

## Chapter 3. Ecosystem Management

*“Sustaining our Nation’s military training and testing lands through ecosystem management is among the most important DOD environmental goals.”<sup>1</sup>*

Fort Greely and Donnelly Training Area’s natural resources program has traditionally been based on multiple-use management philosophies. Military training, however, is the primary land-use. This philosophy will continue through 2002-2006 with one important addition. Maintaining functional ecosystems is now the goal of the Fort Greely and Donnelly Training Area land and natural resources management programs. “Realistic training lands” is often quoted as an essential need by military trainers. For training to be realistic, the military must train in non-degraded ecosystems, with natural vegetation and terrain features. Such ecosystems must also be maintained for the long-term because no new training lands are being created. This means that functional ecosystems on army lands must be sustained indefinitely. Thus the future of Fort Greely and Donnelly Training Area and its military mission, as well as the community that depends upon the installation, relies on maintaining functional ecosystems.

### 3.1 Ecosystem Management Goals and Objectives

DOD has endorsed ecosystem management, stating the DOD goal with regard to ecosystem management is *“To ensure that military lands support present and future training and testing requirements while preserving, improving, and enhancing ecosystem integrity. Over the long term, that approach shall maintain and improve the sustainability and biological diversity of terrestrial and aquatic (including marine) ecosystems while supporting sustainable economies, human use, and the environment required for realistic military training operations.”<sup>2</sup>* Ecosystem management goals and objectives all contribute to one or more of the overall natural resources program goals of stewardship, military training support, compliance, quality of life, and integration. Ecosystem management goals and objectives are listed below:

- Provide an indicator of ecosystem integrity, status of sensitive species or communities, and other special interests.
- Implement an adaptive management strategy by providing current and predictive natural resources information that will affect land-use decision-making.
- Pinpoint areas where management could positively affect ecosystems.
- Protect and conserve all biological communities, including game and nongame species.
- Ensure that Fort Greely and Donnelly Training Area’s natural resources program is coordinated with other agencies and conservation organizations with similar interests.
- Sustain natural landscapes required for the training and testing necessary to maintain military readiness.
- Provide the greatest return on DOD’s investment to preserve and protect the environment.
- Expedite the environmental compliance process and help avoid conflicts.
- Engender public support for the military mission.
- Improve the quality of life for military personnel.

Objectives and guidelines for achieving these goals are listed below:

- Develop a vision of ecosystem health.

---

<sup>1</sup> Sherri W. Goodman, Deputy Under Secretary of Defense (Environmental Security)

<sup>2</sup> Department of Defense Instruction Number 4715.3, Environmental Conservation Program, May 3, 1996, specifically Enclosure 6.

- Develop priorities and reconcile conflicts in land-use decisions.
- Maintain and improve the sustainability and native diversity of ecosystems.
- Administer with consideration of ecological units and evolutionary time frames.
- Support sustainable human activities.
- Develop coordinated approaches to work toward ecosystem health.
- Use benchmarks to monitor and evaluate outcomes.
- Implement through installation plans and programs.
- Support the military mission.
- Use joint planning between natural resources managers and military operations personnel.
- Integrate conservation of ecosystem integrity into INRMP, ITAM, and other planning protocols.
- Involve internal and external stakeholders up front.
- Emphasize the regional (ecosystem) context.
- Involve scientists and use the best science available.
- Concentrate on results.

## 3.2 Ecosystem Management Planning

Ecosystem management program planning and management includes all the planning, budgeting, overseeing contracts, and organization necessary to implement the ecosystem management program. The primary emphasis for this component of the ecosystem management program is the preparation and update of the ecosystem management action plan every five years.

### 3.2.1 Ecosystem Management Plan

**Description and Justification:** Prepare, update, and implement an Ecosystem Management Action Plan for Fort Greely and Donnelly Training Area. The ecosystem management program at Fort Greely and Donnelly Training Area strives to integrate the use of the land by a large number of organisms, including humans. This integration of land-uses, or management of multiple-uses, is accomplished at a broad, landscape scale (see section 3.4 for more discussion of the ecosystem management program). An important part of the ecosystem management plan is the selection of species for management and the determination of specific monitoring and management actions for each species. The ecosystem management plan also develops a GIS-based protocol to help with the resolution of current and predicted land-use conflicts. This is done both for conflicts between habitats for wild species and ‘habitats’ for human land-uses, and between the two major human land-use categories, recreational and military land-use. Updates of the ecosystem management plan are required by Public Law 106-65 (Military Land Withdrawal Act) as mitigation for the land withdrawal LEIS and Public Law 86-797 (Sikes Act) every five years to implement the INRMP. Per Memorandum DAIM-ED-N, 21 March 1997, this component of the INRMP is a class 1 requirement.

#### **Measures of Effectiveness:**

- Complete, update, and maintain an ecosystem management plan
- Maintain ecosystem integrity at the landscape scale while allowing the military to train and maintain combat readiness.
- Involve federal and state resources agencies in ecosystem management planning, and the public in review of the ecosystem management program.

**Management History:** The first ecosystem management plan for Fort Greely and Donnelly Training Area was completed in 2001.

**Current Management:** Current management actions to update the ecosystem management plan will cease in 2002. If this INRMP is not approved and funded, no new ecosystem management plan will be prepared, updated, or implemented. Policies already in place in the current ecosystem management plan will continue.

**Proposed Management:**

**Table 3-1. Ecosystem Management Plan.**

OBJECTIVE	RESPONSIBLE FOR IMPLEMENTATION	PRIORITY	IMPLEMENTATION				
			2002	2003	2004	2005	2006
Evaluate and make changes to the ecosystem management plan annually, following an adaptive management approach.	USARAK Natural Resources	High	x	x	x	x	x
Prepare a comprehensive update of the ecosystem management plan for the period 2007-2011.	USARAK Natural Resources	High					x
Complete NEPA documentation for update	USARAK Natural Resources	High					x

**Other Management Alternatives Considered and Eliminated:** There are no alternatives to maintaining a current ecosystem management plan. Per the Sikes Act, AR 200-3, and Memorandum DAIM-ED-N, 21 March 1997, this management action plan must be updated every five years.

### 3.2.2 Aerial Monitoring Management Plan

**Description and Justification:** Prepare, update, and implement an aerial monitoring management action plan for Fort Greely and Donnelly Training Area. Because of accessibility problems for much of Fort Greely and Donnelly Training Areas' land, aerial monitoring is a tool that is required to keep track of military, recreation, trespass, and fish and wildlife use of training lands. This plan discusses the specific actions necessary to accomplish monitoring on Fort Greely and Donnelly Training Area. Updates of the aerial monitoring management plan are required by Public Law 106-65 (Military Land Withdrawal Act) as mitigation for the land withdrawal LEIS and Public Law 86-797 (Sikes Act) every five years to implement the INRMP. Per Memorandum DAIM-ED-N, 21 March 1997, this component of the INRMP is a class 1 requirement.

**Measures of Effectiveness:**

- Complete, update, and maintain the aerial monitoring management plan
- Increase efficiency of monitoring efforts on Fort Greely and Donnelly Training Area through aerial monitoring planning.
- Involve resource agencies in planning for aerial monitoring and the public in review of the plan.

**Management History:** The first aerial monitoring action plan for Fort Greely and Donnelly Training Area was completed in 2001.

**Current Management:** Current management actions to update the ecosystem aerial monitoring management plan will cease in 2002. If this INRMP is not approved and funded, no new ecosystem aerial

monitoring management plan will be prepared, updated, or implemented. Policies already in place in the current ecosystem aerial monitoring management plan will continue.

***Proposed Management:***

**Table 3-2. Ecosystem Aerial Monitoring Management Plan.**

OBJECTIVE	RESPONSIBLE FOR IMPLEMENTATION	PRIORITY	IMPLEMENTATION				
			2002	2003	2004	2005	2006
Conduct annual updates of the ecosystem aerial monitoring management action plan	USARAK Natural Resources	High	x	x	x	x	x
Prepare a comprehensive update of the aerial monitoring plan for the period 2007-2011.	USARAK Natural Resources	High					x
Complete NEPA documentation for update	USARAK Natural Resources	High					x

***Other Management Alternatives Considered and Eliminated:*** There are no alternatives to maintaining a current ecosystem aerial monitoring management plan. Per the Sikes Act, AR 200-3, and Memorandum DAIM-ED-N, 21 March 1997, this management action plan must be updated every five years.

### **3.3 Ecosystem Management Inventory and Monitoring**

The inventory and monitoring components of the ecosystem management program will be conducted using the concept of adaptive management. Simply put, adaptive management involves learning from one's mistakes, and then applying those lessons to the management program. Adaptive management will be used to evaluate the results of all the inventory and monitoring programs at Fort Greely and Donnelly Training Area and ecosystem management actions as well, and this information will then be used to make changes as needed. The inventory and monitoring programs listed in chapters 3-7 of this plan, and especially Chapter 5, are used as the primary sources of data for the process of adaptive management in the ecosystem management program.

### **3.4 Ecosystem Management**

#### **3.4.1 Maintenance of Ecosystem Integrity**

As stated above, the goal of the ecosystem management program at Fort Greely and Donnelly Training Area is to maintain ecosystem integrity and continue to train soldiers to a high level of military readiness. Ecosystem integrity, sometimes referred to as biodiversity, includes the concept of biological diversity as well as the ecological and evolutionary processes that contribute to the maintenance of functioning ecosystems and the production of biological diversity itself. Ecosystem integrity also encompasses several levels and geographic scales in the hierarchy of life, including ecosystem diversity, community diversity, species diversity, and genetic diversity (Noss and Cooperrider 1994). USARAK is using an ecosystem management process to maintain ecosystem integrity on Fort Greely and Donnelly Training Area by

managing for a large number of species simultaneously, managing for a variety of habitats and structural vegetation types, and striving to maintain natural processes on the landscape.

DOD is developing a policy for the management of ecosystem integrity that will use the INRMP process as the implementation tool. A first step in this process was the preparation of *A Department of Defense (DOD) Biodiversity Management Strategy* (The Keystone Center 1996). In that report the authors note that the challenge is “*to manage for biodiversity in a way that supports the military mission.*” The Keystone Center strategy identifies the INRMP as the primary vehicle to implement protection of ecosystem integrity on military installations.

Conservation of ecosystem integrity is a large commitment, and ecosystem management is increasingly recognized as an important means to achieve this commitment. Although ecosystem management is not mandated by law, its implementation is a proactive approach that will help in the process of complying with existing environmental laws such as the Endangered Species Act, Sikes Act, Clean Water Act, and NEPA.

### **3.4.2 Ecosystem Management Program Procedures**

The basic strategy of the ecosystem management program, in attempting to both maintain ecosystem integrity and promote military training, is to integrate the use of the land by a large number of species, including humans. Critical to the ecosystem management program at Fort Greely and Donnelly Training Area, but a common theme in all ecosystem management programs (Grumbine 1994; Yaffee et al. 1996), is the treatment of human land use as a component of the ecosystem. Under ecosystem management, humans are not viewed as outsiders, but as members of ecosystems, just as other wild species are members of ecosystems. Human use of the land is directly incorporated into the management program from the start (see below). Then with a set of land users (wild species and humans), the goal is to manage at scales large enough to maintain a set of critical habitats and habitat corridors for a large number of species while also facilitating use of the land for military training. The scale of management is currently the entire post at Fort Greely and Donnelly Training Area. Eventually we would like to see coordination in land management with adjacent land holders, as this will more adequately represent regional ecosystems, especially for the larger bird and mammal species, but currently we are limiting management to lands directly under army control. In our decision-making processes, however, we will, as much as possible, take into account the landscapes that are contiguous with Fort Greely and Donnelly Training Area.

The ecosystem management program at Fort Greely and Donnelly Training Area uses a habitat-based approach. This is because (1) habitats are critical for the continued survival of animal and plant populations, (2) it is next to impossible to directly monitor the population sizes of all the important species occurring in any single ecosystem, and (3) we can manipulate vegetation and create or restore habitats for some species. The first step in constructing this habitat-based model for ecosystem management is to determine the set of species to be managed. In selecting species for management, we use four objectively determined criteria representing both biological and human social attributes, and strive to avoid strong subjectivity in the selection process. The list focuses on species of conservation concern, important predator and prey species, and game species. Currently there are 97 species on this list for Fort Greely and Donnelly Training Area (35 birds, 32 mammals, 24 vascular plants, 5 fish, and 1 amphibian).

With a set of species to manage, we then determine the habitat preferences for each species and create spatially explicit data for each species in a GIS. Habitat preferences are assigned using the combined knowledge of many biological field workers in Alaska and local knowledge of the natural history at Fort Greely and Donnelly Training Area. Habitat preferences are currently based upon the ecological land

classification for Fort Greely and Donnelly Training Area. This ecological land classification categorizes areas sharing similar vegetation, elevation, topography, landforms, soils, and hydrology.

To model the integration of land uses across the landscape, we make use of existing GIS data layers representing how the military uses the land and how recreational land uses occur across Fort Greely and Donnelly Training Area. Initially we start with a formal designation of areas to be set aside for intensive human use, areas for less intensive human use (some alteration of habitats may occur), and areas in which no alteration of natural habitats will occur. (This process is described in more detail in Chapter 5, Section 5.4.4.2, see especially Figure 5-7.) By performing overlay operations of these human land-use GIS data layers upon each other, and also sequentially overlaying each human land-use data layer upon each of the species habitat preference data layers (above), we can pinpoint areas where conflicts in land use may occur. We can also use this same process to predict how proposed changes in human land use, for example, will affect the habitats of numerous species on Fort Greely and Donnelly Training Area. Using a landscape approach on the GIS, we will then evaluate the predicted changes in habitats for each species based upon the amount of preferred habitat remaining for each species elsewhere on post, and the geographic pattern of those habitat patches. In other words, we will evaluate both the size and connectivity of remaining habitat patches to decide whether a proposed habitat change will be biologically significant or not.

These spatial data on current and predicted conflicts between military and recreational land uses, and between human land-uses and species' preferred habitats will be used heavily in the land-use decision-making processes at Fort Greely and Donnelly Training Area. They will not eliminate the hard choices that often have to be made, but they will provide much needed data for a number of species, for example, that have traditionally been overlooked in such land-use decisions. These data will also provide a larger, landscape and multi-species perspective from which to make land-use decisions.

It is important to remember that in all land-use decisions, military training is by definition the primary land use at Fort Greely and Donnelly Training Area. Other appropriate land uses will be accommodated if they fit within the framework of the military mission. The maintenance of ecosystem integrity, however, as noted at the beginning of this chapter, often is not at odds with the goals of military training. The following sections discuss the details of the integration of public access for recreational purposes, and the integration of the management of natural resources with the land-use activities conducted by the military.

### **3.4.3 Ecosystem Users**

As mentioned above in Section 3.4.2, human land use under ecosystem management is considered a component of the ecosystem. Range Control is the primary entity responsible for integrating the various human activities across the landscape. Fort Greely and Donnelly Training Area is on public domain land withdrawn for military purposes and therefore the military has primary use of the land. The ITAM program exists to spread that use across the landscape into areas that can best fit with the type of training being conducted. This minimizes disturbance to the ecosystem from the military mission. Military use, however, does not occur at all locations at all times of year. This allows for recreational users, subsistence users, and commercial users to all utilize Fort Greely and Donnelly Training Area in varying degrees.

### **3.4.4 Land Use**

This section defines the various land uses that occur on Fort Greely and Donnelly Training Area.

#### **3.4.4.1 Land Use and the Military Mission**

**Military Use:** Military land use on Fort Greely and Donnelly Training Area can be separated into two broad groups, urban areas and training areas. Urban areas include most of the developed areas on an installation. Training areas also can be separated into two broad categories, maneuver training and weapons training. Maneuver training is conducted primarily in training areas. A training area is space for ground and air combat forces to practice movements and tactics as specified in the unit's Army Training and Evaluation Program (ARTEP). Different unit types may work in support of one another (combined arms), or the unit may operate on its own to practice a specific set of ARTEP tasks. Included in these areas are bivouac sites, base camps, drop zones, artillery and mortar firing points, and other miscellaneous training areas. Each training area is managed and scheduled by Range Control. Weapons training also has land-based requirements. Weapons training occurs primarily on firing ranges, and munitions from firing ranges land in surface danger zones or impact areas. Military land-use categories on Fort Greely and Donnelly Training Area are shown in Figure 3-1. Descriptions for each military land-use category are listed in Table 3-3.

**Table 3-3. Military Land Use.**

General Land Use Type	Primary Military Land Use Category	Secondary Military Land Use Category	Size	Description
Urban Areas	Cantonment Area		322 acres	The cantonment area is where most of the buildings are located. These built-up areas include buildings for office use, indoor training facilities and housing for soldiers and their families.
	Recreation Areas		217 acres	Areas are designated as recreation areas when recreation use is the primary land use. Examples include the skeet range and the Twin Lakes fishing area.
	Ammunition Storage		106 acres	Ammunition Storage areas are off-limits areas where ammunition is stored. These areas are typically fenced off and are not compatible with other land uses.
Training Areas	Weapons Training	Firing Ranges	350 acres	Ranges are semi-permanent or permanent facilities for weapons firing, demolition, assault courses, or other specific training, usually with associated buildings or berms. This includes firing ranges, assault courses, urban assault areas, etc. Firing ranges are areas that are controlled and restricted for firing live ammunition from direct fire or line of sight weapons systems at targets within a controlled area. Typically, a range has left and right boundaries that extend from the firing line forward to just past the last target array. Training ranges are normally reserved and equipped for practice and qualification in weapons delivery and/or shooting at targets. Further, training ranges constitute a functional complex that normally includes a range control tower with associated firing points, lanes or pits, a cleared or graded area, target system emplacements, and a firing flag and flagpole, in addition to equipment-in-place such as target control systems, target systems, targets and fixed PA system components. A range could include area for back blast safety zones, which can have a secondary use as non-duded impact area or maneuver area.

General Land Use Type	Primary Military Land Use Category	Secondary Military Land Use Category	Size	Description
		Non-Dudded Impact Areas	85,120 acres	A surface danger zone or a non-dudded impact area is an area that has designated boundaries within which ordnance that does not produce duds will impact. This area is composed mostly of the safety fans for small arms ranges. The primary function of the impact area is to contain weapons effects as much as possible using earthen berms or natural terrain features. These impact areas may be used for maneuver, at the cost of curtailing use of weapons ranges.
		Dudded Impact Areas	62,010 acres	A dudded or high intensity impact area is an area having designated boundaries within which all potential dud-producing ordnance will detonate or impact. Vehicle bodies are sometimes placed in the area to act as targets for artillery direct and indirect fire. The primary function of the impact area is to contain weapons effects as much as possible using earthen berms or natural terrain features. Impact areas containing potential unexploded ordnance may not be used for maneuver.
	Maneuver Training Areas	Maneuver Areas	888 acres	Maneuver areas generally are open to semi-open areas where vehicles can move without running into obstacles such as trees, range buildings, streams, wetlands, lakes, etc. Military activities which occur in maneuver areas include conducting offensive operations, conducting tactical movement, movement to contact, relocating a unit to a new site, defend assigned area, relocating/establishing new area of operations, trail construction, mobility and counter mobility operations, reducing obstacles with equipment, and constructing obstacles with equipment.
		Bivouac Areas	2616 acres	Bivouac areas are areas where units stop together for a period of time. Most often, bivouac areas are semi-open to semi-closed areas where the units "camp out." Activities conducted in bivouac areas are assembly area operations, combat service support operations, and unit security and defense operations.
		Foot Use Areas	468,695 acres	Foot use areas are areas that show little or no impacts from military use. Foot use areas are areas where units are on foot and are conducting movement to contact and land navigation.
		Drop Zones	7413 acres	Drop zones or landing zones are cleared areas used for dropping troops and equipment that are maintained by mowing and hydro-axing. These areas should have vegetation, but are probably highly disturbed. Military activities include airborne assault, air assault in support of combined arms, aeromedical evacuation, and landing zones for rotary wing aircraft.
		Firing Points	90 acres	Firing points are localized areas from which either artillery or mortars are fired. These areas are often open with high vegetation disturbance. Firing points are sometimes also designated by survey markers.
		Airstrips	651 acres	Airstrips and assault strips are semi-permanent or permanent facilities for aircraft landing and taking off that are not paved or part of an urban area.

General Land Use Type	Primary Military Land Use Category	Secondary Military Land Use Category	Size	Description
		Road Corridors	336 acres	Road corridors are defined as semi-permanent or permanent access ways (including ditches and the open right-of-way on each side of the road) which are improved, semi-improved or receive some type of maintenance. <b>Non-permanent or semi-permanent trails that receive no maintenance are not classified as roads and are included in maneuver areas.</b>
		Rights-of-Way	151 acres	Rights-of-way are any area used for utility or pipelines (electric, gas, or communication). Areas bordering either side of improved roads are part of the road corridor and are not considered a separate right of way polygon in this case.
		Excavations	13 acres	Excavations are gravel pits or military engineer training areas and similar types of areas that show signs of digging, either manual or mechanical.

**Natural Resources Management Use:** There are a number of natural resources management land uses on Fort Greely and Donnelly Training Area. Integrated Training Area Management, forest management, fish and wildlife management, habitat management, wetlands management, watershed management, fire management, endangered species management, special interest areas management, pest management, cultural resources management and minerals management all have spatial components and land based requirements. These land uses and their associated programs and projects are discussed in greater detail in the following sections of Chapter 3 through Chapter 7.

**Recreation and Subsistence Use:** Hunting, trapping, fishing, off-road vehicle use, skiing, boating, and cutting firewood all have land based requirements. Maps showing areas open for various recreation and subsistence activities are found in Section 6.2.4.

**Commercial Use:** Commercial timber sales is the primary commercial use that has a spatial component and land based requirements. Maps showing potential areas for commercial timber sales are found in Section 5.2.4.

**Rights-of-way, Easements and Leases:** There are a number of existing rights-of-way, easements, and leases on Fort Greely and Donnelly Training Area. The Alaska pipeline, the Richardson Highway, various power lines, etc. all have land based requirements.

### 3.4.4.2 Surrounding Land Use

Fort Greely and Donnelly Training Area is surrounded by State land except for a tract of Federal land to the south of the West Training Area managed by the Bureau of Land Management. State lands to the north of Fort Greely and Donnelly Training Area are managed for forestry, fish and wildlife habitat, public recreation, and watershed maintenance. Up to 60,000 acres may be designated for agricultural disposal. An additional 1,000 acres is designated for future settlement. Adjacent lands have been and are being used as traditional Tribal hunting lands, in particular by the Healy Lake Traditional Council. Privately owned land exists north of the State land. Adjacent to the eastern boundary of the Fort Greely and Donnelly Training Area, the State has designated bison habitat to provide winter range and alter seasonal movement to minimize damage to area agricultural lands. State lands along the southern boundaries of Fort Greely and Donnelly Training Area are managed for public recreation, mineral exploration, and fish and wildlife habitat. State lands adjacent to the western boundary of Fort Greely and Donnelly Training Area are managed for fish and wildlife habitat, forestry, and mineral exploration. State

lands located on either side of the Richardson Highway (commonly known as the keyhole) are managed for public recreation and designated for settlement (ADNR 1991).

### **3.4.5 Public Access, Encroachment, and Trespass**

Public access and use of Fort Greely and Donnelly Training Area is an important component of ecosystem management. The following section discusses military land use and policy concerning access, trespass, and encroachment.

#### **3.4.5.1 Public Access Policy**

While the Army has been training soldiers around the world for more than a century, it also has provided access to quality recreational opportunities for soldiers, their families, employees, and the general public.

If recreational or management activities conflict with military activities, the military mission comes first. USARAK, however, has shown that these two goals can be met even in the most rigorous and demanding of training environments.

Traditionally, there have been ample opportunities for the public to participate in recreational activities at Fort Greely and Donnelly Training Area. In maintaining a liberal policy of public access, USARAK relies on a responsible public to adhere to installation policies designed to promote physical security, minimize safety hazards, and protect natural and cultural resources. Figure 3-3 shows open and closed areas on Fort Greely and Donnelly Training Area. All recreation activities must be conducted in accordance with applicable rules and regulations.

The Sikes Act states: “*Consistent with the use of military installations to ensure the preparedness of the Armed Forces, each integrated natural resources management plan prepared... shall, to the extent appropriate and applicable, provide for... (F) sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources; (G) public access to the military installation that is necessary or appropriate for the use described in subparagraph (F), subject to requirements necessary to ensure safety and military security...*”

DOD Directive 4715.3, *Environmental Conservation Program*, May 3, 1996, states, “... *Those [DOD] lands shall be made available to the public for educational or recreational use of natural and cultural resources when such access is compatible with military mission activities, ecosystem sustainability, and with other considerations such as security, safety, and fiscal soundness. Opportunities for such access shall be equitably and impartially allocated.*”

Paragraph 2-10 of Army Regulation 200-3, *Natural Resources -- Land, Forest, and Wildlife Management*, states that access by recreational users, “... *will be within manageable quotas, subject to safety, military security, threatened or endangered species restrictions, and the capability of the natural resources to support such use; and at such times as such access can be granted without bona fide impairment of the military mission, as determined by the installation commander.*”

USARAK’s policies regarding public access are within both the spirit and letter of federal law and Army and DOD’s policies, and they will be continued in 2002-2006.

#### **3.4.5.2 Public Access and Military Land Use**

The amount of limitations and restrictions on public access depends on the type of military use. Military use can be broken down into four general categories that affect access.

**Training areas and non-firing facilities:** Training areas encompass approximately 467,381 acres on Fort Greely and Donnelly Training Area. These areas provide a varied terrain for training. The vegetation also varies widely and includes most types common to interior Alaska, from heavily forested riverine areas to alpine tundra. There is an additional 25,234 acres in the outlying areas of the Gerstle River Training Area, Black Rapids Training Site, and Whistler Creek Rock-Climbing Area. Gerstle River Training Area includes a biathlon course and a Forward Arming and Refueling Point for aviation units. Black Rapids and Whistler Creek are small parcels used for specific training, such as cold regions and mountain glacier training.

Public access into training areas is allowed subject to safety restrictions and military security, when access does not impair the military mission, as determined by the installation commander. Compatible uses generally include natural resources management, habitat improvement, mineral or vegetative resources extraction, hunting, fishing, trapping, bird watching, hiking, skiing, dog sledding, and ORV use. In general, activities that are not compatible with training areas include any permanent nonmilitary structures, easements, or leases.

**Firing ranges, safety danger zones, and non-dudded impact areas:** Most of the firing ranges on Fort Greely and Donnelly Training Area are located in the small arms range complex, in the northern section of the impact area between the Richardson Highway and the Delta River. These small arms ranges cover 142 acres. Allen Army Controlled Fire Area is 8146 acres and serves as the surface danger zone and non-dudded impact area for those ranges. Bondsteel Range, built in 1999 and covering 15 acres in Bolio Training Area, is used regularly as a combined arms live fire exercise (CALFEX) range. The Simpsonville CALFEX site, built in 1997 on 64 acres on the eastern edge of TA 77, has been used for Northern Edge, the annual joint readiness exercise. The Lakes Impact Area is primarily a non-dudded impact area between the Delta River and Delta Creek and is 74,565 acres. The Cold Regions Test Center (CRTC) is the primary user of 8961 acres of weapons testing ranges at Bolio Lake Test Site, TA 51 (Mississippi Test Site), and the Texas and Washington ranges in TAs 60 and 63.

Public access into firing ranges, surface danger zones, and non-dudded impact areas is normally not allowed due to conflicts with the military mission. However, there are times during the year when public use does not conflict with military training and public access is allowed into these areas. Compatible uses generally include natural resources monitoring, range maintenance, fire prevention and suppression, hunting, fishing, and trapping. In general, activities that are not compatible with firing ranges, surface danger zones and non-dudded impact areas include any permanent non-military structures, easements, or leases.

**Dudded impact areas:** Donnelly Training Area's dudded impact areas are: Oklahoma Impact Area, Delta Creek Impact Area, Mississippi Impact Area, and Washington Impact Area. Dudded impact areas on Donnelly Training Area cover 63,138 acres. These dudded impact areas are not available for maneuver training. U.S. Air Force relies heavily on the restricted airspace R2202 A, B and C for use of the Oklahoma/Delta Creek Impact Area for bombing and gunnery and for testing various weapon systems.

Public access into dudded impact areas is prohibited because of the hazard of unexploded ordnance. Compatible uses include remote monitoring of natural resources and military impacts, and prescribed burning to reduce fire hazards and improve habitat. Activities that are not compatible with dudded impact areas include any on-the-ground natural resources management, digging in wetlands or anywhere, mineral extraction, commercial timber sales, hunting, fishing, trapping, bird watching, ORVs of any kind, dog sledding, airboats, camping, new construction, easements, and leases.

**Urban Areas:** Fort Greely and Donnelly Training Area has 858 acres of urban area. They include the built-up portion of the Main Post, Allen Army Airfield, the ammunition supply point, and some recreational areas. Most of these are not used for training exercises and are off-limits to tactical vehicles. Some grounds are intensively maintained, but many areas are unimproved and may provide excellent wildlife habitat.

Public access into urban areas is allowed subject to safety restrictions and military security, when access does not impair the military mission, as determined by the installation commander. Compatible uses generally include natural resources management, habitat improvement, mineral or vegetative resources extraction, bird watching, hiking, and skiing. In general, activities that are not compatible with urban areas are hunting and trapping.

### **3.4.5.3 Encroachment Policy**

Encroachment may be defined as legal activities and land use on or next to a military installation that are incompatible with long-term military mission sustainability and success. Building residences and subdivisions right up alongside an installation boundary often results in conflicts with the public resulting from noise and dust. USARAK is committed to working with surrounding landowners to minimize these types of potential conflicts.

Over the last 10 years, USARAK has received numerous requests and proposals from state, federal, and municipal government agencies, businesses, utilities, clubs, organizations, and individuals for authorization or permission to use Army lands for nonmilitary purposes. These requests have included commercial or long-term real estate interests involving rights-of-way, easements, land use permits, leases, outgrants, land transfers, exclusive use areas, and special concessions, many of which have detrimental effects on current or future military training. These types of requests will probably continue in the future as BRAC takes final effect and other possible uses of the main post area are considered.

The term "military purpose" with regard to land use means programs, activities, and facilities necessary to accomplish the military mission and those support elements crucial to its implementation. Any additional long-term nonmilitary uses will create the potential for adverse impacts on training and thereby threaten Fort Greely and Donnelly Training Area's viability as a military installation. Besides the mission, USARAK is mandated by both law and common sense, through sound stewardship, to preserve the integrity and health of the environment. Only by doing this can the military be assured of maintaining the realistic "backdrops" and scenarios crucial to its training.

In general, it is current USARAK policy to deny requests for nonmilitary uses of Fort Greely and Donnelly Training Area properties if those requests include or involve a requirement for long-term real estate commitments such as leases, easements, or land transfers, or if they create a potential adverse impact on the military mission or the environment. The only exceptions to this would be when such actions clearly result in tangible benefits to the military training mission or to the environment. These situations will be carefully scrutinized and evaluated by appropriate staff members. It is also the position of USARAK to adopt a policy which favors temporary, noncommercial low-impact uses of Fort Greely and Donnelly Training Area by the local community, consistent with training and the military mission, as long as the natural resources will not be adversely impacted.

### **3.4.5.4 Trespass**

Illegal entry onto Fort Greely and Donnelly Training Area is the most common form of trespass, which is often the precursor to other illegal range activities. Most illegal activities either directly or indirectly affect natural resources.

Crossing the installation boundary or the internal boundary of an off-limits area without approval constitutes trespass. Little of the installation boundary is fenced or marked with signs, which adds to the problem. However, trespass is often premeditated. Marking the boundary would reduce accidental trespass, but the effect on premeditated trespass would be minimal. Boundary marking can only be as effective in concert with enforcement efforts associated with premeditated trespass.

Trespassing is a problem on Fort Greely and Donnelly Training Area, with most incidents occurring far west of the Delta River. Most are related to commercial and private fly-ins. Failure to enforce hunting, fishing, and trapping check-in requirements makes trespassing difficult to control on Fort Greely and Donnelly Training Area. It also adds safety risk if people become lost or have emergencies.

Structures built on Fort Greely and Donnelly Training Area without approval from the federal government are considered illegal trespass. Generally, structures are built for use as base camps for hunting and trapping. Problems with trespass structures on Fort Greely and Donnelly Training Area were identified as early as 1982.

The Post Judge Advocate concluded that, “... *the present individuals have no right to construct the cabins. Moreover, paragraph 2-11, AR 405-80 clearly sets out the procedures to be followed in the event of an unauthorized use. The command should take immediate action to discontinue use of the land and obtain compensation for its use to date. If the individuals can be located the command should request them to vacate the land. If efforts are not successful the matter should be referred to the division district engineer for further action.*” Specific concerns regarding unauthorized cabins are listed below.

- Trespass structures cause interference with military training missions.
- Trespass structures are “incompatible” land uses.
- Persons building trespass structures deny the public authorized uses of those parcels of land.
- The Army and AFS have responsibilities to protect people occupying trespass structures from wildfires, and face hazards during a fire from fuel or propane that may be on site.
- The Army’s liability in the event a person is hurt in a trespass structure is uncertain.
- Once a precedent is set, allowing structures to be built on Army lands, it is difficult to change.

In 1987 it was stated that trespass structures could be important to trapper “survival,” and it was noted that it was in the Army’s best interest to maintain a civil relationship with these trappers. This action resulted in an Encroachment Notice being posted on trespass structures with the following statements:

- These structures are negative to the military mission and protection of natural resources, and future action may be taken to reduce or eliminate this conflict by destroying or moving encroachment structures.
- Unauthorized improvements on Army-controlled lands become the property of the Army, but such improvements may be removed by the builder within six months, with prior approval of the Garrison Commander.
- Until the Army decides to take action against these improvements, they may remain at the builder’s and user’s risk if permission is obtained to enter Fort Greely and Donnelly Training Area. Cabins remain open to the public for temporary recreational purposes on a first-come, first-served basis; the Army assumes no responsibility for loss or damage of these structures or their contents, and no adverse possession rights accrue against the government because of the continued existence of the improvements.

*The Fort Greely Resource Management Plan* (BLM and U.S. Army 1994) proposes that only the federal government and private developers authorized by the government may erect or maintain structures on

Fort Greely and Donnelly Training Area. All unauthorized use of the land or resources will be investigated and either permitted or stopped. All unauthorized structures are subject to possession by the government following proper notice.

In 1998 USARAK took action to begin the process of removing trespass structures. Public announcements were made whereby owners had until October 1, 1998, to register structures. Registered structure owners had two years to remove them. After June 1, 2000, USARAK began removing unregistered structures and their possessions. This course of action will continue to be pursued until all trespass structures are removed from Fort Greely and Donnelly Training Area.

### **3.4.6 Fort Greely and Donnelly Training Area as Part of a Regional Ecosystem Management Effort**

**Regional Bird Partnerships:** The USFWS plans to conduct a habitat assessment of wetlands in the Fairbanks area, primarily to categorize bird usage of different wetland classifications. The Waterways Experiment Station (WES) wetland delineation on Fort Greely and Donnelly Training Area may be useful to this project. No additional wetland inventories are planned for the next five years.

**Regional Habitat Restoration Goals:** ADF&G uses prescribed burning for habitat restoration (creating age class mosaics and successional vegetation amongst willow, spruce, birch, alder, etc.) on state lands west of Wood River (approximately 90 miles west of Fort Greely and Donnelly Training Area). This burning is facilitated through the *Western Tanana Flats Prescribed Burning Plan* (State of Alaska 1995). This plan has three goals and three objectives.

Goals:

- Restore age diversity among aging vegetative types, thereby maintaining or enhancing wildlife habitat values for species needing early to mid-successional stages.
- Maintain or enhance wildlife use opportunities in areas close to human population centers in interior Alaska.
- Reduce the risk of unmanageable, expensive, and potentially dangerous wildland fires that could threaten adjacent communities and protected timber resources.

Objectives:

- Burn 50%-70% of each of the three core areas.
- Kill at least 50% of the existing black spruce with a burn of varying intensities to allow the shrub understory component to proliferate by sprouting.
- Kill at least 50% of existing aboveground stems of birch, aspen, poplar, and willow to promote root or basal sprouting.

This plan includes discussions of preburn considerations, public notice of planned burns, burning prescriptions, ignition methods, smoke management considerations, holding plan, contingency plan for fire escape, communications and coordination, and monitoring and evaluation. This plan could be used as the basis for a Fort Greely and Donnelly Training Area prescribed burning plan.

### **3.4.7 Land Management Units**

#### **3.4.7.1 Military Training Areas**

Fort Greely and Donnelly Training Area schedules and controls military training and other land use with military training areas. Donnelly Training Area is divided into 73 numbered training areas. Of these, six

are ranges and five are drop zones. Training areas 1 through 34 are east of the Richardson Highway, training areas 40 through 63 are between the Richardson Highway and the Delta River, and 71 through 86 are west of the Delta River. Those west of the Delta River are accessible by air year-round, and by ice bridge during the winter.

### **3.4.7.2 Ecological Management Units**

Ecosystem management on Fort Greely and Donnelly Training Area will be accomplished on a landscape scale using the principles of landscape ecology. Multiple-use concepts will be applied across the landscape. While all land uses will be considered across the landscape, not every use may be compatible on each acre. GIS will be used to identify compatible land uses, enabling USARAK to implement ecosystem management. Each ecological management unit will have a management prescription that will define compatible uses, prioritize uses, access and delineate ecosystem management objectives. Prioritizing land uses for each management unit guides conflict resolution. Ecological management units on Fort Greely and Donnelly Training Area are shown in Figure 3-2.

Ecological management units follow roughly the boundaries of the ecodistricts cited in the ecological land classification for Fort Greely and Donnelly Training Area (Jorgensen et.al. 2001). Ecological management sub-units generally follow training area boundaries, because training area boundaries determine use and access.

Each ecological management unit will be managed under one or more management levels described below:

***Intensive Management:*** Intensive management areas are sub-units that are highly populated, receive high levels of use and are easily accessible by road. All forms of surveys, monitoring, and active management of land, forest, fish and wildlife, and recreation resources may be conducted.

***Full Management:*** Full management areas are sub-units that receive use and are accessible by road. All forms of surveys, monitoring, and active management of land, forest, fish and wildlife, and recreation resources may be conducted with exception of intensive urban area management options.

***Modified Management:*** Modified management areas are sub-units that receive use, are not accessible by road, but are open to public access. All forms of surveys, monitoring, and active management of land, forest, fish and wildlife, and recreation resources may be conducted, but may not be practical.

***Limited Management:*** Limited management areas are sub-units where public access is prohibited. Methods of ecosystem management will concentrate on remote monitoring and passive means of conducting management.

The following sections discuss each ecological management unit in terms of description and management objectives. Following each ecological management unit are descriptions of ecological sub-units in terms of location, description, public access policies, compatible uses, management priorities, and summaries of management alternatives.

#### ***3.4.6.2.1 Donnelly East Ecological Management Unit***

***Location and Description:*** The Donnelly East Training Area consists of one ecological management unit called Donnelly East. The Donnelly East ecological management unit consists of all of Fort Greely and Donnelly Training Area east of the Delta River, except for the area commonly known as the keyhole,

which is private land that surrounds the Richardson Highway. Donnelly East is made up of three sub-units.

The first sub-unit is the Ranges sub-unit. The Ranges sub-unit includes all of the firing ranges that make up the Wills Range Complex, Texas Range and Washington Range.

The second sub-unit is the Fort Greely Main Post sub-unit. This sub-unit encompasses all of the buildings and urban areas on Fort Greely.

The third sub-unit is Donnelly East Training Areas sub-unit. This sub-unit consists of all remaining areas in Donnelly East Ecological management unit not included in the Fort Greely Main Post sub-unit or the Ranges sub-unit.

**Land Use:** The Donnelly East Training Area is used primarily as a maneuver area. Battalion-sized and larger elements of the 172<sup>nd</sup> Infantry Brigade train throughout the year. Training exercises may include deployment of troops by truck and helicopter, field bivouac, and construction of temporary fighting/defensive positions. Exercises typically involve approach marches, weapons firing, and infantry tactical maneuvers. CRTC utilizes the East Training Area for experimental airdrops; airborne training; and testing of clothing, vehicles, and equipment.

The Fort Greely Main Post sub-unit is suitable for small unit training, classroom training, individual training, non-fire range facilities, housing, and office facilities. Other compatible uses include improved grounds management, natural resources management, fishing, bird watching, hiking, skiing, camping, and new construction. Activities that are not compatible in the Main Post sub-unit are live-fire military training and ORV use.

The Ranges sub-unit is suitable for direct and indirect fire weapon training and aerial gunnery exercises. Small arms munitions impact the area. This sub-unit has been classified for small arms, as a non-dud producing impact area. Other compatible uses include live-fire maneuver training, remote monitoring of natural resources and military impacts, and limited on-the-ground natural resources management. Other activities that are not compatible with this sub-unit include most on-the-ground natural resources management, digging without a permit from the Army Corps of Engineers, mineral or vegetative extraction, hunting, fishing, trapping, bird watching, ORVs of any kind, dog sledding, airboats, camping, new construction, easements, and leases.

The Donnelly East Training Areas sub-unit is suitable for indirect fire weapons, aerial gunnery, small arms, platoon- to brigade-sized exercises, company-sized live-fire exercises, road marches, and bivouacs. This sub-unit is primarily used for large-scale military training exercises, airborne drops, and winter bivouacs. The recommended time for military activities in low areas for mechanized vehicles is between freeze-up and spring break-up. Donnelly, Bear, Fox Drop, and Buffalo Drop Zones and Donnelly Assault Air Strip will sustain year-round use. Eddy and Butch Drop Zones will sustain only winter use. Other compatible uses include natural resources management, habitat improvement, mineral or vegetative resources extraction, hunting, fishing, trapping, bird watching, hiking, skiing, dog sledding, and ORV use. Activities that are not compatible with the Donnelly East Training Areas sub-unit include digging without a permit, and any permanent nonmilitary structures, easements, or leases.

**Public Access:** Public access is allowed in the Donnelly East Training Areas and Fort Greely Main Post sub-units for recreation, subject to safety restrictions and military security, when access does not impair the military mission, as determined by the installation commander. Access is not permitted to unauthorized personnel in the Ranges sub-unit. The Texas Range is covered by R-2202A and R-2202C restricted airspace. R2202A covers up to but not including 10,000 feet MSL. R-2202C covers 10,000

feet MSL to unlimited. Eielson Range Control will activate one or both restricted airspace coverages based on the Air Force's needs. Access into the Wills Range Complex and Texas Range on the ground is prohibited. Military personnel may request permission to enter this sub-unit, and if permission is granted, EOD personnel must accompany personnel.

#### ***3.4.6.2.2 Donnelly West Ecological Management Unit***

The Donnelly West Training Area is used for training and testing weapons and equipment (including experimental designs) under conditions of extreme cold. Weaponry testing include rockets, mortars, small arms, and artillery. The Donnelly West Training Area also is used for testing wheeled and tracked vehicles.

***Location and Description:*** The Donnelly West Training Area consists of one ecological management unit called Donnelly West ecological management unit. The Donnelly West ecological management unit covers all of Fort Greely and Donnelly Training Area west of and including the Delta River. The Donnelly West unit consists of flat, lowland wetlands in the north, portions of the Alaska Range in the south, and most of the Delta floodplain ecodistrict. The Delta River unit contains numerous braided channels and riverbed deposits.

The Donnelly West ecological management unit consists of two sub-units, the Donnelly West Impact Areas sub-unit and the Donnelly West Training Areas sub-unit. The Donnelly West Impact Areas sub-unit consists of Oklahoma, Delta Creek, Lakes, Washington and Mississippi Impact Areas.

***Land Use:*** The Donnelly West Impact Area sub-unit is used for aerial gunnery, surface-to-air, and direct and indirect firing and is the ground and associated airspace within the training complex used to contain fired or launched ammunition and explosives and resulting fragments, debris, and components from various weapons systems. The Lakes Impact Areas are primarily used for live-fire exercises and act as a buffer to Oklahoma Impact Area to the west and Mississippi and Washington Impact Areas to the east. This impact area can also be used for aerial gunnery, surface-to-air, and direct and indirect firing. Impact areas are the ground and associated airspace within the training complex and are used to contain fired or launched ammunition and explosives and resulting fragments, debris, and components from various weapons systems.

The Donnelly West Impact Area sub-unit is suitable for indirect fire weapon training and aerial gunnery exercises. The area is impacted by small arms and dud-producing munitions. USAF uses the Oklahoma/Delta Creek Impact Area as its primary tactical air-to-ground weapons range, and for low and high altitude bombing by B1 and B52 aircraft. This sub-unit has been classified as a high hazard impact area. Other compatible uses include remote monitoring of natural resources and military impacts, and prescribed burning to reduce fire hazards and improve habitat. Military maneuver is prohibited in the Donnelly West Impact Areas sub-unit. There is hazard of unexploded ordnance in this area. Commanders will ensure that safety personnel maintain surveillance of the area and have the officer-in-charge suspend firing immediately at the approach of an aircraft. Other activities that are not compatible with this sub-unit include any on the ground natural resources management, digging in wetlands without a permit from the Army Corps of Engineers, mineral extraction, hunting, fishing, trapping, bird watching, ORVs of any kind, dog sledding, airboats, camping, new construction, easements, and leases.

The Donnelly West Training Areas sub unit is used primarily for winter exercises only and is suitable for foot training at any time of year. Other compatible uses include natural resources management, habitat management, mineral or vegetative resources extraction, hunting, fishing, trapping, bird watching, hiking, skiing, dog sledding, and ORV use. Activities that are not compatible with the Donnelly West Training

Areas sub-unit include airboats, digging in wetlands without a permit, and any permanent nonmilitary structures, easements or leases.

**Public Access:** Public access into the Donnelly West Training Areas sub-unit is allowed for recreation, subject to safety restrictions and military security, when access does not impair the military mission, as determined by the installation commander. Access into the Donnelly West Impact Areas sub-unit is prohibited. Military personnel may request permission to enter this sub-unit, and if permission is granted, personnel must be accompanied by Explosive Ordnance Disposal (EOD) personnel. Oklahoma/Delta Creek Impact Area has been designated as restricted airspace by the Federal Aviation Administration and can be closed to all aircraft during periods of scheduled firing.

#### ***3.4.6.2.3 Gerstle River Training Area Ecological Management Unit***

The Gerstle River Training Area was formerly known as the Gerstle River Test Site. Currently, no testing is conducted on the training area, and maneuver training is the primary use. The Gerstle River Test Site was used by CRTC for testing chemical, biological, and conventional munitions. Primary use was assumed by the NWTC in the early 1980s for a variety of training, including a biathlon course and a Forward Arming and Refueling Point for aviation units. In 1988, the area came under control of the newly created Range Control, Directorate of Plans, Training, Security, and Mobilization (DPTSM).

**Location and Description:** Gerstle River Training Area is approximately 20,581 acres and is located about 20 miles southeast of Delta Junction along the Alaska Highway. Gerstle River Training Area has primarily flat terrain and is dominated by hardwood spruce forests.

**Land Use:** The Gerstle River Training Area is suitable for small arms, platoon- to brigade-sized exercises, company-sized live-fire exercises, road marches, and bivouacs. This sub-unit is primarily used for small-scale military training exercises and winter bivouacs. The recommended time for military activities in low areas for mechanized vehicles is between freeze-up and spring break-up. Other compatible uses include natural resources management, forest inventory and forest management, habitat improvement, mineral or vegetative resources extraction, hunting, fishing, trapping, bird watching, hiking, skiing, dog sledding, and ORV use. Activities not compatible with the Gerstle River Training Area include digging without a permit, and any permanent nonmilitary structures, easements or leases.

**Public Access:** Public access into the Gerstle River Training Area is allowed for recreation, subject to safety restrictions and military security, when access does not impair the military mission, as determined by the installation commander.

#### ***3.4.6.2.4 Black Rapids Training Area Ecological Management Unit***

Black Rapids Training Area is the primary training area for the Northern Warfare Training Center.

**Location and Description:** Black Rapids Training Area is comprised of Whistler Creek Rock climbing site and the training area surrounding the Northern Warfare Training Center buildings for a total of approximately 3311 acres. Black Rapids Training Area is approximately 50 miles south of the Fort Greely and Donnelly Training Area cantonment area on the Richardson Highway across from the Black Rapids glacier. The terrain is steep with large rocky outcrops.

**Land Use:** The Black Rapids Training Area is suitable for light infantry foot maneuver, limited bivouacs, and rock climbing. This sub-unit is primarily used for small-scale military training exercises and winter bivouacs. Other compatible uses include natural resources management, mineral or vegetative resources extraction, hunting, fishing, trapping, bird watching, hiking, skiing, dog sledding, and ORV use.

Activities not compatible with the Black Rapids Training Area include digging without a permit, and any permanent nonmilitary structures, easements or leases.

**Public Access:** Public access into the Black Rapids Training Area is allowed for recreation, subject to safety restrictions and military security, when access does not impair the military mission, as determined by the installation commander.

#### **3.4.6.2.5 Fort Greely and Donnelly Training Area / Fort Wainwright Land Bridge**

**Location and Description:** USARAK has established a land bridge corridor linking Fort Wainwright TFTA and Fort Greely and Donnelly Training Area through a land use permit with the state. This corridor, on state-owned land, is about eight miles long and 270 yards wide, paralleling the Tanana River.

**Land Use:** The permit allows the Army to construct a winter trail. The trail is roughly 20 feet wide, except for occasional two-lane sections, which are approximately 40 feet wide. The corridor eliminates the need to use Tanana River ice bridges and roads. The corridor provides a 1,222,000-acre contiguous training area, capable of supporting large force-on-force operations (U.S. Army Alaska 1996).

USARAK has used this corridor since the 1960s by obtaining a year-to-year permit from the state. The most recent use occurred in the 1970s. A recently concluded action established this corridor on a recurring basis using a limited land-use permit from the state. No land changed ownership. Current plans are for limited use of the land-bridge corridor, as large force-on-force maneuvers are not scheduled as frequently as they have been in the past. This land bridge corridor action is in anticipation of such use, should these large-scale exercises be repeated in the future.

**Public Access:** There are no public access restrictions on this permitted land.

## **3.5 Ecosystem Management Alternatives**

### **3.5.1 Current Management:**

Ecosystem management has not been implemented on Fort Greely and Donnelly Training Area. Under the current management, all on-going projects will be continued. Current public access policy, as outlined in sections 3.4.4.1 and 3.4.4.2, will remain in effect. Current encroachment policy, as outlined in Section 3.4.4.3, and trespass policy, as described in Section 3.4.4.4, will also remain in effect. Fire management will continue, with full protection for the Main Post and Training Area sub-units and limited protection for all impact areas. USARAK will comply with Section 404 of the Clean Water Act and obtain permits if necessary to dig or disturb wetlands. Hunting and fishing programs will continue. USARAK will manage recreation by controlling access.

Under the current management alternative, no new ecosystem management planning, inventory, monitoring, or management actions, as listed under the proposed management section below, will be conducted after current management actions cease in 2002.

### **3.5.2 Proposed Management:**

Under the proposed management alternative, USARAK will manage all East Training Areas and Range ecosystem management sub-units as full management areas, the Main Post sub-unit as an intensive management area, West Training Areas sub-unit as a modified management area and Impact Area sub-

unit as a limited management area (see section 3.4.7.2 for descriptions of management levels). USARAK will maintain public access as outlined in sections 3.4.4.1 and 3.4.4.2 and will limit encroachment as outlined in Section 3.4.4.3. Fire protection categories for all sub-units will be full protection except for impact areas, which will receive limited protection.

Under the proposed management alternative, USARAK will comply all laws, regulations, and Executive Orders pertaining to natural resources management. USARAK will complete ongoing projects, conduct annual updates and five-year rewrites of the ecosystem management plan and the aerial monitoring plan, and conduct full implementation of ecosystem management projects. USARAK will conserve physical resources by conducting Integrated Training Area Management (ITAM), watershed management, and minerals management. USARAK will conserve biological resources by conducting wetlands management, forest management, fish and wildlife management, endangered species management, pest management, and urban area management. USARAK will integrate social (human) resources into ecosystem management by conducting education, awareness and public outreach, conservation enforcement, outdoor recreation management, and cultural resources management. USARAK will support ecosystem management decision-making through implementation of NEPA, GIS, and other decision support systems, and integration with other land management programs such as RTLP and RPMP.

***Proposed Management Objectives:***

- Maintain public access as outlined in sections 3.4.4.1 and 3.4.4.2.
- Limit encroachment as outlined in Section 3.4.4.3.
- Manage the Greely East Training Areas sub-unit as full management area.
- Manage the Ranges sub-unit as modified management area.
- Manage the Greely Main Post sub-unit as a full management area.
- Manage the Greely West Training Areas sub-unit as a modified management area.
- Manage the Greely West Impact Areas sub-unit as a limited management area.
- Manage Gerstle River Training Area as a full management area.
- Manage Black Rapids Training Area as a modified management area.
- Manage Fort Wainwright/Donnelly Training Area Land Bridge as a modified management area.

**Table 3-4. Proposed Management Projects.**

OBJECTIVE	RESPONSIBLE FOR IMPLEMENTATION	PRIORITY	IMPLEMENTATION				
			2002	2003	2004	2005	2006
Conduct Soil and Water Quality Monitoring	USARAK Natural Resources	High	x	x	x	x	x
Conduct Conservation Enforcement	USARAK Natural Resources	High	x	x	x	x	x
Conduct Wetlands Monitoring	USARAK Natural Resources	High	x	x	x	x	x
Conduct Wetlands Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Endangered, Threatened, and Rare Species Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Erosion Control and Streambank Stabilization	USARAK Natural Resources	High	x	x	x	x	x

OBJECTIVE	RESPONSIBLE FOR IMPLEMENTATION	PRIORITY	IMPLEMENTATION				
			2002	2003	2004	2005	2006
Conduct Fish and Wildlife Monitoring	USARAK Natural Resources	High	x	x	x	x	x
Conduct Geographic Information Systems Projects	USARAK Natural Resources	High	x	x	x	x	x
Conduct Soil Planning Level Survey Update	USARAK Natural Resources	High	x	x	x	x	x
Conduct Floristics Planning Level Survey Update	USARAK Natural Resources	High	x	x	x	x	x
Conduct Vegetation Planning Level Survey Update	USARAK Natural Resources	High	x	x	x	x	x
Conduct Wetlands Planning Level Survey Update	USARAK Natural Resources	High	x	x	x	x	x
Conduct Fauna Planning Level Surveys Update	USARAK Natural Resources	High	x	x	x	x	x
Conduct Environmental Awareness	USARAK Natural Resources	High	x	x	x	x	x
Conduct Natural and Cultural Resources Education and Awareness	USARAK Natural Resources	High	x	x	x	x	x
Conduct Soil and Water Quality Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Recreational Use Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Training Requirements Integration	USARAK Natural Resources	High	x	x	x	x	x
Conduct Land Condition-Trend Analysis Monitoring	USARAK Natural Resources	High	x	x	x	x	x
Conduct Land Rehabilitation and Maintenance	USARAK Natural Resources	High	x	x	x	x	x
Conduct Special Interest Areas Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Fish and Wildlife Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Recreational Use Monitoring	USARAK Natural Resources	High	x	x	x	x	x
Conduct Habitat Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Forest Inventory	USARAK Natural Resources	High	x	x	x	x	x
Conduct Forest Management	USARAK Natural Resources	High	x	x	x	x	x
Conduct Fire Inventory	USARAK Natural Resources	High	x	x	x	x	x

***Other Management Alternatives Considered and Eliminated:*** There are many different options for conducting ecosystem management on Fort Greely and Donnelly Training Area. However, funding high priority projects is the only option that will fully cover USARAK's stewardship responsibilities to manage Fort Greely and Donnelly Training Area. Options to provide more intensive management of the ecosystem at Fort Greely and Donnelly Training Area are cost-prohibitive. There are no other options for public access. Public access is already allowed to the maximum extent possible around the military mission. Encroachment is not compatible with the long-term sustainable military mission and therefore no other options for other than military use can be considered.

### **3.6 Ecosystem Management Responsibilities**

Ecosystem management on Fort Greely and Donnelly Training Area is the primary responsibility of USARAK. Coordinating the many land uses on post is the responsibility of DPTSM Range Control, while management of natural resources and recreation is the responsibility of DPW. Most commercial uses and all leases, easements and rights-of-way must be permitted by BLM, with concurrence by USARAK. Both USFWS and ADF&G play integral roles in ecosystem management, both on the installation and in regional ecosystem management efforts.

**Figure 3-1. Fort Greely and Donnelly Training Area Military Land Use.**

**Figure 3-2. Fort Greely and Donnelly Training Area Ecosystem Management Units.**

**Figure 3-3. Fort Greely and Donnelly Training Area Public Access.**