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified at Remote Sprint Launch Site 1.

Mitigation Measures

No mitigation measures would be required.

4.2.4.2.5 Remote Sprint Launch Site 2—Cultural Resources

Under the No-action Alternative, potential impacts and mitigation measures at Remote Sprint Launch Site 2 would be the same as described for Remote Sprint Launch Site 1.

4.2.4.2.6 Remote Sprint Launch Site 4—Cultural Resources

Under the No-action Alternative, potential impacts and mitigation measures at Remote Sprint Launch Site 4 would be the same as described for Remote Sprint Launch Site 1.

4.2.4.2.7 North Dakota—Fiber Optic Cable Line—Cultural Resources

Under the No-action Alternative, cultural resources would continue to be managed along the fiber optic cable line route either on a case-by-case basis under Section 106 of the NHPA or in accordance with plans or agreements established by the owners of the affected parcels.

Cumulative Impacts

No other future programs that could contribute to cumulative cultural resources impacts have been identified for the fiber optic cable line.

Mitigation Measures

No mitigation measures would be required.

4.2.5 GEOLOGY AND SOILS

4.2.5.1 Alaska Installations

4.2.5.1.1 Clear AFS—Geology and Soils

Under the No-action Alternative, the Ballistic Missile Early Warning System radar will continue to operate until mid-year 2000 when it will be replaced by the new phased array radar currently under construction. Impacts relevant to the construction and operation of the new phased array radar have been addressed in the *Environmental Assessment for Radar Upgrade at Clear Air Station, Alaska* (U.S. Department of Air Force, 1997), concluding that there will be minimal effect on geology and soils.

Cumulative Impacts

No other mission changes are anticipated at Clear AFS under the No-action Alternative, and no other major future programs to be considered for cumulative impacts would occur. In addition, no cumulative impacts were identified in the EA for upgrade of the proposed radar at Clear AFS.

Mitigation Measures

No mitigation measures would be required.

4.2.5.1.2 Eareckson AS—Geology and Soils

Under the No-action Alternative, current mission activities would continue at existing levels at Eareckson AS, and no mission changes are anticipated. Much of the landscape at Eareckson AS has already been modified from prior construction. Continued operations at Eareckson AS should have minimal effect on the geology and soils. Eareckson AS Civil Engineering uses best practices when dealing with soil-structure designs for foundation engineering on unsuitable soils, erosion control, earthquake ground shaking, storm surge, and tsunami run-up conditions.

Cumulative Impacts

Review of existing documentation shows that there are currently no major projects that may contribute to cumulative impacts. There may be some minor repairs and alterations to existing facilities.

Mitigation Measures

No mitigation measures would be required.

4.2.5.1.3 Eielson AFB—Geology and Soils

Under the No-action Alternative, current mission activities would continue at existing levels at Eielson AFB, and no mission changes are anticipated. Eielson AFB would continue to conduct minor base maintenance activities that may include some base improvement construction projects (e.g., trenching for infrastructure etc). These projects would result in minor ground-disturbing activities, which have the potential to disturb soils (including permafrost conditions) and cause minor erosion. Potential impacts of infrastructure improvements and construction of new facilities in the developed portions of Eielson AFB were addressed in the *Environmental Assessment, Omnibus Base Construction on Developed Lands* (U.S. Department of the Air Force, 1997). It was concluded in this EA that infrastructure improvements and new base construction would not impact geology and soils on Eielson AFB; therefore, no impacts to geology and soils would be expected under the No-action Alternative.

Cumulative Impacts

Potential cumulative impacts from multiple construction projects were addressed in the Omnibus Base Construction on Developed Lands EA prepared for Eielson AFB. It was determined that no cumulative impacts would result to geology and soils. In addition, Eielson AFB has implemented procedures to track potential cumulative impacts using a data base (U.S. Department of the Air Force, 1997—EA, Omnibus Base Construction on Developed Land).

Mitigation Measures

No mitigation measures would be required.

4.2.5.1.4 Fort Greely—Geology and Soils

Under the No-action Alternative, the Fort Greely cantonment area will be realigned and will be available for reuse.

The remainder of the base outside of the cantonment area would operate with similar mission activities and levels of operation. Fort Greely is a major training range. Under the No-action Alternative, there will be ground disturbance related to a wide variety of activities, including maneuvers, training, and equipment development and testing. Potential impacts of continued operations under the No-action Alternative were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). This EIS concluded that there would be no impact to geology or mineral resources on Fort Greely. However, some soil damage from vehicles, weapons, and fires may occur. In addition, some soil erosion with net soil loss and water impacts could occur near training activities. Localized long-term damage to permafrost could occur as a result of ground training and fire damage from training.

Cumulative Impacts

Cumulative impacts were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Air Force, 1999). It was concluded that activities would continue to negatively impact soils. However, impacts to soils would be identified and monitored, and areas restored when feasible. Since most of the Fort Greely cantonment area has been developed, has little open land, and is located away from the main base training areas, potential reuse activities should not contribute to cumulative impacts.

Mitigation Measures

Potential mitigation measures have been identified in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). These mitigation measures include conducting detailed soil surveys, refilling and leveling of foxholes, trench systems, tanks traps, hull-down positions, or explosive excavations; conducting vehicular stream crossings in designated areas only; and limiting cross-country vehicular travel.

For permafrost, the continuance of existing management programs, which identify and monitor permafrost areas so they can be restored when feasible, would continue to be followed.

4.2.5.1.5 Yukon Training Area (Fort Wainwright)—Geology and Soils

Activities at the Yukon Training Area would continue at similar levels of operation and mission activities under the No-action Alternative. Under the No-action Alternative, there will be ground disturbance related to a wide variety of activities that includes maneuvers, training and equipment development and testing, and aircraft operations. Potential impacts of continued operations under the No-action Alternative were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). The types of impacts expected to geology and soils described in the EIS under the No-action Alternative would be the same as described for Fort Greely.

Cumulative Impacts

Cumulative impacts at the Yukon Training Area would be similar to those described for Fort Greely.

Mitigation Measures

Mitigation measures at the Yukon Training Area under the No-action Alternative would be similar to those described for Fort Greely.

4.2.5.1.6 Alaska—Fiber Optic Cable Line—Geology and Soils

Under the No-action Alternative, there will be no other activities along the sea floor or ground route planned for the fiber optic cable line; therefore, no impacts should occur to geology and soils.

Cumulative Impacts

No other major activities that could contribute to long-term cumulative impacts have been identified along the fiber optic cable line route.

Mitigation Measures

No mitigation measures would be required.

4.2.5.2 North Dakota Installations

4.2.5.2.1 Cavalier AFS—Geology and Soils

Under the No-action Alternative, current mission activities would continue at existing levels at Cavalier AFS, and no mission changes are anticipated. Much of the landscape at Cavalier AFS has already been modified from prior construction. Continued operations at Cavalier AFS should have minimal effect on geology and soils.

Cumulative Impacts

Review of existing documentation shows that some minor construction projects may occur in the future at Cavalier AFS. However, given the disturbed nature of the site and the limited amount of ground disturbance, no cumulative impacts to geology and soils are expected.

Mitigation Measures

No mitigation measures would be required.

4.2.5.2.2 Grand Forks AFB—Geology and Soils

Under the No-action Alternative, current mission activities would continue at existing levels at Grand Forks AFB, and no mission changes are anticipated. Much of the landscape at Grand Forks AFB has already been modified from prior construction. Continued operations at Grand Forks AFB should have minimal effect on geology and soils.

Cumulative Impacts

Review of existing documentation shows that some construction projects may occur in the future at Grand Forks AFB. However, given the disturbed nature of the site and the limited amount of ground disturbance from these projects, no cumulative impacts to geology and soils are expected.

Mitigation Measures

No mitigation measures would be required.

4.2.5.2.3 Missile Site Radar—Geology and Soils

The Missile Site Radar is not operational and is under caretaker status. No activities would occur under the No-action Alternative that could contribute to potential geology and soils impacts.

Cumulative Impacts

No other projects have been identified in the region that could contribute to potential cumulative impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.5.2.4 Remote Sprint Launch Site 1—Geology and Soils

Potential impacts and mitigation measures to geology and soils under the No-action Alternative at Remote Sprint Launch Site 1 would be similar to those described for the Missile Site Radar.

4.2.5.2.5 Remote Sprint Launch Site 2—Geology and Soils

Potential impacts and mitigation measures to geology and soils under the No-action Alternative at Remote Sprint Launch Site 2 would be similar to those described for the Missile Site Radar.

4.2.5.2.6 Remote Sprint Launch Site 4—Geology and Soils

Potential impacts and mitigation measures to geology and soils under the No-action Alternative at Remote Sprint Launch Site 4 would be similar to those described for the Missile Site Radar.

4.2.5.2.7 North Dakota—Fiber Optic Cable Line—Geology and Soils

Under the No-action Alternative, the fiber optic cable line will not be laid along existing highway rights-of-way. Therefore, there will be no impact to geology and soil along the preliminary fiber optic cable line corridor.

Cumulative Impacts

No other projects have been identified in the region that could contribute to potential cumulative impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.6 HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT

Under the No-action Alternative, there would be no change to the hazardous materials and hazardous waste management activities at any of the potential deployment locations as a result of the NMD program. Current hazardous materials and hazardous waste management activities and other potential future programs that could add to management responsibility under the No-action Alternative are described in the following paragraphs.

4.2.6.1 Alaska Installations

4.2.6.1.1 Clear AFS—Hazardous Materials and Hazardous Waste Management

Potential impacts of the No-action Alternative at Clear AFS were addressed in the *Environmental Assessment for Radar Upgrade at Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997). The EA concluded that there would be no significant impact to hazardous materials and hazardous waste management activities at Clear AFS from either the continued operation of the Ballistic Missile Early Warning System radar or the proposed solid state phased-array radar currently under construction. In addition, it is expected that once the new radar becomes operational at the site and the existing radar is decommissioned, there would be a reduction in the amount of hazardous waste generated at Clear AFS. The base has appropriate hazardous materials and hazardous waste management plans in place for continued operations and will continue its remediation efforts under the IRP.

Cumulative Impacts

No other future programs that could contribute to cumulative hazardous materials and hazardous waste management impacts have been identified at Clear AFS or within the region. Analysis of the proposed operation of the new phased-array radar concluded that there would be no impacts to hazardous materials and hazardous waste management activities at Clear AFS. (U.S. Department of the Air Force, 1997—EA for Radar Upgrade at Clear Air Station, Alaska).

Mitigation Measures

No mitigation measures would be required.

4.2.6.1.2 Eareckson AS—Hazardous Materials and Hazardous Waste Management

No impacts would result from hazardous materials and hazardous waste used under the No-action Alternative at Eareckson AS. Section 3.7.1.2

provides an overview of the hazardous materials and hazardous waste activities at Eareckson AS. Under the No-action Alternative, similar activities would be expected to continue to occur at this location. Eareckson AS has the appropriate plans and procedures in place to manage hazardous materials and hazardous waste activities. The base will continue the remediation of IRP sites under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, no other programs have been identified that would contribute to hazardous materials and hazardous waste management cumulative impacts at Eareckson AS.

Mitigation Measures

No mitigation measures would be required.

4.2.6.1.3 Eielson AFB—Hazardous Materials and Hazardous Waste Management

No impacts would result from hazardous materials and hazardous waste used under the No-action Alternative at Eielson AFB. Section 3.7.1.3 provides an overview of the hazardous materials and hazardous waste activities at Eielson AFB. Under the No-action Alternative, similar activities would be expected to continue at this location. Eielson AFB has the appropriate plans and procedures in place to manage hazardous materials and hazardous waste activities. The base will continue the remediation of IRP sites under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that construction of new facilities would occur on Eielson AFB; however, there would be no change to the overall base mission that would result in the change in hazardous materials and hazardous waste management activities. The construction programs would result in a temporary increase in the use of hazardous materials and generation of hazardous waste that would be handled in accordance with appropriate Federal, state, and local regulations. In 2001, the base anticipates construction of a new hazardous waste collection facility. This facility should provide additional storage capability on the base. Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.6.1.4 Fort Greely—Hazardous Materials and Hazardous Waste Management

Under the No-action Alternative, no impacts would result from hazardous materials and hazardous waste management activities at Fort Greely. Section 3.7.1.4 provides an overview of the current hazardous materials and hazardous waste management activities at Fort Greely. Under the No-action Alternative, the Cold Regions Test Center and the Northern Warfare Training Center within the Fort Greely cantonment area would be realigned to Fort Wainwright by 2001; however, some Cold Regions Test Center activities would occur at their Bolio Lake Test Facility. The remainder of the base would continue to be used for military training activities. This realignment would reduce the amount of hazardous materials used and hazardous waste generated by military activities. Fort Greely has the appropriate plans and procedures in place to manage hazardous materials and hazardous waste activities. The base will continue the remediation of contaminated sites under the No-action Alternative.

In accordance with the BRAC Commission, the Army will dispose of surplus property made available to the public from the realignment action. Reuse of the cantonment area could include industrial, commercial, a correctional facility, and aviation support type uses. These activities could use hazardous materials and generate hazardous waste. The specific chemical compositions and the use/disposal rates are not known. Each separate organization reusing the base would be responsible for the management of these materials according to applicable regulations. Overall, no impacts would be expected from implementation of the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that minor new military construction would occur on Fort Greely. The construction programs, which consist mostly of range upgrades to infrastructure, could result in a temporary increase in the use of hazardous materials and generation of hazardous waste that would be handled in accordance with appropriate Federal, state, and local regulations. A reuse plan has been developed for the Fort Greely cantonment area. The addition of numerous separate organizations could result in an increase in the amount of hazardous materials used and hazardous waste generated depending on the reuse activities selected. The presence of numerous independent operators could result in the potential for cumulative impacts; however, hazardous materials or hazardous waste impacts would not occur because these materials would be managed in accordance with applicable regulations.

Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.6.1.5 Yukon Training Area (Fort Wainwright)—Hazardous Materials and Hazardous Waste Management

No impacts would result from hazardous materials and hazardous waste used under the No-action Alternative at the Yukon Training Area. Section 3.7.1.5 provides an overview of the hazardous materials and hazardous waste activities at the Yukon Training Area. Under the No-action Alternative, similar activities would be expected to continue at this location. The Yukon Training Area has the appropriate plans and procedures under Fort Wainwright in place to manage hazardous materials and hazardous waste activities.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that minor new construction would occur on the Yukon Training Area; however, there would be no change to the overall installation mission that would result in the change in hazardous materials and hazardous waste management activities. The construction programs, which consist mostly of range upgrades to infrastructure, could result in a temporary increase in the use of hazardous materials and generation of hazardous waste that would be handled in accordance with appropriate Federal, state, and local regulations. Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.6.2 North Dakota Installations

4.2.6.2.1 Cavalier AFS—Hazardous Materials and Hazardous Waste Management

No impacts would result from hazardous materials and hazardous waste used under the No-action Alternative at Cavalier AFS. Section 3.7.2.1 provides an overview of the hazardous materials and hazardous waste activities at Cavalier AFS. Under the No-action Alternative, similar activities would be expected to continue to occur at this location. Cavalier AFS has the appropriate plans and procedures in place to manage hazardous materials and hazardous waste activities. The base will continue the remediation of IRP sites under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that construction of new facilities and the demolition of some existing facilities would occur on Cavalier AFS; however, there would be no change to the overall base mission that would result in the change in hazardous materials and hazardous waste management activities. The construction programs would result in a temporary increase in the use of hazardous materials and generation of hazardous waste that would be handled in accordance with appropriate Federal, state, and local regulations. Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.6.2.2 Grand Forks AFB—Hazardous Materials and Hazardous Waste Management

No impacts would result from hazardous materials and hazardous waste used under the No-action Alternative. Section 3.7.2.2 provides an overview of the hazardous materials and hazardous waste activities at Grand Forks AFB. Under the No-action Alternative, similar activities would be expected to occur. Once Grand Forks AFB completes the dismantlement process of the Minuteman III system in 2001, there will be an overall reduction of hazardous materials used and hazardous waste generated at Grand Forks AFB. Grand Forks AFB has the appropriate plans and procedures in place to manage hazardous materials and hazardous waste activities. The base will continue the remediation of IRP sites under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that there would be construction of new facilities on Grand Forks AFB; however, there would be no change to the overall base mission that would result in the change in hazardous materials and hazardous waste management activities. The construction programs would result in a temporary increase in the use of hazardous materials and generation of hazardous waste that would be handled in accordance with appropriate Federal, state, and local regulations. The restoration of the city of Grand Forks and Devils Lake from flood damage would also increase the use of hazardous materials and generation of hazardous waste within the region; however, this would be handled in accordance with appropriate Federal, state, and local regulations. Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.6.2.3 Missile Site Radar—Hazardous Materials and Hazardous Waste Management

Under the No-action Alternative, no impacts would result from hazardous materials and hazardous waste activities at the Missile Site Radar. The site would continue to be maintained in caretaker status, and little hazardous materials would be used or hazardous waste generated. The Missile Site Radar has the appropriate plans and procedures in place to manage hazardous materials and hazardous waste activities. The base will continue the remediation of contaminated sites under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, no other program have been identified that would contribute to hazardous materials and hazardous waste management cumulative impacts at the Missile Site Radar.

Mitigation Measures

No mitigation measures would be required.

4.2.6.2.4 Remote Sprint Launch Site 1—Hazardous Materials and Hazardous Waste Management

Under the No-action Alternative, no impacts would result from hazardous materials and hazardous waste activities at Remote Sprint Launch Site 1. The site would continue to be maintained in caretaker status, and little hazardous materials would be used or hazardous waste generated. The appropriate plans and procedures are in place to manage hazardous materials and hazardous waste activities at this location. No contaminated sites have been identified at this location.

Cumulative Impacts

Under the No-action Alternative, no other programs have been identified that would contribute to hazardous materials and hazardous waste management cumulative impacts at Remote Sprint Launch Site 1.

Mitigation Measures

No mitigation measures would be required.

4.2.6.2.5 Remote Sprint Launch Site 2—Hazardous Materials and Hazardous Waste Management

Impacts at Remote Sprint Launch Site 2 would be similar to those described above for Remote Sprint Launch Site 1.

4.2.6.2.6 Remote Sprint Launch Site 4—Hazardous Materials and Hazardous Waste Management

Impacts at Remote Sprint Launch Site 4 would be similar to those described above for Remote Sprint Launch Site 1.

4.2.7 HEALTH AND SAFETY

Under the No-action Alternative, there would be no change to the health and safety risks at any of the potential deployment locations as a result of the NMD program. Current activities that present health and safety risks and other potential future programs that could add to these risks under the No-action Alternative are described in the following paragraphs.

4.2.7.1 Alaska Installations

4.2.7.1.1 Clear AFS—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks at Clear AFS. By the end of the year 2000, the existing Ballistic Missile Early Warning System radar would be decommissioned and the solid state phased-array radar would become operational. Impacts from the operation of this radar were addressed in the *Environmental Assessment for Radar Upgrade at Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997), which concluded that there would be no significant health and safety impacts from the construction or operation of this radar. No other health and safety issues have been identified at Clear AFS.

Cumulative Impacts

No other future programs that could contribute to cumulative health and safety impacts have been identified at Clear AFS or within the region. Analysis of the continued operation of the new phased-array radar concluded that there would be no long-term impacts from EMR (U.S. Department of the Air Force, 1997—EA for Radar Upgrade at Clear AS, Alaska).

Mitigation Measures

No mitigation measures would be required.

4.2.7.1.2 Eareckson AS—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks at Eareckson AS. The current early warning radar mission would continue to operate under the No-action Alternative. The area around the COBRA DANE radar where EMR levels exceed IEEE C95.1 personnel exposure limits is an enclosed area where unauthorized access is prohibited. The EMR from the COBRA DANE has not presented any public health and safety risks off-base because of the isolation of the island. Eareckson AS has established appropriate safety zones around explosive areas and the ends of the runways. The base maintains a health and safety plan for hazardous operations. No other health and safety issues have been identified at Eareckson AS.

Cumulative Impacts

No other future programs that could contribute to cumulative health and safety impacts have been identified at Eareckson AS or within the region. Analysis of the continued operation of the COBRA DANE radar concluded that there would be no long-term impacts from EMR.

Mitigation Measures

No mitigation measures would be required.

4.2.7.1.3 Eielson AFB—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks on Eielson AFB. The current Air Force operations that occur at the base would continue. The base has appropriate safety procedures and safety zones in place for the continued aircraft operations and associated support activities. The Air Force has a long history of working with the hydrazine fuels associated with the F-16 aircraft based on Eielson AFB and has appropriate safety procedures in place. Overall, no increase in health and safety risks is expected from continuation of activities under the No-action Alternative.

Cumulative Impacts

No other future programs that could contribute to cumulative health and safety impacts have been identified at Eielson AFB or within the region under the No-action Alternative. As discussed above, current Air Force activities only result in minimal health and safety risk to the public outside of the base and do not represent a cumulative health and safety risk.

Mitigation Measures

No mitigation measures would be required.

4.2.7.1.4 Fort Greely—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks on Fort Greely. The current Army and Air Force operations that occur at the base would continue. The Army maintains appropriate safety buffers to limit potential health and safety risks to the public. There is the potential for forest fires to be caused by military activities on the base; however, in the past none of these fires have posed significant health and safety risks because of the sparse population. Fort Greely would continue to maintain a fire department within the cantonment to provide mutual aid response to emergencies in the surrounding communities. Overall, no increase in health and safety risks is expected from continuation of activities under the No-action Alternative.

Cumulative Impacts

No other future programs that could contribute to cumulative health and safety impacts have been identified at Fort Greely or in the region under the No-action Alternative. As discussed above, current Army activities only provide a minimal cumulative health and safety risk (mainly from fires) to the public outside of the base because of the increased potential to cause fires from military activities.

Mitigation Measures

No mitigation measures would be required.

4.2.7.1.5 Yukon Training Area (Fort Wainwright)—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks on the Yukon Training Area. The current Army and Air Force operations that occur at the base would continue. The Army maintains appropriate safety buffers to limit potential health and safety risks to the public. There is the potential for forest fires to be caused by military activities on the base; however, in the past none of these fires have posed significant health and safety risks because of the sparse population in the area. Overall, no increase in health and safety risks is expected from continuation of activities under the No-action Alternative.

Cumulative Impacts

No other future programs that could contribute to cumulative health and safety impacts have been identified at the Yukon Training Area and in the region under the No-action Alternative. As discussed above, current Army activities only provide a minimal cumulative health and safety risk (mainly from fires) to the public outside of the base because of the increased potential to cause fires from military activities.

Mitigation Measures

No mitigation measures would be required.

4.2.7.2 North Dakota Installations

4.2.7.2.1 Cavalier AFS—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks at Cavalier AFS or within the region. The current early warning radar mission would continue to operate under the No-action Alternative. The Perimeter Acquisition Radar can exceed IEEE C95.1 EMR personnel exposure limits out to a distance of 120 meters (394 feet). However, the area around the radar at this distance is an enclosed area within government-controlled land that is fenced to ensure no unauthorized access occurs; therefore, there are no public health and

safety EMR risks from the continued operation of this radar. The base maintains appropriate fire protection.

Cumulative Impacts

No other future programs that could contribute to cumulative health and safety impacts have been identified at Cavalier AFS. Analysis of the continued operation of the Perimeter Acquisition Radar concluded that there would be no long-term health impacts from EMR. No other major EMR sources exist within the ROI that would contribute to cumulative effects.

Mitigation Measures

No mitigation measures would be required.

4.2.7.2.2 Grand Forks AFB—Health and Safety

Under the No-action Alternative, there would be no increase in health and safety risks on Grand Forks AFB. The current Air Force operations that occur at the base would continue. These activities consist mostly of aircraft operations associated with an air refueling wing. The base has appropriate safety procedures and safety zones in place for continued aircraft operations. Potential health and safety risks as a result of the dismantlement of the Minuteman III missile system were addressed in the *EIS for Minuteman III Missile System Dismantlement* (U.S. Department of the Air Force, 1999). This EIS concluded that there would only be short-term, insignificant impacts and no long-term impacts. Overall, no increase in health and safety risks is expected from continuation of activities under the No-action Alternative.

Cumulative Impacts

The recent dismantlement of the Minuteman III system has reduced some of the health and safety risks associated with Grand Forks AFB. No other programs on-base or within the region have the potential to add to cumulative health and safety risks. Military and civilian aircraft operations have been occurring in the area for over 30 years and appropriate safety procedures are in place. Overall, no cumulative health and safety impacts are expected.

Mitigation Measures

No mitigation measures would be required.

4.2.7.2.3 Missile Site Radar—Health and Safety

Under the No-action Alternative, no activities would occur at the Missile Site Radar other than facility maintenance. Because no activities occur at the site, there are no public health and safety risks.

Cumulative Impacts

This site is currently inactive. There are no cumulative health and safety risks under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.7.2.4 Remote Sprint Launch Site 1—Health and Safety

Potential impacts and mitigation measures to health and safety under the No-action Alternative at Remote Sprint Launch Site 1 would be similar to those described for the Missile Site Radar.

4.2.7.2.5 Remote Sprint Launch Site 2—Health and Safety

Potential impacts and mitigation measures to health and safety under the No-action Alternative at Remote Sprint Launch Site 2 would be similar to those described for the Missile Site Radar.

4.2.7.2.6 Remote Sprint Launch Site 4—Health and Safety

Potential impacts and mitigation measures to health and safety under the No-action Alternative at Remote Sprint Launch Site 4 would be similar to those described for the Missile Site Radar.

4.2.8 LAND USE AND AESTHETICS

4.2.8.1 Alaska Installations

4.2.8.1.1 Clear AFS—Land Use

Under the No-action Alternative, there is not expected to be a change in the current land use status at Clear AFS. Currently, construction of the solid state phased-array radar is underway and is to become operational by the end of the year 2000. The existing Ballistic Missile Early Warning System will be decommissioned at that time. Land use compatibility from the construction and operation of this radar is discussed in the *Environmental Assessment for Radar Upgrade at Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997). It concluded that construction and operation of the new radar would disturb less than 2 hectares (5 acres) of land and would be similar to existing activities that occur at the Technical Site. Existing operational activities would continue and the mission of the Clear AFS would remain the same. No other land use concerns have been identified at Clear AFS, and there are currently no land use or zoning conflicts with the adjacent land around Clear AFS.

Cumulative Impacts

No other future programs have been identified by Clear AFS that could contribute to cumulative land use impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.1.2 Eareckson AS—Land Use

Under the No-action Alternative, no change in the current land use status is anticipated. It will continue its mission as an early warning radar site monitoring space and missile activities. The current housing, administrative, open space, industrial, and recreation land uses that are in place are not expected to change other than minor repairs and fine-tuning of the existing uses and facilities. There are currently no zoning or land use conflicts with the adjoining areas of Eareckson AS. The continuation of existing activities at Eareckson AS would also be consistent to the maximum extent practicable with the Alaska Coastal Management Program.

Cumulative Impacts

No other future programs or projects have been identified for Eareckson AS that could contribute to cumulative land use impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.1.3 Eielson AFB—Land Use

Under the No-action Alternative, the current mission activities would continue at existing levels, and no mission changes are expected. The current housing, industrial, administrative, recreation, and open space should not change other than fine-tuning of existing uses. There are currently no zoning conflicts with the adjoining areas of Eielson AFB and only one incompatible land use, which is the community of Moose Creek that falls within the Clear and Approach Zones of the runways at the base.

Cumulative Impacts

Over the next 5 years, several upcoming projects are proposed for Eielson AFB, including construction of a consolidated munitions facility, weapons and release system shop, transportation heavy maintenance facility, Phase 2 of Supply Complex, vehicle munitions heated parking, HAZWASTE collection facility, family wellness center, aircraft support equipment facility, fuel operations facility, munitions storage/inspection facility, munitions assembly facility, fabrication flight consolidation facility, and a joint deployment processing facility. This also includes repairing the KC-135 parking ramp and the runway and the addition/alteration of the fitness center and addition of security lighting and parking apron. The majority of these projects would take place on previously disturbed land and are not expected to drastically change the land use of the base. These projects would not create any zoning or land use conflicts with the adjoining areas of the base and would not contribute to any land use or aesthetic cumulative impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.1.4 Fort Greely—Land Use

Under the No-action Alternative, some changes to the mission of Fort Greely are anticipated. This will have some effect on the land uses of Fort Greely. Most of the main cantonment area is being excessed in response to being placed on the 1995 BRAC list for realignment. A reuse plan has been developed to help guide future development on the base. Possible reuses for the excessed land include institutional, industrial, and military reuse. A self-contained medium-security correctional facility is among the many possibilities for the reuse of the base. Other potential uses are for warehousing, distribution, light manufacturing and small business development. These activities, if they occur, would take place

on previously disturbed land and utilize existing facilities and infrastructure where possible. This would change some of the land uses of the main cantonment area but would still be compatible with the previous military uses. This would affect only a small portion of total land base of Fort Greely. If this reuse does not occur, then a majority of the cantonment area would be put in caretaker status, and some of the facilities would be demolished. The West Training Area and East Training Area portions of the base will still be used for testing, training, and maneuver exercises and would not be affected by BRAC. Currently, there are no zoning or land use conflicts with the adjoining areas of Fort Greely, and there is little expectation that this will change.

Cumulative Impacts

In addition to the possible changes from the reuse of the main cantonment, there are plans to construct a new power line from the Richardson Highway to the Alascom Microwave site. This project is minor and would have little effect on land use. This project, in addition to the possible reuse and existing activities that occur on Fort Greely would not contribute to any major land use or aesthetic cumulative impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.1.5 Yukon Training Area (Fort Wainwright)—Land Use

Under the No-action Alternative, no major land use changes at the Yukon Training Area are anticipated. The land will remain relatively undeveloped and will be used for its current purposes. The Air Force Technical Applications Center in the northwest corner of the training area will continue to operate. The Stuart Creek Impact Area in the north central portion of the maneuver area will still be used by the Army and Air Force for the firing of live and practice munitions. The remainder of the Yukon Training Area will still be used as a training area and for maneuver exercises. Currently, there are no zoning or land use conflicts with the adjacent property surrounding the Yukon Training Area, and there is little expectation that this will change.

Cumulative Impacts

There are some small projects on the horizon for the Yukon Training Area, but none of these should dramatically change the current land uses of the area. These projects include the construction of minor roads and extension of power lines to various portions of the maneuver area, the construction of a new urban training site at one of several potential locations, and the clearing and expansion of the Mock Airfield within the Stuart Creek Impact Area. The existing activities on the training area in

combination with these proposed projects do not combine to create any cumulative land use and aesthetic impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.2 North Dakota Installations

4.2.8.2.1 Cavalier AFS—Land Use

Under the No-action Alternative, no change in the current land use status is anticipated. Cavalier AFS will continue its mission as part of the Spacetrack Missile Warning System. The current housing, administrative, open space, industrial, and recreation land uses that are in place are not expected to change other than fine-tuning of the existing uses. There are currently no zoning or land use conflicts with the adjoining areas of Cavalier AFS.

Cumulative Impacts

Several upcoming projects are proposed for Cavalier AFS, including: an addition to the Fitness Center, new parking lot and road, upgrade of Community Center, four new housing units, new Base Civil Engineering Self Help Center, new water treatment building, and demolition of several buildings. These projects are not expected to drastically change the land use of the base. Activities of the base combined with other potential land use issues outside the base do not combine to create any cumulative land use and aesthetic impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.2.2 Grand Forks AFB—Land Use

Under the No-action Alternative, there is no anticipation of any major land use changes at Grand Forks AFB. It will continue its mission as the air-refueling wing for the Air Mobility Command. The limited availability of land for new development limits the capability of making drastic land use changes, but rather focuses on fine tuning the existing land use. There are currently no incompatible land uses or zoning conflicts with adjoining areas of Grand Forks AFB and no changes are expected.

Cumulative Impacts

There are several new on-base facilities that are proposed for the near future. These include a new commissary, new Squadron Operations Facility, extended flightline parking ramp and a field house addition to the gym. These new facilities all occur on-base and may slightly change the

on-base land use; however, these would not create any zoning or land use conflicts with adjacent off-base property or contribute to any land use cumulative impacts.

There are two other programs occurring off-base in close proximity to Grand Forks AFB. One is the restoration of the city of Grand Forks from flood damage until 2002. The other is the continued restoration effort of Devils Lake flooding. These programs are far enough away that they will have very little effect on the land use around the base nor will it have any cumulative land use impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.2.3 Missile Site Radar—Land Use

Under the No-action Alternative, no change in the current land use status at the Missile Site Radar is expected. The entire site is currently inactive and being maintained in a caretaker status and will remain that way. The land around the Missile Site Radar is sparsely populated and there are currently no land use or zoning conflicts with the adjacent properties.

Cumulative Impacts

No other future programs have been identified for the Missile Site Radar that could contribute to cumulative land use impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.8.2.4 Remote Sprint Launch Site 1—Land Use

Under the No-action Alternative, no change in the current land use status of Remote Sprint Launch Site 1 is expected. The entire site is currently inactive and being maintained in a caretaker status and will remain that way. The land around the Remote Sprint Launch Site 1 is sparsely populated, and there are currently no land use or zoning conflicts with the adjacent properties. The surrounding land is used for agricultural purposes and is compatible with the military use of the site.

Cumulative Impacts

No other future programs that could contribute to cumulative land use and aesthetic impacts have been identified at Remote Sprint Launch Site 1 under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.8.2.5 Remote Sprint Launch Site 2—Land Use

Potential land use and aesthetic impacts at Remote Sprint Launch Site 2 under the No-action Alternative would be similar to those described for Remote Sprint Launch Site 1.

4.2.8.2.6 Remote Sprint Launch Site 4—Land Use

Potential land use and aesthetic impacts at Remote Sprint Launch Site 4 under the No-action Alternative would be similar to those described for Remote Sprint Launch Site 1.

4.2.9 NOISE

Under the No-action Alternative, there would be no change to the noise environment at any of the potential deployment locations as a result of the NMD program. The noise environment expected during the time period of the Proposed Action and other potential future programs that could effect the noise environment under the No-action Alternative are described below.

The analysis in this section is concerned with human receptors; noise effects on wildlife are discussed under Biological Resources.

4.2.9.1 Alaska Installations

4.2.9.1.1 Clear AFS—Noise

Under the No-action Alternative, no significant change in the noise environment at Clear AFS would be expected.

By the end of the year 2000, the existing Ballistic Missile Early Warning System radar would be decommissioned and the solid state phased-array radar would become operational. Impacts from the operation of this radar were addressed in the *Environmental Assessment for Radar Upgrade at Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997). The EA concluded that construction and operation of the new radar would be similar to existing activities that occur at the Technical Site. Furthermore, the EA concluded that noise generated from construction activities would be intermittent and short-term and that no noise effects would be associated with the long-term operations of the radar system. Consequently, it was concluded that there would be no significant impacts to the noise environment from the construction or operation of this radar.

Under the No-action Alternative, on-base traffic levels for Clear AFS are expected to decrease slightly, and traffic levels on the main highways in the vicinity of Clear AFS, Anderson Road and the George Parks Highway, are expect to stay the same or increase slightly (see section 4.2.11.1.1). Consequently, on-base traffic noise levels would be expected to remain comparable or decrease slightly from current levels, and off-base traffic levels would be expected to remain comparable or increase slightly from current levels.

No other potential impacts to the noise environment at Clear AFS for the time period considered have been identified.

Cumulative Impacts

No other future programs that could contribute to cumulative impacts to the noise environment have been identified at Clear AFS or within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.9.1.2 Eareckson AS—Noise

Under the No-action Alternative, no change in the noise environment at Eareckson AS would be expected. The main sources of noise at Eareckson AS, winds and aircraft, would not be expected to change under the No-action Alternative. No other potential impacts to the noise environment at Eareckson AS for the time period considered have been identified.

Cumulative Impacts

No other future programs that could contribute to cumulative impacts to the noise environment have been identified at Eareckson AS or within the region.

Mitigation Measures

No mitigation measures would be required.

4.2.9.1.3 Eielson AFB—Noise

Under the No-action Alternative, no significant change in the noise environment at Eielson AFB would be expected. Current Air Force operations at the base would continue. The Air Force aircraft activities were addressed in the Alaska Military Operation Areas EIS and determined not to have any significant adverse impact on the noise environment or land use (U.S. Department of the Air Force, 1995—EIS, Alaska Military Operation Areas). Soundproofing in structures adjacent to the airstrip and other siting and noise reduction measures are addressed through Eielson AFB's AICUZ program and its Base Comprehensive Plan (U.S. Department of the Air Force, 1997—EA, Omnibus Base Construction on Developed Land, Eielson AFB).

As noted in section 3.10.1.3, the 1996 AICUZ for Eielson AFB indicates that the community of Moose Creek, which has low density housing, falls within the DNL equals 65 dBA noise contour (Eielson AFB, 1998—Integrated Natural Resources Management Plan). Air Force land use recommendations suggest residential areas be located outside the 65 dBA contour. The AICUZ concept was developed to assist local governments in achieving compatibility between air bases and

neighboring communities. Therefore, the local government, Eielson AFB, and the community of Moose Creek would be expected to use the Eielson AFB AICUZ to assist in the land use planning and control process, and thus minimize future noise impacts.

Traffic levels on the main highway in the vicinity of Eielson AFB, the Richardson Highway, are expected to remain comparable to their current levels (see section 4.2.11.1.2). Consequently, traffic noise levels are expected to remain comparable to current levels.

Cumulative Impacts

Over the next 5 years, several construction projects are proposed for Eielson AFB. The majority of these projects would take place on previously disturbed land. Impacts from construction projects within the developed portion of the base were addressed in the *Environmental Assessment for Omnibus Base Construction on Developed Land* (U.S. Department of the Air Force, 1997), which concluded that these types of projects would not result in any significant change to the noise environment at Eielson AFB.

No other future programs that could contribute to cumulative impacts to the noise environment have been identified at Eielson AFB or within the region under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.9.1.4 Fort Greely—Noise

Under the No-action Alternative, no significant increase in the noise environment at Fort Greely would be expected. Under the No-action Alternative, portions of Fort Greely will be realigned and available for reuse. According to the *Final Reuse Plan for Fort Greely* (Delta/Greely Community Coalition, 1998), the preferred reuse would consist of a private correctional facility and a variety of industrial uses within the cantonment area. For the remainder of the base, mission activities and levels of operation similar to those currently taking place would be expected to continue.

Current Air Force aircraft activities were addressed in the EIS, Alaska Military Operation Areas, and determined not to have any significant adverse impact on the noise environment or land use (U.S. Department of the Air Force, 1995—EIS, Alaska Military Operation Areas).

The volume of traffic on-base at Fort Greely would be expected to remain comparable to current levels or slightly increase because of realignment (see section 4.2.11.1.3). Consequently, traffic noise levels would be

expected to remain comparable to current levels on-base, with a slight decrease expected from current levels along the Alaska and Richardson Highways.

Cumulative Impacts

In addition to the possible changes from the reuse of the main cantonment, there are plans to construct a new power line from the Richardson Highway to the Alascom Microwave site. Construction activities from this project would increase the level of noise in Fort Greely's noise environment. However, because the project is relatively minor, the increase will be temporary and localized to the respective construction site. Therefore, it is not anticipated that this construction project would have a significant cumulative impact on the noise environment.

No other future programs that could contribute to cumulative impacts to the noise environment have been identified at Fort Greely or within the region under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.9.1.5 Yukon Training Area (Fort Wainwright)—Noise

Under the No-action Alternative, no significant change in the noise environment at the Yukon Training Area would be expected. The current Army and Air Force operations that occur in the Yukon Training Area would be expected to continue. The Air Force activities for this area were addressed in the EIS, Alaska Military Operation Areas, and determined to not have any significant adverse impact on the noise environment or land use (U.S. Department of the Air Force, 1995—EIS, Alaska Military Operation Areas).

Traffic levels on the main highway in the vicinity of the Yukon Training Area, the Richardson Highway, are expected to remain comparable to their current levels (see section 4.2.11.1.4). Consequently, traffic noise levels are expected to remain comparable to current levels.

Cumulative Impacts

Several small projects planned for the area include extension of power lines in various portions of the training area, minor road construction, and construction of one new urban training site in several potential locations in the maneuver area. The existing activities on the maneuver area in combination with these proposed projects may cause temporary localized increases in noise levels; however, no significant cumulative impact to the noise environment would not be expected.

No other future programs that could contribute to cumulative impacts to the noise environment have been identified at the Yukon Training Area or within the region under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.9.2 North Dakota Installations

4.2.9.2.1 Cavalier AFS—Noise

Under the No-action Alternative, no significant change in the noise environment at Cavalier AFS would be expected. The current operations that occur at Cavalier AFS would be expected to continue.

Traffic levels on the main highways in the vicinity of Cavalier AFS, State Highways ND 5 and 32 and CR 89, are expected to remain comparable to their current levels (see section 4.2.11.2.1). Consequently, traffic noise levels are expected to remain comparable to current levels.

Cumulative Impacts

Several upcoming projects are proposed for Cavalier AFS, including an addition to the Fitness Center, a new parking lot and road, upgrade of the Community Center, four new housing units, a new Base Civil Engineering Self Help Center, a new water treatment building, and demolition of several buildings. The existing activities on Cavalier AFS in combination with these proposed projects may cause temporary localized increases in noise levels; however, no significant cumulative impacts to the noise environment would be expected.

No other future programs that could contribute to cumulative impacts to the noise environment have been identified for Cavalier AFS or within the region under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.9.2.2 Grand Forks AFB—Noise

Under the No-action Alternative, no significant change in the noise environment at Grand Forks AFB would be expected. The current Air Force operations at the base would be expected to continue. These activities consist mostly of aircraft operations associated with an air-refueling wing.

As noted in section 3.10.2.2, the 1995 AICUZ for Grand Forks AFB indicates that noise contours with DNL values of both 65 and 70 dBA were estimated to occur outside the base boundaries on land northwest of the base. The DNL equals 65 dBA contour was also estimated to extend very slightly off the southern end of the base. As the land use in these areas was designated as "Open/Agricultural/Low Density," the study did not conclude that there was any land use incompatibility due to the estimated aircraft noise. Air Force land use recommendations suggest residential areas be located outside the 65 dBA contour. The AICUZ concept was developed to assist local governments in achieving compatibility between air bases and neighboring communities. Therefore, the local government, Grand Forks AFB, and local communities would be expected to use the Grand Forks AFB AICUZ to assist in the land use planning and control process, and thus minimize future noise impacts.

Potential impacts to the noise environment as a result of the dismantlement of the Minuteman III missile system were addressed in the *EIS for Minuteman III Missile System Dismantlement* (U.S. Department of the Air Force, 1999). This EIS concluded that short-term noise impacts would likely be adverse, but insignificant, based on the expected levels of noise generated from traffic, operation of equipment, and explosive demolition.

Long-term traffic levels on the main highways in the vicinity of Grand Forks AFB, U.S. 2 and CR 3B, are expected to remain comparable to their current levels (see section 4.2.11.2.2). Consequently, traffic noise levels are expected to remain comparable to current levels.

Cumulative Impacts

Several new on-base facilities are proposed for the near future at Grand Forks AFB, including a new commissary, a new Squadron Operations Facility, an extended flightline parking ramp, and a field house addition to the gym. These new facilities all occur on-base. The existing activities on Grand Forks AFB in combination with these proposed projects may cause temporary localized increases in noise levels; however, no significant cumulative impact to the noise environment would be expected.

Two other programs occur off-base in close proximity to Grand Forks AFB. One is the restoration of the city of Grand Forks from flood damage, planned to continue until 2002. The other is the continued restoration effort of Devils Lake flooding. These programs are far enough away that they will have very little effect on the noise environment around the base and will not have any cumulative impacts.

During the dismantlement of the Minuteman III system, a significant increase in traffic levels would be generated in the deployment area over a 3-year period; however, it is estimated that this increase will be nearly entirely offset by the decrease in Air Force traffic (see section 4.2.11.2.2). Consequently, traffic noise levels would be expected to remain comparable to current levels.

Mitigation Measures

No mitigation measures would be required.

4.2.9.2.3 Missile Site Radar—Noise

Under the No-action Alternative, no activities would occur at the Missile Site Radar other than facility maintenance. Because no activities occur at the site, no impacts to the noise environment would be expected.

Cumulative Impacts

This site is currently inactive. There are no cumulative impacts to the noise environment under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.9.2.4 Remote Sprint Launch Site 1—Noise

Potential noise impacts at Remote Sprint Launch Site 1 would be the same as described for the Missile Site Radar.

4.2.9.2.5 Remote Sprint Launch Site 2—Noise

Potential noise impacts at Remote Sprint Launch Site 2 would be the same as described for the Missile Site Radar.

4.2.9.2.6 Remote Sprint Launch Site 4—Noise

Potential noise impacts at Remote Sprint Launch Site 4 would be the same as described for the Missile Site Radar.

4.2.10 SOCIOECONOMICS

4.2.10.1 Alaska Installations

Interior Alaska, in which the following actions take place, has experienced several economic upswings and downturns in response to single large projects. This volatility is a function of the limited diversity and small size of the local economy. Interior Alaska is also the fastest growing region within the state, albeit from a low base of economic activity.

4.2.10.1.1 Clear AFS—Socioeconomics

Under the No-action Alternative, construction activities at Clear AFS would be limited to the construction of the Solid-State Phased Array radar (underway). This limited activity represents a relatively small body of construction work; therefore, no socioeconomic impacts would be anticipated.

Cumulative Impacts

There would be little or no cumulative impacts, positive or negative, arising from the two planned projects.

Mitigation Measures

No mitigation measures would be required.

4.2.10.1.2 Eareckson AS—Socioeconomics

Eareckson AS is an isolated, self-contained installation with all personnel being required to stay on-base; therefore, few socioeconomic effects are generated from base operations.

Cumulative Impacts

No cumulative impacts have been identified for Eareckson AS under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required

4.2.10.1.3 Eielson AFB—Socioeconomics

Eielson has an extensive program of major works planned for the next 4 years. Under the No-action Alternative, considerable positive economic impacts would still be expected as a result of the existing program. The local pool of construction labor would be called upon and a number of indirect and induced jobs would be created by the expenditures

associated with the program. Depending on the scale of activity, some negative fiscal impacts could arise.

Cumulative Impacts

The various programs outlined above could result in short-term labor shortages, should they overlap. These shortages would prompt labor to be recruited outside the ROI, thus increasing the positive economic impacts particularly with respect to increased bed tax revenue. The increased use of outside labor could also place greater pressure on local public safety resources.

Mitigation Measures

No mitigation measures would be required.

4.2.10.1.4 Fort Greely—Socioeconomics

Under the No-action Alternative, the reuse of Fort Greely by the local community would represent the most important activity at the base in terms of socioeconomic impacts. The preferred reuse plan, characterized as Mixed Use Industrial, is forecast to produce between 490 and 600 jobs. A correctional institution providing up to 260 jobs represents the single potential largest employment generator. The minimum threshold alternative forecast between 30 and 66 jobs will remain at Fort Greely.

Clearly, the preferred reuse plan proposes a positive future for Fort Greely. Assuming that the plan is fulfilled, it indicates, nevertheless, a net loss of up to 150 jobs in the local community. The impact of this loss will likely lead to a fall in the local population and a decline in its wealth, as well as a fiscal loss for the community. If the minimum threshold alternative is fulfilled, there would be a significant impact to the local population and economy.

Cumulative Impacts

The cumulative impact of the Fort Greely Reuse Plan will be to lessen the major decline in the local economy without reversing it.

Mitigation Measures

No mitigation measures would be required.

4.2.10.1.5 Yukon Training Area (Fort Wainwright)—Socioeconomics

For the purposes of socioeconomic impacts, the Yukon Training Area falls under Eielson AFB.

4.2.10.2 North Dakota Installations

Northeast North Dakota has experienced a continued decline in population and economic wealth for several decades. Major construction projects, such as the Devils Lake flood prevention program, have helped to slow the process of decline but have failed to reverse the trend.

4.2.10.2.1 Cavalier AFS—Socioeconomics

Cavalier AFS has a program of works that extends to 2003. Under the No-action Alternative, this program would continue to provide valuable income for the local community; particularly, its retailers would provide some modest indirect and induced jobs through the local purchases of materials and the employment of construction workers.

Cumulative Impacts

The decline in the local communities within the ROI will be slowed but not reversed by the small, transitory, positive cumulative economic impacts of the Cavalier AFS programs.

Mitigation Measures

No mitigation measures would be required.

4.2.10.2.2 Grand Forks AFB—Socioeconomics

Grand Forks AFB has a program of works that extends to 2004. In addition, flood restoration in the city of Grand Forks is expected to continue until 2002. Devils Lake drainage activities are also expected to continue for several years. Under the No-action Alternative, these various construction-related activities would have considerable positive economic benefits for the surrounding communities, supporting retailing in the region and generating jobs.

Cumulative Impacts

The positive cumulative impact on the ROI of the various construction programs is significant, but will disappear as each program comes to an end.

Mitigation Measures

No mitigation measures would be required.

4.2.10.2.3 Missile Site Radar—Socioeconomics

Under the No-action Alternative, this site would continue to make no positive contribution to the local economy, which is experiencing a chronic decline in population and wealth.

Cumulative Impacts

There are no cumulative impacts, positive or negative.

Mitigation Measures

No mitigation measures would be required.

4.2.10.2.4 Remote Sprint Launch Site 1—Socioeconomics

Potential impacts and mitigation measures under the No-action Alternative at Remote Sprint Launch Site 1 would be the same as described for the Missile Site Radar.

4.2.10.2.5 Remote Sprint Launch Site 2—Socioeconomics

Potential impacts and mitigation measures under the No-action Alternative at Remote Sprint Launch Site 2 would be the same as described for the Missile Site Radar.

4.2.10.2.6 Remote Sprint Launch Site 4—Socioeconomics

Potential impacts and mitigation measures under the No-action Alternative at Remote Sprint Launch Site 4 would be the same as described for the Missile Site Radar.

4.2.11 TRANSPORTATION

Under the No-action Alternative, there would be no change to the transportation activities at any of the potential deployment locations due to the NMD program. Current transportation activities and other potential future programs that could add to the transportation activities under the No-action Alternative are described in the following paragraphs.

There would be no change to the air transportation system at any of the sites listed below under the No-action Alternative. Therefore, no impacts would occur.

4.2.11.1 Alaska Installations

4.2.11.1.1 Clear AFS—Transportation

Under the No-action Alternative, no impacts would result from transportation activities at Clear AFS. Currently, Clear AFS is in the process of replacing its Ballistic Missile Early Warning System Radar with a Solid-State Phased-Array Radar. In the *Environmental Assessment for Radar Upgrade Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997), it was concluded that there would be no impacts to transportation in the vicinity of Clear AFS due to the upgrade activities. When the replacement radar becomes operational in fiscal year 2001, station personnel will be reduced from 405 to 317. Therefore, on-base traffic will experience a slight decrease in volume in fiscal year 2001. Off-base roads in the vicinity of Clear AFS include Anderson Road and the George Parks Highway. The traffic volume on Anderson Road is not expected to change significantly. The George Parks Highway is expected to experience a slight increase in the summer months due to tourism, but a change in the LOS A is not anticipated.

Cumulative Impacts

No future activities that could contribute to cumulative transportation impacts have been identified at Clear AFS or the region. No transportation impacts are anticipated due to the radar upgrade (U.S. Department of the Air Force, 1997—EA for Radar Upgrade at Clear AS, Alaska).

Mitigation Measures

No mitigation measures would be required.

4.2.11.1.2 Eielson AFB—Transportation

No impacts would occur due to transportation activities at Eielson AFB under the No-action Alternative. Under the No-action Alternative, similar activities would be expected to continue at the installation, and on-base

traffic volumes are expected to remain comparable to the current levels. The Richardson Highway, which provides access to the base, is projected to experience a slight increase in volume during the summer months due to tourism. However, the LOS A value is not anticipated to change.

Cumulative Impacts

Under the No-action Alternative, several new facilities are scheduled for construction on Eielson AFB. Also, a traffic study is currently in process for Eielson AFB, which includes a proposal to move the base entrance north approximately 0.8 kilometer (0.5 mile). These activities would result in a temporary increase in traffic volumes during the construction phase. However, these activities will not affect the overall base mission, and no cumulative impacts due to transportation activities are anticipated.

Mitigation Measures

No mitigation measures would be required.

4.2.11.1.3 Fort Greely—Transportation

No impacts would occur due to transportation activities at Fort Greely under the No-action Alternative. Fort Greely is currently undergoing realignment, which is scheduled for completion by July 2001. This realignment would result in a decrease of approximately 700 personnel at the installation, thereby reducing the traffic volume on and in the vicinity of the base. However, the reuse plan for Fort Greely consists of two alternatives that would result in the generation of 30 to 600 jobs, depending on which alternative is chosen (Delta/Greely Community Coalition, 1998—Final Reuse Plan, Fort Greely, Alaska). The net effect of realignment and reuse on Fort Greely and the surrounding area would be positive, with a decrease in traffic volume. The Alaska Highway north of the base and the Richardson Highway, which provides access to the base, are expected to continue to operate at LOS B.

Cumulative Impacts

Under the No-action Alternative, new construction activities are expected to occur on Fort Greely. The construction would be minor and would cause a temporary increase in the traffic volume. Overall, no cumulative transportation impacts are anticipated under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.11.1.4 Yukon Training Area (Fort Wainwright)—Transportation

No transportation impacts would occur on the Yukon Training Area under the No-action Alternative. Under the No-action Alternative, similar activities would be expected to continue at the installation, and traffic volumes are expected to remain comparable to the current levels. Access to the Yukon Training Area is gained at two points along the Richardson Highway: through the main gate of Eielson AFB and via Johnson Road. The traffic volume along the Richardson Highway is expected to increase slightly due to tourism, but level of service for the roadway is projected to remain at its current value of LOS A. More information concerning roads on Eielson AFB and the vicinity can be found in section 4.2.11.1.2.

Cumulative Impacts

Under the No-action Alternative, new construction activities are expected to occur on the Yukon Training Area. The construction would be minor and would cause a temporary increase in the traffic volume. However, these activities would not change the overall base mission, and no cumulative transportation impacts are expected.

Mitigation Measures

No mitigation measures would be required.

4.2.11.2 North Dakota Installations

4.2.11.2.1 Cavalier AFS—Transportation

No transportation impacts would occur on Cavalier AFS under the No-action Alternative. Under the No-action Alternative, similar activities would be expected to continue at the installation and on-base traffic volumes are expected to remain comparable to the current levels. ND 5 and ND 32 in the vicinity of the installation are not expected to experience an increase in volume, leaving the LOS A for the roadways unchanged.

Cumulative Impacts

Under the No-action Alternative, new construction activities are expected to occur on Cavalier AFS. The construction would be minor and would cause a temporary increase in traffic volume. However, these activities would not change the overall base mission, and no cumulative transportation impacts are expected to occur.

Mitigation Measures

No mitigation measures would be required.

4.2.11.2.2 Grand Forks AFB—Transportation

No transportation impacts would occur on Grand Forks AFB under the No-action Alternative. Under the No-action Alternative, similar activities would be expected to continue at the installation. Personnel numbers at Grand Forks AFB have decreased by about 500 from fiscal year 1995 to fiscal year 1997, and will continue to decrease by another 900 from fiscal year 1997 to fiscal year 2000. Traffic generated by Air Force personnel at and near Grand Forks AFB will decrease accordingly, resulting in a long-term beneficial impact to traffic levels on the roads in the vicinity of Grand Forks AFB. (U.S. Department of the Air Force, 1999—Final EIS, Minuteman III Missile System Dismantlement) Currently, the main gate to Grand Forks AFB on CR 3B, the secondary gate on U.S. 2, and U.S. 2 in the vicinity of the base all operate at LOS A. This level of service is not expected to change.

Cumulative Impacts

Under the No-action Alternative, new construction activities are expected to occur on Grand Forks AFB. Also, a proposed action by Grand Forks AFB is the dismantlement of the Minuteman III system. During the dismantlement process, a significant increase in traffic levels would be generated on the road network in the deployment area over a 3-year period. Air Force vehicle traffic both within the deployment area and at Grand Forks AFB is decreasing from historic levels. Considering the decrease in Air Force traffic and increase in contractor traffic during the dismantlement process, no change in the level of service of area roads is projected. (U.S. Department of the Air Force, 1999—Final EIS, Minuteman III Missile System Dismantlement) All construction-related activities on the base would not affect the overall base mission and would only cause a temporary increase in traffic volumes. No transportation cumulative impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.11.2.3 Missile Site Radar—Transportation

No transportation impacts would occur at the Missile Site Radar under the No-action Alternative. Under the No-action Alternative, the site would remain in caretaker status, and similar activities would be expected to continue at this location. Traffic on the installation would only be maintenance personnel. In the vicinity of the installation, traffic volumes on ND 1, ND 66, and CR 26 are expected to remain comparable to the current levels and to continue to operate at LOS A.

Cumulative Impacts

Under the No-action Alternative, no future programs have been identified that would contribute to transportation cumulative impacts at the Missile Site Radar.

Mitigation Measures

No mitigation measures would be required.

4.2.11.2.4 Remote Sprint Launch Site 1—Transportation

No transportation impacts would occur at Remote Sprint Launch Site 1 under the No-action Alternative. Under the No-action Alternative, the site would remain in caretaker status, and similar activities would be expected to continue at this location. Traffic on the installation would only be from maintenance personnel. Traffic volumes in the vicinity of the installation are expected to remain comparable to the current levels. Currently, ND 1, CR 3, and CR 32 all operate at LOS A. A change in the level of service of these roadways is not anticipated.

Cumulative Impacts

Under the No-action Alternative, no future programs have been identified that would contribute to transportation cumulative impacts at Remote Sprint Launch Site 1.

Mitigation Measures

No mitigation measures would be required.

4.2.11.2.5 Remote Sprint Launch Site 2—Transportation

No transportation impacts would occur at Remote Sprint Launch Site 2 under the No-action Alternative. Under the No-action Alternative, the site would remain in caretaker status, and similar activities would be expected to continue at this location. Traffic on the installation would continue to be only occasional maintenance personnel visits. Traffic volumes in the vicinity of the installation are expected to remain comparable to the current levels. Currently, ND 1 and CR 55 operate at LOS A. A change in the level of service on these roadways is not anticipated.

Cumulative Impacts

Under the No-action Alternative, no future programs have been identified that would contribute to transportation cumulative impacts at Remote Sprint Launch Site 2.

Mitigation Measures

No mitigation measures would be required.

4.2.11.2.6 Remote Sprint Launch Site 4—Transportation

No transportation impacts would occur at Remote Sprint Launch Site 4 under the No-action Alternative. Under the No-action Alternative, the site would remain in caretaker status, and similar activities would be expected to continue at this location. Traffic on the installation would only be occasional maintenance personnel visits. Currently, ND 1, ND 17, CR 22, and CR 9 in the vicinity of the installation all operate at LOS A. A change in level of service is not expected for these roadways.

Cumulative Impacts

Under the No-action Alternative, no future programs have been identified that would contribute to transportation cumulative impacts at Remote Sprint Launch Site 4.

Mitigation Measures

No mitigation measures would be required.

4.2.12 UTILITIES

This section provides an evaluation of system capacities and current and future service demands without the NMD program for four major public utility systems including water supply, wastewater treatment, solid waste disposal, and energy. Under the No-action Alternative, there would be no change to the utility system activities at any of the potential deployment locations as a result of the NMD program. Under the No-action Alternative, production capacities of existing installation and public utility facilities would normally fulfill current demands for both average and peak service requirements. If under-capacity scenarios exist for No-action activities, the service short-fall and currently planned mitigations to augment existing capacity are identified. New utility demands from non-NMD project activities have been identified and are included quantitatively where specific data is available. The discussion of cumulative impacts and mitigations within this section generally include planned projects and system additions that have been approved.

Current utility activities and other potential future programs that could add to additional management responsibility under the No-action Alternative are described below.

4.2.12.1 Alaska Installations

4.2.12.1.1 Clear AFS—Utilities

Potential impacts of the No-action Alternative at Clear AFS were addressed in the *Environmental Assessment for Radar Upgrade Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997). Section 3.13.1.1 provides an overview of existing utility system production capacities and current service demands. The EA concluded that water supply, wastewater treatment, solid waste disposal, and electric power systems had available capacity or could be expanded to accommodate either the continued operation of the Ballistic Missile Early Warning System radar or the proposed solid state phased-array radar currently under construction. As a result, there would be no significant impact on utility systems under the No-action Alternative. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

Cumulative Impacts

No other future programs that could contribute to cumulative utility system impacts have been identified at Clear AFS or within the region. Analysis of the proposed operation of the new phased-array radar concluded that there would be no impacts to utility system integrity at Clear AFS. (U.S. Department of the Air Force, 1997—EA for Radar Upgrade at Clear AS Alaska)

Mitigation Measures

No mitigation measures would be required.

4.2.12.1.2 Eareckson AS—Utilities

No impacts on water supply, wastewater treatment, solid waste disposal, or electric power systems are projected to occur under the No-action Alternative at Eareckson AS. Section 3.13.1.2 provides an overview of existing utility system production capacities and current service demands. Under the No-action Alternative, similar levels of activity would be expected to continue at this location. Eareckson AS has the appropriate plans and procedures in place to manage normal and peak demand and capacity requirements for these utility systems.

Cumulative Impacts

Under the No-action Alternative, no other programs have been identified that would contribute to utility system cumulative impacts at Eareckson AS.

Mitigation Measures

No mitigation measures would be required.

4.2.12.1.3 Eielson AFB—Utilities

No impacts on water supply, wastewater treatment, solid waste disposal, steam generation, or electric power systems are projected to occur under the No-action Alternative at Eielson AFB. Section 3.13.1.3 provides an overview of existing utility system production capacities and current service demands. Under the No-action Alternative, similar levels of activity would be expected to continue at this location. Eielson AFB has the appropriate plans and procedures in place to manage normal and peak service demand and capacity requirements for these utility systems. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that construction of new facilities would occur on Eielson AFB; however, there would be no change to the overall base mission that would result in insufficient service capabilities for existing utility systems. The construction programs would result in a temporary increase in utility demands, which would be accommodated through existing or temporary construction-related utility systems. Overall, no cumulative utility system impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.12.1.4 Fort Greely—Utilities

Under the No-action Alternative, no impacts on water supply, wastewater treatment, solid waste disposal, or electric power systems are projected to occur at Fort Greely. Section 3.13.1.4 provides an overview of the current utility system activities. Under the No-action Alternative, the Cold Regions Test Center and the Northern Warfare Training Center within the Fort Greely cantonment area would be realigned to Fort Wainwright by 2001. The remainder of the base would continue to be used for military training activities. This realignment would reduce the demand for utility services required by military activities. Fort Greely has the appropriate plans and procedures in place to manage normal and peak service demand and capacity requirements for these utility systems. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

In accordance with the BRAC Commission, the Army will dispose of surplus property made available to the public from the realignment action. Reuse of the cantonment area could include industrial, commercial, and aviation support type uses. These activities could require varying levels of utility services. The specific service demands for alternative reuse options are not known. Each separate organization reusing the base would be responsible for determining utility service requirements and for providing or obtaining appropriate utility service capacity. It is likely that reuse would result in less of a demand on the utility systems at Fort Greely than when the post was fully operational. Overall, no impacts would be expected from implementation of the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that minor new military construction would occur on Fort Greely. The construction programs, which consist mostly of range upgrades to infrastructure, could result in a temporary increase in utility demands, which would be accommodated through existing or temporary construction-related utility systems.

Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.12.1.5 Yukon Training Area (Fort Wainwright)—Utilities

The proposed site on the Yukon Training Area does not have any existing utilities. Potential support facilities and utility systems for this site would be located on Eielson AFB and are described in section 4.2.12.1.3.

4.2.12.2 North Dakota Installations

4.2.12.2.1 Cavalier AFS—Utilities

No impacts on water supply, wastewater treatment, solid waste disposal, natural gas distribution, or electric power systems are projected to occur under the No-action Alternative at Cavalier AFS. Section 3.13.2.1 provides an overview of existing utility system production capacities and current service demands. Under the No-action Alternative, similar levels of activity would be expected to continue at this location. Cavalier AFS has the appropriate plans and procedures in place to manage normal and peak service demand and capacity requirements for these utility systems. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, it is anticipated that construction of new facilities and the demolition of some existing facilities would occur on Cavalier AFS; however, there would be no change to the overall base mission that would result in insufficient service capabilities for existing utility requirements. The construction programs would result in a temporary increase in utility demands, which would be accommodated through existing or temporary construction-related utility systems. Operational utility requirements would be provided by existing system capacity or with the construction of additional facility capacity. Overall, no cumulative utility system impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.12.2.2 Grand Forks AFB—Utilities

No impacts on water supply, wastewater treatment, solid waste disposal, natural gas distribution, or electric power systems are projected to occur under the No-action Alternative at Grand Forks AFB. Section 3.13.2.2 provides an overview of existing utility system production capacities and current service demands. Under the No-action Alternative, similar levels of activity would be expected to continue at this location. Once Grand Forks AFB completes the dismantlement process of the Minuteman III

system in 2001, there will be an overall reduction in utility service requirements. Grand Forks AFB has the appropriate plans and procedures in place to manage normal and peak service demand and capacity requirements for these utility systems. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, construction of new facilities on Grand Forks AFB is anticipated; however, there would be no change to the overall base mission that would result in insufficient service capabilities for existing utility requirements. The construction programs would result in a temporary increase in utility demands, which would be accommodated through existing or temporary construction-related utility systems. Operational utility requirements would be provided by existing system capacity or with the construction of additional facility capacity. The restoration of the city of Grand Forks and Devils Lake from flood damage would also increase the use of utility services within the region; however, this increase would be handled in cooperation with major public service providers in the area. Overall, no cumulative hazardous materials and hazardous waste impacts are expected under the No-action Alternative.

Mitigation Measures

No mitigation measures would be required.

4.2.12.2.3 Missile Site Radar—Utilities

No impacts on water supply, wastewater treatment, solid waste disposal, natural gas distribution, or electric power systems are projected to occur under the No-action Alternative at the Missile Site Radar. Section 3.13.2.3 provides an overview of existing utility system production capacities and current service demands. The site would continue to be maintained in caretaker status, and minimum utility service demands would be generated. The Missile Site Radar has the appropriate plans and procedures in place to manage normal and peak service demand and capacity requirements for these utility systems. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, no other programs have been identified that would contribute to utility system cumulative impacts at the Missile Site Radar.

Mitigation Measures

No mitigation measures would be required.

4.2.12.2.4 Remote Sprint Launch Site 1—Utilities

Under the No-action Alternative, there would be no impacts on utility systems serving Remote Sprint Launch Site 1. Section 3.13.2.4 provides an overview of existing utility system production capacities and current service demands. The site would continue to be maintained in caretaker status and would require minimal utility services. It is expected that off-base utility demands and capacities would continue to operate at similar levels as current conditions under the No-action Alternative.

Cumulative Impacts

Under the No-action Alternative, no other programs have been identified that would contribute to utility system cumulative impacts at Remote Sprint Launch Site 1.

Mitigation Measures

No mitigation measures would be required.

4.2.12.2.5 Remote Sprint Launch Site 2—Utilities

Impacts at Remote Sprint Launch Site 2 would be similar to those described for Remote Sprint Launch Site 1.

4.2.12.2.6 Remote Sprint Launch Site 4—Utilities

Impacts at Remote Sprint Launch Site 4 would be similar to those described for Remote Sprint Launch Site 1.

4.2.13 WATER RESOURCES

Under the No-action Alternative, there would be no effects on water resources at any of the potential deployment locations as a result of the NMD program. Potential impacts on water resources from current and potential future activities other than NMD are described in the following sections.

Activities at each location under the No-action Alternative would be carried out under the required permits in accordance with state and Federal water resources regulations. Additional mitigations that have been identified are discussed under each section.

4.2.13.1 Alaska Installations

4.2.13.1.1 Clear AFS—Water Resources

Under the No-action Alternative, no change in the water resources regime is expected at Clear AFS. Currently, construction of the solid state phased-array radar is underway and is to become operational by the end of the year 2000. The existing Ballistic Missile Early Warning System will be decommissioned at that time. Potential impacts to water resources from the construction and operation of this radar are discussed in the *Environmental Assessment for Radar Upgrade at Clear Air Station, Alaska* (U.S. Department of the Air Force, 1997). The EA concluded that construction and operation of the new radar would disturb less than 2 hectares (5 acres) of land and would be similar to existing activities at the Technical Site. Existing operational activities would continue, and the mission of Clear AFS would remain the same. No other water resources concerns have been identified at Clear AFS.

Cumulative Impacts

No other future programs have been identified by Clear AFS that could contribute to cumulative water resources impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.13.1.2 Eareckson AS—Water Resources

Under the No-action Alternative, no change in the water resources regime is expected. Eareckson AS will continue its mission as an early warning radar site monitoring space and missile activities.

Cumulative Impacts

No other future programs or projects have been identified for Eareckson AS that could contribute to cumulative water resources impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.13.1.3 Eielson AFB—Water Resources

Under the No-action Alternative, the current mission activities would continue at existing levels. No change in the water resources regime is expected. Several construction projects, anticipated over the next 5 years, would be carried out under the required permits in accordance with state and Federal regulations.

Cumulative Impacts

Over the next 5 years, several projects are proposed for Eielson AFB. The majority of these projects would take place on previously disturbed land and are not expected to change the water resources of the area.

Mitigation Measures

No mitigation measures would be required.

4.2.13.1.4 Fort Greely—Water Resources

Under the No-action Alternative, some changes to the mission of Fort Greely are anticipated. Most of the main cantonment area is being excessed in response to being placed on the 1995 BRAC list for realignment. This activity, if it occurs, would take place on previously disturbed land and utilize existing facilities and infrastructure where possible. If this reuse does not occur, then a majority of the cantonment area would shut down. In either case, the water usage at Fort Greely is expected to decrease. The West Training Area would continue to be used for testing, training, and maneuver exercises and would not be affected by BRAC. Potential impacts to water resources were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). That EIS concluded that off-road maneuvering, conducted in an area over a length of time, could result in increased runoff reaching the stream system in a shorter amount of time. The *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999) also concluded that development would not occur on floodplains, avoiding any possible impacts to floodplains in accordance with Executive Order 11988, *Floodplain Management*. The quantity of groundwater would not be impacted by ongoing activities; however, groundwater quality could be impacted by pollutant spills. (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Renewal Final Legislative EIS)

Cumulative Impacts

In addition to the potential impacts from maneuvers described above, there are two minor construction projects that would have little effect on water resources. The ongoing maneuvers, if conducted repeatedly in the same area, could result in cumulative impacts to water resources.

Mitigation Measures

Existing mitigation measures identified in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999) include compliance with U.S. Army Alaska Range Regulation 350-2, which provides procedures for planning, requesting, and operating ranges and training areas, and includes certain environmental aspects to be taken into consideration. U.S. Army Alaska Range Regulation 200-4 provides procedures for proper management of hazardous materials and waste, thereby reducing potential impacts from those materials. The Spill Prevention Control and Countermeasure Plan for Fort Greely documents methods used to prevent spills from reaching navigable waters and/or groundwater. The Integrated Training Area Management program would continue to be used to monitor and help to correct erosion and sedimentation problems. Compliance with the Alaska Drinking Water Standards would also mitigate potential impacts to water resources. (U.S. Department of the Army, 1999—Alaska Army Lands Withdrawal Final Legislative EIS)

4.2.13.1.5 Yukon Training Area (Fort Wainwright)—Water Resources

Under the No-action Alternative, no change in the water resources regime at the Yukon Training Area is expected. The land would remain relatively undeveloped, and would be used as a training area and for maneuver exercises. Potential impacts to water resources were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999), and are similar to the impacts described in section 4.2.13.1.4 for the West Training Area portion of Fort Greely.

Cumulative Impacts

Several small projects planned for the area would not be expected to create cumulative water resources impacts. These projects include the construction of minor roads and the extension of power lines to various portions of the maneuver area, and the construction of a new urban training site at one of several potential locations. As described for Fort Greely, off-road maneuvers, if conducted repeatedly in the same area, could result in cumulative impacts to water resources.

Mitigation Measures

Mitigation measures for water resources are similar to those described in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999) and summarized in section 4.2.13.1.4.

4.2.13.1.6 Alaska—Fiber Optic Cable Line—Water Resources

Under the No-action Alternative, no change in the water environment is expected. Water resources would remain relatively undisturbed and would be used for its current purposes; therefore, impacts relative to water resources would not be expected.

Cumulative Impacts

No other activities have been identified that would contribute to the seabed or ocean water resources cumulative impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.13.2 North Dakota Installations

4.2.13.2.1 Cavalier AFS—Water Resources

Under the No-action Alternative, Cavalier AFS will continue its mission as part of the Spacetrack Missile Warning System. No change in the water resources regime of the area is expected.

Cumulative Impacts

Several upcoming projects are proposed for Cavalier AFS. These projects include: an addition to the Fitness Center, a new parking lot and road, upgrade of the Community Center, four new housing units, a new Base Civil Engineering Self Help Center, a new water treatment building, and demolition of several buildings. These projects, anticipated over the next 5 years, would be carried out under the required permits in accordance with state and Federal regulations. The existing activities on Cavalier AFS in combination with these proposed projects would not be expected to create any cumulative water resources impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.13.2.2 Grand Forks AFB—Water Resources

Under the No-action Alternative, Grand Forks AFB will continue its mission as the air-refueling wing for the Air Mobility Command. No change in the water resources regime of the area is expected.

Cumulative Impacts

Several new on-base facilities are proposed for the near future. These include a new commissary, a new Squadron Operations Facility, an extended flightline parking ramp, and a field house addition to the gym. These projects, anticipated over the next 5 years, would be carried out under the required permits in accordance with state and Federal regulations. The existing activities on Grand Forks AFB in combination with these proposed projects would not be expected to create any cumulative water resources impacts.

Two other programs occur off-base in close proximity to Grand Forks AFB. One is the restoration of the city of Grand Forks from flood damage, planned to continue until 2002. The other is the continued restoration effort of Devils Lake flooding. These programs are far enough away that they would have very little effect on the water resources around the base, and no cumulative impacts to water resources are anticipated.

Mitigation Measures

No mitigation measures would be required.

4.2.13.2.3 Missile Site Radar—Water Resources

Under the No-action Alternative, no change is expected in the current status of the Missile Site Radar site. The entire site is currently inactive; it is being maintained in a caretaker status and will remain that way. No other activities are anticipated at this site; therefore, no change in the water resources regime of the area is expected.

Cumulative Impacts

No other future programs have been identified for Missile Site Radar site that could contribute to cumulative water resources impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.13.2.4 Remote Sprint Launch Site 1—Water Resources

Potential impacts and mitigation measures to water resources under the No-action Alternative at Remote Sprint Launch Site 1 would be similar to those described for the Missile Site Radar.

4.2.13.2.5 Remote Sprint Launch Site 2—Water Resources

Potential impacts and mitigation measures to water resources under the No-action Alternative at Remote Sprint Launch Site 2 would be similar to those described for the Missile Site Radar.

4.2.13.2.6 Remote Sprint Launch Site 4—Water Resources

Potential impacts and mitigation measures to water resources under the No-action Alternative at Remote Sprint Launch Site 4 would be similar to those described for the Missile Site Radar.

4.2.14 ENVIRONMENTAL JUSTICE

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires that Federal agencies identify and address disproportionately high and adverse environmental effects (including human, health, and economic and social effects) of its programs, policies, and activities on minority and low-income populations. An environmental justice impact would be a long-term health, environmental, cultural, or economic effect that has a disproportionately high and adverse effect on a nearby minority or low-income population. The potential for a disproportionately high and adverse effect could occur under either of two conditions: (1) the percentage of persons in low-income or minority populations in the census area meaningfully exceeds the percentage in the borough (Alaska) or county (North Dakota), the regions of comparison, or (2) the percentage of low-income or minority population in the census area exceeds 50 percent (see tables 3.15-1 and 3.15-2).

4.2.14.1 Alaska Installations

4.2.14.1.1 Clear AFS—Environmental Justice

Under the No-action Alternative, there would be no disproportionately high and adverse environmental or human health effects on minority or low-income populations around Clear AFS. As discussed above, there would be no environmental, human health, economic, or Native American and Traditional resource impacts from implementation of the No-action Alternative; therefore, no disproportionate minority or low-income populations would be affected.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.1.2 Eareckson AS—Environmental Justice

Eareckson AS is on Shemya Island, and only military personnel and contractors live at this site. There are no disproportionately high minority or low-income populations around Eareckson AS.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.1.3 Eielson AFB—Environmental Justice

Under the No-action Alternative, there would not be disproportionately high and adverse environmental or human health effects on minority and low-income populations around Eielson AFB. Moose Creek census area, the closest community near Eielson AFB, has a 20.29 percent minority population and 9.42 percent low-income population. This population percentage is above the Fairbanks North Star Borough Census area ROI for this location of 19.63 percent minority and 7.58 percent low-income population. However, the small difference in both low-income and minority populations from the larger population is not a meaningful difference for environmental justice analysis.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.1.4 Fort Greely—Environmental Justice

Potential environmental justice impacts at Fort Greely were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999), which concluded that there would be no disproportionately high and adverse environmental or human health effects on low-income or minority populations.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.1.5 Yukon Training Area (Fort Wainwright)—Environmental Justice

Potential environmental justice impacts at the Yukon Training Area were addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999), which concluded

that there would be no disproportionately high and adverse environmental or human health effects on low-income or minority populations.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.2 North Dakota Installations

4.2.14.2.1 Cavalier AFS—Environmental Justice

Under the No-action Alternative, there would be no disproportionately high and adverse environmental or human health effects on minority or low-income populations around Cavalier AFS. As discussed above, there would be no environmental, human health, economic, or Native American and Traditional resource impacts from implementation of the No-action Alternative; therefore, no disproportionate minority or low-income populations would be affected.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.2.2 Grand Forks AFB—Environmental Justice

Potential environmental justice impacts at Grand Forks AFB were addressed in the *EIS for Minuteman III Missile System Dismantlement* (U.S. Department of the Air Force, 1999), which concluded that there would be no disproportionately high and adverse environmental or human health effects on low-income or minority populations.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.2.3 Missile Site Radar—Environmental Justice

Under the No-action alternative, there would be no disproportionately high and adverse environmental or human health effects on minority or low-income populations around the Missile Site Radar. As discussed above, there would be no environmental, human health, economic, or Native American and Traditional resource impacts from implementation of the No-action Alternative; therefore, no disproportionate minority or low-income populations would be affected.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.2.4 Remote Sprint Launch Site 1—Environmental Justice

Under the No-action alternative, there would be no disproportionately high and adverse environmental or human health effects on minority or low-income populations around Remote Sprint Launch Site 1. As discussed above, there would be no environmental, human health, economic, or Native American and Traditional resource impacts from implementation of the No-action Alternative; therefore, no disproportionate minority or low-income populations would be affected.

Cumulative Impacts

No other projects or activities in the region have been identified that would contribute to potential cumulative environmental justice impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.14.2.5 Remote Sprint Launch Site 2—Environmental Justice

Potential environmental justice impacts at Remote Sprint Launch Site 2 would be the same as described for Remote Sprint Launch Site 1.

4.2.14.2.6 Remote Sprint Launch Site 4—Environmental Justice

Potential environmental justice impacts at Remote Sprint Launch Site 4 would be the same as described for Remote Sprint Launch Site 1.

4.2.15 SUBSISTENCE

4.2.15.1 Clear AFS—Subsistence

Under the No-action Alternative, there would be no change to subsistence hunting or fishing on or around Clear AFS. Currently, Air Force personnel, civilian base personnel, and people they sponsor are the only people allowed to hunt or fish on-base, which may include some subsistence users. However, these people make up a very small percentage of the population at Clear AFS. Subsistence hunting and fishing does occur in the area of Clear AFS and is not expected to change.

Cumulative Impacts

No other programs have been identified that would contribute to cumulative subsistence impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.15.2 Eareckson AS—Subsistence

Under the No-action Alternative, there would be no change to activities on Eareckson AS. Access to the island is restricted to base personnel, and no subsistence hunting or fishing occurs on the island. Activities on Eareckson AS do not impact subsistence uses in surrounding waters.

Cumulative Impacts

No other future programs have been identified that would contribute to cumulative subsistence impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.15.3 Eielson AFB—Subsistence

Under the No-action Alternative, there would be no change to subsistence hunting or fishing on or around Eielson AFB. Eielson AFB falls into the Fairbanks North Star Borough, which is not considered a rural area and where residents are exempt from subsistence considerations under ANILCA. Subsistence users from other regions can travel to Eielson AFB for subsistence resources, but this event is infrequent, and subsistence use is virtually nonexistent.

Cumulative Impacts

Several future projects have been identified for Eielson AFB. However, these activities would occur in the developed parts of the base. Therefore, there would be no cumulative subsistence impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.15.4 Fort Greely—Subsistence

Potential impacts to subsistence use under the No-action Alternative have been previously addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). This EIS concluded that residents of the native villages of Healy Lake and Dot Lake, and the non-native community of Dry Creek, are the main subsistence users in the area. However, their ranges normally do not extend as far as Fort Greely. Some residents do occasionally make the trip to hunt on Fort Greely. Subsistence users from other areas can travel to Fort Greely for subsistence resources, but this event is infrequent, and subsistence use at Fort Greely is virtually nonexistent. Subsistence use in the area of Fort Greely is not expected to change.

Cumulative Impacts

Currently, portions of Fort Greely are being realigned. This is affecting only the cantonment area of Fort Greely and should have no impact on subsistence resources. The Fort Greely Reuse Plan preferred alternative estimates that a maximum of 600 jobs could be created if implemented with a good portion of these jobs filled by workers in the local area. However, there would be some increase in the number of people moving into the area, which could put pressure on subsistence resources if they hunt. Overall, the total number of proposed jobs would be below the number of personnel working on Fort Greely (750) in 1997 before the base was realigned. No other programs have been identified for Fort Greely that would contribute to any cumulative subsistence impacts.

Mitigation Measures

No mitigation measures would be required.

4.2.15.5 Yukon Training Area (Fort Wainwright)—Subsistence

Potential impacts to subsistence use at the Yukon Training Area under the No-action Alternative have been previously addressed in the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* (U.S. Department of the Army, 1999). The Yukon Maneuver Area falls into the Fairbanks North Star Borough and is therefore exempt from subsistence

considerations under ANILCA. Subsistence users from other areas may occasionally travel to the Yukon Training Area for subsistence resources, but this is a rare event, and subsistence use at the Yukon Training Area is virtually nonexistent. No changes to subsistence fishing and hunting are anticipated for the Yukon Training Area.

Cumulative Impacts

Several future projects have been identified for the Yukon Training Area. However, these projects would not change subsistence uses in the region.

Mitigation Measures

No mitigation measures would be required.

4.2.15.6 Alaska—Fiber Optic Cable Line—Subsistence

Potential impacts to subsistence use under the No-action Alternative have been previously addressed in the *Alaska Maritime National Wildlife Refuge Comprehensive Conservation Plan Environmental Impact Statement, Wilderness Review* (U.S. Fish and Wildlife Service, 1988). This EIS concluded that there would be negligible impacts on subsistence resources in and along the Aleutian Islands included within the wildlife refuge. No change to subsistence uses are anticipated outside of the refuge.

Cumulative Impacts

As addressed above, no subsistence impacts are anticipated, and no cumulative impacts have been identified.

Mitigation Measures

No mitigation measures would be required.