



**FINAL  
ENVIRONMENTAL ASSESSMENT  
February 2008**



**WIDE AREA COVERAGE  
CONSTRUCT LAND MOBILE NETWORK  
COMMUNICATIONS INFRASTRUCTURE  
MALMSTROM AFB, MONTANA**

Report Documentation Page		Form Approved OMB No. 0704-0188
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.		
1. REPORT DATE <b>FEB 2008</b>	2. REPORT TYPE	3. DATES COVERED <b>00-00-2008 to 00-00-2008</b>
4. TITLE AND SUBTITLE <b>Final Environmental Assessment for Wide Area Coverage Construct Land Mobile Network Communications Infrastructure Malmstrom Air Force Base, Montana</b>	5a. CONTRACT NUMBER	
	5b. GRANT NUMBER	
	5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)	5d. PROJECT NUMBER	
	5e. TASK NUMBER	
	5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Earth Tech,1999 Avenue of Stars Ste 2600,Los Angeles,CA,90067</b>	8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)	
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT <b>The Interoperability Montana (IM) Project is initiating a comprehensive communication system to be implemented across Montana. The system will provide advanced digital, secure voice and data communications for public safety organizations. The system will be based on current federal and state communication standards in which federal, state, and local public safety and emergency management representatives can operate autonomously and transition seamlessly to communicate effectively during emergency situations. The effort involves upgrading equipment, antennas, and utility connections at mostly existing communication sites across central Montana. The 11 communication sites included in the upgraded network include Belgian Hill, Cooney, Flying J, Garneill, Highwood Baldy, Judith Peak, Malmstrom AFB Building 500, Pacific Steel, South Moccasin, Sullivan, Teton Ridge, and South Peak. The proposed South Peak communication site is an alternative to using Highwood Baldy. This EA has been prepared in accordance with the National Environmental Policy Act to analyze the potential environmental consequences of the Proposed Action and alternatives. Three alternatives were examined: the Proposed Action, the South Peak Alternative, and the No-Action Alternative. The Proposed Action involves the establishment of 11 Wide Area Coverage (WAC) communication sites across central Montana. The South Peak Alternative involves establishing 11 WAC communication sites across central Montana; however, South Peak would be used as a communication location rather than Highwood Baldy Peak. The No-Action Alternative involves not implementing WAC communication upgrades. The environmental resources potentially affected by the Proposed Action and alternatives are land use and aesthetics, hazardous materials management, hazardous waste management, storage tanks, asbestos, lead-based paint, soils and geology, biological resources, and cultural resources. Based on the nature of the activities that would occur under the Proposed Action and alternatives the Air Force has determined that minimal or no adverse effects to the above resources are anticipated.</b>		
15. SUBJECT TERMS		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>217</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			





**FINDING OF NO SIGNIFICANT IMPACT  
WIDE AREA COVERAGE  
CONSTRUCT LAND MOBILE NETWORK COMMUNICATIONS INFRASTRUCTURE  
MALMSTROM AIR FORCE BASE, MONTANA**

The attached environmental assessment (EA) analyzes the potential for impacts to the environment as a result of establishing/modifying 11 communication sites associated with the Wide Area Coverage (WAC), Construct Land Mobile Network Communications Infrastructure across central Montana. The EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [U.S.C.] 4321 et seq.), the Council on Environmental Quality regulations implementing the procedural provisions of NEPA, 40 Code of Federal Regulations (CFR) Parts 1500-1580, and Air Force policy and procedures (32 CFR Part 989).

This Finding of No Significant Impact (FONSI) summarizes the Proposed Action and alternatives and the results of the evaluation of establishing/modifying 11 WAC communication sites.

**Description of Proposed Action and Alternatives**

Proposed Action. The Proposed Action involves establishing a WAC communication system that provides advanced digital, secure voice and data communications for public safety organizations across central Montana. The 11 WAC communication sites include Belgian Hill, Cooney, Flying J, Garneill, Highwood Baldy, Judith Peak, Malmstrom Air Force Base (AFB) Building 500, Pacific Steel, South Moccasin, Sullivan, and Teton Ridge.

Estimated ground disturbance as a result of demolition and construction at each site would be less than one acre; however, approximately 2 miles of access road improvements is proposed for the Garneill communication site (approximately 3.5 acres of disturbance anticipated).

South Peak Alternative. Under the South Peak Alternative, proposed construction and modification activities at the WAC communication sites would be the same as discussed under the Proposed Action; however, South Peak would be used as an alternative communication site in the event that the Highwood Baldy site is unavailable. Estimated ground disturbance as a result of demolition and construction at the South Peak site would be less than one acre; however, approximately 3 miles of new access road is proposed (approximately 5.5 acres of disturbance anticipated).

No-Action Alternative. Under the No-Action Alternative, proposed WAC communication system improvements would not be implemented.

**Summary of Environmental Consequences**

Initial analysis indicated that proposed WAC activities would not result in short- or long-term impacts to socioeconomics, utilities, transportation, medical/biohazardous waste, pesticide usage, polychlorinated biphenyls, radon, ordnance, radioactive materials, water resources, air quality, noise, and environmental justice.

The resources analyzed in more detail are land use and aesthetics, hazardous materials management, hazardous waste management, storage tanks, asbestos-containing material (ACM), lead-based paint, soils and geology, biological resources, and cultural resources.

The land use at the communication sites would not change; the sites would continue to be used for communications purposes. There would be no significant change in the appearance of the communication sites after completion of the upgrade activities.

During WAC upgrade activities, small amounts of hazardous materials are expected to be utilized, and the potential for spills would exist. All storage, handling, and transportation of hazardous materials associated with WAC upgrades and operation of the communication sites would be conducted in accordance with applicable regulations and established procedures. During WAC upgrade activities, hazardous waste may be generated from processes that utilize hazardous materials. Any hazardous waste generated on the property would be managed in accordance with applicable regulations.

The Anaconda Mineral Company - Great Falls Smelter Voluntary Cleanup Plan (VCP) Site could affect proposed WAC improvements at the Pacific Steel communication site. The VCP site would remain the responsibility of Atlantic Richfield Company-British Petroleum (ARC-BP) until regulator concurrence on a no further action decision has been obtained. Access rights to the communication site would be coordinated to allow construction and improvements on the site as well as access to inspect/maintain communication equipment as needed. ARC-BP would be consulted prior to initiating any ground-disturbing activities to ensure construction activities do not impact ongoing remedial actions.

The two storage tanks situated at the Highwood Baldy communication site would remain in place and a new 2,000-gallon propane tank would be installed to support the new structure. The propane tanks associated with the Belgian Hill and Teton Ridge communication sites would remain in place. A propane tank would be installed at the remaining communication sites to power emergency generators. Management of the propane tanks in accordance with applicable regulations would minimize the potential for impacts.

Demolition/removal of existing structures at the communication sites that may contain ACM and lead-based paint would occur. Such activities would be conducted in accordance with applicable federal, state, and local regulations to minimize potential risk to human health and the environment. Any demolition debris that contains ACM and/or lead-based paint would be disposed off site in a landfill permitted to accept this type of material.

Ground-disturbing activities would affect a small area (less than 1 acre) at each site and would be subject to standard construction site management practices designed to minimize soil erosion. Because ground disturbance associated with the road and utility improvements would exceed 1 acre, the construction activity would fall under the "General Permit for Storm Water Discharges Associated with Construction Activity" (General Permit). A Montana Pollutant Discharge Elimination System (MPDES) permit would be acquired before initiating any ground-disturbing activity. In association with the MPDES permit, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared for proposed ground-disturbing activity. Use of management practices and controls outlined in the MPDES permit and SWPPP would reduce the potential for erosion of disturbed soils.

Most of the communication site improvements would occur in disturbed areas already occupied by communication related facilities. Any vegetated areas disturbed by WAC construction activities would be restored to pre-construction conditions. Forest Service sensitive species, Management Indicator Species, and common wildlife species present near the communication sites may be temporarily displaced during construction activities. Preferred habitat for threatened and endangered species potentially occurring in the region of the communication sites is not present and wetland or other sensitive habitats are not present at the communication sites. The Air Force will take reasonable steps to conserve migratory birds in accordance with Executive Order 13186 – *Responsibilities of Federal Agencies to Protect Migratory Birds*. Pursuant to Executive Order 13186, the Department of Defense (DOD) entered into a Memorandum of Understanding with the U.S. Fish and Wildlife Service (USFWS) which identifies specific activities where cooperation between the DOD and USFWS will contribute substantially to the conservation of migratory birds and their habitats.

No known archaeological resources are present at the communication sites and none are likely to be present because of extensive site disturbance during their construction. However, should archaeological resources or human remains be unexpectedly encountered during deactivation activities, activities would cease and the State Historic Preservation Officer (SHPO) would be notified. There are no known historic buildings or traditional cultural resources that would be affected by proposed WAC activities.

### **Cumulative Impacts**

No other reasonably foreseeable actions have been identified in the vicinity of the communication sites that could be considered as contributing to a potential cumulative impact on the environment along with impacts associated with implementing the proposed WAC communication system upgrades. The potential impacts from the Proposed Action are short term and minor, and are not expected to contribute to cumulative impacts.

### **Mitigation Measures**

Access agreements would be coordinated with ARC-BP to allow access to the Pacific Steel communication site. Appropriate construction practices would be implemented to avoid potential impacts associated with erosion.

### **Conclusion**

As a result of the analysis of impacts in the EA, it was concluded that, with the incorporation of appropriate construction practices identified in the EA and referenced in this FONSI, the proposed activities would not have a significant effect on human health or the natural environment; therefore, an environmental impact statement will not be prepared.

  
\_\_\_\_\_  
PAUL W. GYDESEN, COLONEL, USAF  
Vice Commander

2/8/2008  
Date

**THIS PAGE INTENTIONALLY LEFT BLANK**

**FINAL  
ENVIRONMENTAL ASSESSMENT  
FOR  
WIDE AREA COVERAGE  
CONSTRUCT LAND MOBILE NETWORK COMMUNICATIONS INFRASTRUCTURE  
MALMSTROM AIR FORCE BASE, MONTANA**

**FEBRUARY 2008**



**COVER SHEET  
ENVIRONMENTAL ASSESSMENT  
WIDE AREA COVERAGE  
CONSTRUCT LAND MOBILE NETWORK COMMUNICATIONS INFRASTRUCTURE  
MALMSTROM AIR FORCE BASE, MONTANA**

- a. Lead Agency: Department of the Air Force
- b. Cooperating Agencies: U.S. Department of Agriculture, National Forest Service
- c. Proposed Action: Establish a joint communication system serving local, state, and federal agencies in Montana.
- d. Written comments and inquiries regarding this document should be directed to: Mr. Tony Lucas, 341 CES/CEV, 39 78th Street North, Building 470, Malmstrom Air Force Base, Montana 59402, facsimile (406) 731-6181; e-mail Tony.Lucas@malmstrom.af.mil.
- e. Designation: Environmental Assessment (EA)
- f. Abstract: The Interoperability Montana (IM) Project is initiating a comprehensive communication system to be implemented across Montana. The system will provide advanced digital, secure voice and data communications for public safety organizations. The system will be based on current federal and state communication standards in which federal, state, and local public safety and emergency management representatives can operate autonomously and transition seamlessly to communicate effectively during emergency situations. The effort involves upgrading equipment, antennas, and utility connections at mostly existing communication sites across central Montana. The 11 communication sites included in the upgraded network include Belgian Hill, Cooney, Flying J, Garneill, Highwood Baldy, Judith Peak, Malmstrom AFB Building 500, Pacific Steel, South Moccasin, Sullivan, Teton Ridge, and South Peak. The proposed South Peak communication site is an alternative to using Highwood Baldy.

This EA has been prepared in accordance with the National Environmental Policy Act to analyze the potential environmental consequences of the Proposed Action and alternatives. Three alternatives were examined: the Proposed Action, the South Peak Alternative, and the No-Action Alternative. The Proposed Action involves the establishment of 11 Wide Area Coverage (WAC) communication sites across central Montana. The South Peak Alternative involves establishing 11 WAC communication sites across central Montana; however, South Peak would be used as a communication location rather than Highwood Baldy Peak. The No-Action Alternative involves not implementing WAC communication upgrades.

The environmental resources potentially affected by the Proposed Action and alternatives are land use and aesthetics, hazardous materials management, hazardous waste management, storage tanks, asbestos, lead-based paint, soils and geology, biological resources, and cultural resources. Based on the nature of the activities that would occur under the Proposed Action and alternatives, the Air Force has determined that minimal or no adverse effects to the above resources are anticipated.

**THIS PAGE INTENTIONALLY LEFT BLANK**



# TABLE OF CONTENTS

	<u>Page</u>
1.0 PURPOSE OF AND NEED FOR ACTION.....	1-1
1.1 PURPOSE AND NEED .....	1-1
1.2 LOCATION OF THE PROPOSED ACTION .....	1-2
1.3 PUBLIC INVOLVEMENT .....	1-2
1.4 SCOPE OF THE ENVIRONMENTAL REVIEW .....	1-2
1.5 FEDERAL, STATE, AND LOCAL PERMITS AND LICENSES .....	1-5
2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION .....	2-1
2.1 DESCRIPTION OF THE PROPOSED ACTION .....	2-1
2.2 DESCRIPTION OF ALTERNATIVES TO THE PROPOSED ACTION .....	2-28
2.2.1 South Peak Alternative.....	2-28
2.2.2 No-Action Alternative.....	2-30
2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER STUDY .....	2-30
2.4 OTHER FUTURE ACTIONS IN THE REGION.....	2-30
2.5 COMPARISON OF ENVIRONMENTAL IMPACTS.....	2-31
3.0 AFFECTED ENVIRONMENT.....	3-1
3.1 INTRODUCTION.....	3-1
3.2 LAND USE AND AESTHETICS .....	3-1
3.2.1 Land Use.....	3-1
3.2.2 Aesthetics.....	3-2
3.3 HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT .....	3-2
3.3.1 Hazardous Materials Management .....	3-3
3.3.2 Hazardous Waste Management .....	3-3
3.3.2.1 Contaminated Sites.....	3-4
3.3.3 Storage Tanks.....	3-5
3.3.4 Asbestos .....	3-5
3.3.5 Lead-Based Paint.....	3-6
3.4 SOILS AND GEOLOGY .....	3-6
3.4.1 Soils.....	3-7
3.4.2 Geology .....	3-7
3.5 BIOLOGICAL RESOURCES.....	3-7
3.5.1 Vegetation .....	3-8
3.5.2 Wildlife.....	3-10
3.5.3 Threatened and Endangered Species .....	3-10
3.5.3.1 Lewis and Clark National Forest Sensitive Species and Management Indicator Species .....	3-20
3.5.4 Sensitive Habitats.....	3-21
3.6 CULTURAL RESOURCES .....	3-21
3.6.1 Prehistoric and Historic Archaeological Resources .....	3-23
3.6.2 Historic Buildings and Structures .....	3-23
3.6.3 Traditional Cultural Resources.....	3-24

## TABLE OF CONTENTS (Continued)

	<u>Page</u>
4.0 ENVIRONMENTAL CONSEQUENCES.....	4-1
4.1 INTRODUCTION.....	4-1
4.2 LAND USE AND AESTHETICS .....	4-1
4.2.1 Proposed Action.....	4-1
4.2.2 South Peak Alternative.....	4-1
4.2.3 No-Action Alternative.....	4-2
4.3 HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT .....	4-2
4.3.1 Hazardous Materials Management .....	4-3
4.3.1.1 Proposed Action.....	4-3
4.3.1.2 South Peak Alternative .....	4-3
4.3.1.3 No-Action Alternative .....	4-3
4.3.2 Hazardous Waste Management .....	4-3
4.3.2.1 Proposed Action.....	4-3
4.3.2.2 South Peak Alternative .....	4-4
4.3.2.3 No-Action Alternative .....	4-4
4.3.3 Storage Tanks.....	4-5
4.3.3.1 Proposed Action.....	4-5
4.3.3.2 South Peak Alternative .....	4-5
4.3.3.3 No-Action Alternative .....	4-5
4.3.4 Asbestos .....	4-5
4.3.4.1 Proposed Action.....	4-5
4.3.4.2 South Peak Alternative .....	4-6
4.3.4.3 No-Action Alternative .....	4-6
4.3.5 Lead-Based Paint.....	4-6
4.3.5.1 Proposed Action.....	4-6
4.3.5.2 South Peak Alternative .....	4-6
4.3.5.3 No-Action Alternative .....	4-6
4.4 SOILS AND GEOLOGY .....	4-7
4.4.1 Proposed Action.....	4-7
4.4.2 South Peak Alternative.....	4-8
4.4.3 No-Action Alternative.....	4-9
4.5 BIOLOGICAL RESOURCES.....	4-9
4.5.1 Proposed Action.....	4-9
4.5.2 South Peak Alternative.....	4-12
4.5.3 No-Action Alternative.....	4-12
4.6 CULTURAL RESOURCES .....	4-13
4.6.1 Proposed Action.....	4-13
4.6.2 South Peak Alternative.....	4-13
4.6.3 No-Action Alternative.....	4-14
4.7 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS.....	4-14
4.8 COMPATIBILITY OF THE PROPOSED ACTION WITH OBJECTIVES OF FEDERAL, STATE, REGIONAL, AND LOCAL LAND USE PLANS AND POLICIES .....	4-15
4.9 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY.....	4-15
4.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES .....	4-15
4.11 CUMULATIVE ENVIRONMENTAL CONSEQUENCES .....	4-15

## TABLE OF CONTENTS (Continued)

	<u>Page</u>
5.0 CONSULTATION AND COORDINATION .....	5-1
6.0 LIST OF PREPARERS AND CONTRIBUTORS .....	6-1
7.0 DISTRIBUTION LIST .....	7-1
8.0 BIBLIOGRAPHY .....	8-1

### APPENDICES

#### Appendix A - Photographs

- A-1 Malmstrom Building 500
- A-2 Garneill
- A-3 South Peak
- A-4 Highwood Baldy
- A-5 Judith Peak
- A-6 Pacific Steel
- A-7 Teton Ridge
- A-8 Belgian Hill
- A-9 Cooney
- A-10 Flying J
- A-11 South Moccasin
- A-12 Sullivan

#### Appendix B - Consultation

#### Appendix C - Memorandum of Understanding between the U.S. Department of Defense and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds.

#### Appendix D - Public Comments and Responses

## LIST OF TABLES

2-1	Summary of Influencing Factors and Environmental Impacts.....	2-32
3-1	Threatened and Endangered Species within the ROI.....	3-11
3-2	Lewis and Clark National Forest Management Indicator Species.....	3-22

## LIST OF FIGURES

1-1	Wide Area Coverage Communication Systems.....	1-3
2-1	Belgian Hill Communication Site .....	2-3
2-2	Belgian Hill Location Map .....	2-4
2-3	Teton Ridge Communication Site .....	2-5
2-4	Teton Ridge Location Map .....	2-6
2-5	Sullivan Communication Site.....	2-7
2-6	Sullivan Location Map .....	2-9
2-7	Flying J Communication Site.....	2-10
2-8	Flying J, Pacific Steel, and Building 500 Location Map .....	2-11
2-9	Pacific Steel Communication Site .....	2-14
2-10	Building 500 Communication Site .....	2-15
2-11	Judith Peak Communication Site .....	2-16
2-12	Judith Peak, South Moccasin, and Garneill Location Map .....	2-17
2-13	South Moccasin Communication Site .....	2-19
2-14	Garneill Communication Site.....	2-21
2-15	Cooney Communication Site.....	2-23
2-16	Cooney Location Map .....	2-24
2-17	Highwood Baldy Communication Site .....	2-26
2-18	Highwood Baldy and South Peak Location Map .....	2-27
2-19	South Peak Communication Site .....	2-29
3-1	Pallid Sturgeon Habitat.....	3-12
3-2	Piping Plover Habitat.....	3-13
3-3	Bald Eagle Habitat.....	3-14
3-4	Gray Wolf Habitat.....	3-15
3-5	Canada Lynx Habitat.....	3-16
3-6	Black-footed Ferret Habitat .....	3-17
3-7	Grizzly Bear Habitat.....	3-18

## LIST OF ACRONYMS/ABBREVIATIONS

ACM	asbestos-containing material
Advisory Council	Advisory Council on Historic Preservation
AFB	Air Force Base
AFI	Air Force Instruction
AFOSH	Air Force Occupational Safety and Health
AHERA	Asbestos Hazard Emergency Response Act
amp	amperes
ARC-BP	Atlantic Richfield Company-British Petroleum
ARM	Administrative Rules of Montana
AST	aboveground storage tank
BA	Biological Assessment
BE	Biological Evaluation
BMP	best management practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMICC	Central Montana Interoperable Communication Consortium
CPSC	Consumer Product Safety Commission
DOD	Department of Defense
DOT	Department of Transportation
EA	environmental assessment
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FY	fiscal year
HVAC	heating, ventilation, and air cooling
IHMERP	Integrated Hazardous Materials Emergency Response Plan
IM	Interoperability Montana
KW	kilowatt
MCA	Montana Code Annotated
MCL	maximum contaminant level
MDEQ	Montana Department of Environmental Quality
MFW&P	Montana Fish Wildlife & Parks
MIS	Management Indicator Species
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPDES	Montana Pollutant Discharge Elimination System
NAAQS	National Ambient Air Quality Standards
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NORAD	North American Air Defense
NTIP	Northern Tier Interoperability Project
OSHA	Occupational Safety and Health Administration
pCi/L	pico curies per liter
PCB	polychlorinated biphenyl

**LIST OF ACRONYMS/ABBREVIATIONS**  
**(Continued)**

P.L.	Public Law
POL	petroleum, oils, and lubricants
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
SHPO	State Historic Preservation Officer
SPCCP	Spill Prevention Control and Countermeasures Plan
SWPPP	Storm Water Pollution Prevention Plan
UHF	ultra high frequency
U.S.C.	U.S. Code
USFWS	U.S. Fish and Wildlife Service
VCP	Voluntary Cleanup Plan
VHF	very high frequency
WAC	Wide Area Coverage

## **1.0 PURPOSE OF AND NEED FOR ACTION**

---

This environmental assessment (EA) examines the potential for impacts to the environment as a result of establishing/modifying 11 communication sites associated with the Wide Area Coverage (WAC), Construct Land Mobile Network Communications Infrastructure across central Montana. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [U.S.C.] 4321, et seq.), the Council on Environmental Quality (CEQ) regulations implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989).

The Interoperability Montana (IM) Project is initiating a comprehensive communication system to be implemented across a large geographic region (WAC Communication System). The system will provide advanced digital secure voice and data communications for public safety organizations. The system will be based on current federal and state communication standards in which federal, state, and local public safety and emergency management representatives can operate autonomously and transition seamlessly to communicate effectively during emergency situations.

Two IM Project components will be implemented across central Montana; these components include the Central Montana Interoperable Communications Consortium (CMICC) and the Northern Tier Interoperability Project (NTIP). The area covered by the CMICC includes Cascade, Chouteau, Fergus, Judith Basin, Pondera, and Teton counties and the Chippewa Cree Tribe. The area covered by the NTIP includes Blaine, Daniels, Flathead, Glacier, Hill, Liberty, Lincoln, Phillips, Roosevelt, Sheridan, Toole, and Valley counties and the Blackfeet, Confederated Salish and Kootenai, Fort Belknap, and Fort Peck Indian Nations (State of Montana, 2007a).

### **1.1 PURPOSE AND NEED**

The purpose of this action is to establish a comprehensive communication system in cooperation with local, state, and federal agencies across central Montana. With over 550 miles of border with Canada, Montana law enforcement officials have critical communications interoperability requirements between levels of government and across jurisdictions. The WAC communication system will provide advanced digital secure voice and data communications for public safety organizations near the border region. It will also improve homeland security by providing the means for military and civil authorities to communicate by radio. The Montana National Guard's homeland security mission will also be enhanced through highly reliable, redundant communications capabilities.

## **1.2 LOCATION OF THE PROPOSED ACTION**

The 11 WAC communication sites are situated across central Montana at the following locations: Belgian Hill, Cooney, Flying J, Garneill, Highwood Baldy, Judith Peak, Malmstrom Air Force Base (AFB) Building 500, Pacific Steel, South Moccasin, Sullivan, Teton Ridge, and South Peak (Figure 1-1).

The proposed South Peak communication site is considered an alternative to using Highwood Baldy. If the Highwood Baldy communication site is approved, the South Peak site would not be required.

## **1.3 PUBLIC INVOLVEMENT**

During the week of October 22, 2007, a Notice of Availability (NOA) was placed in a local newspaper informing the public of where copies of the Draft EA were available for review and who to contact for further information or to submit comments. The Draft EA was circulated to the interested public and government agencies for a 30-day review and comment period (October 22 to November 20, 2007). Based on comments received, the EA was revised, as appropriate. Appendix D contains the public comments to the draft EA and Air Force responses.

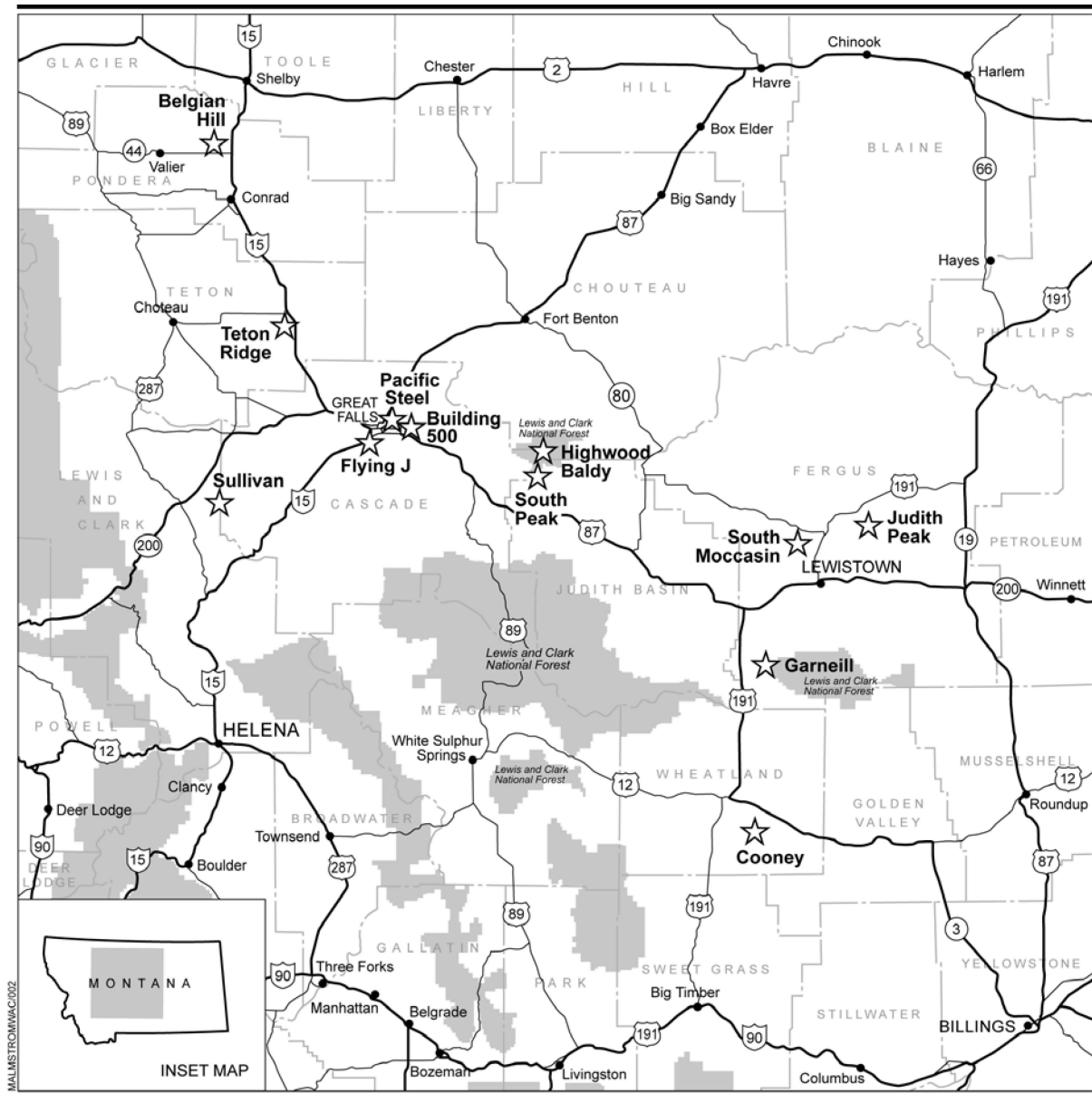
## **1.4 SCOPE OF THE ENVIRONMENTAL REVIEW**

Consistent with the CEQ regulations, the scope of analysis presented in this EA is defined by the potential range of environmental impacts that would result from implementation of the Proposed Action or alternatives. This document is "issue-driven," in that it concentrates on those resources that may be affected by implementation of the Proposed Action or alternatives. These activities involve establishing or modifying communications sites across central Montana to support the WAC communication system.

Resources that have a potential for impact were considered in more detail in order to provide the Air Force decision maker with sufficient evidence and analysis to determine whether or not additional analysis is required pursuant to 40 CFR Part 1508.9. The resources analyzed in more detail are land use and aesthetics, hazardous materials management, hazardous waste management, storage tanks, asbestos-containing material (ACM), lead-based paint, soils and geology, biological resources, and cultural resources. The affected environment and the potential environmental consequences relative to these resources are described in Chapters 3.0 and 4.0, respectively.

Initial analysis indicates that proposed activities would not result in short- or long-term impacts to socioeconomics, utilities, transportation, medical/biohazardous waste, pesticide usage, polychlorinated biphenyls (PCBs), radon, ordnance, radioactive materials, water resources, air quality, noise, or environmental justice. The reasons for not addressing these resources are briefly discussed in the following paragraphs.

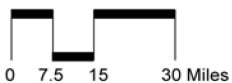




#### EXPLANATION

- ☆ WAC Communication Site
- National Forest

#### Wide Area Coverage Communication Systems



Note: South Peak communication site is the alternative to using Highwood Baldy communication site.

Figure 1-1

**Socioeconomics.** Since the communication sites are not permanently occupied “manned” facilities, no employment or population effects are anticipated from establishing the WAC communication system. Therefore, socioeconomic impacts are not expected and are not analyzed further in this EA.

**Utilities.** Utility requirements to establish and operate the WAC communication sites are minimal, and local utility purveyors have adequate capacity to service the utility needs of the sites (the only utility provided to the sites is electricity); therefore, impacts to utilities (i.e., water, wastewater, solid waste, and electricity) are not expected and are not analyzed further in this EA. Potential environmental impacts of providing/replacing power lines to two of the communication sites (Garneill and Highwood Baldy) is addressed in the appropriate sections of the EA (i.e., soils and geology, biological resources, and cultural resources).

**Transportation.** Establishing the WAC communication sites would require minimal vehicle trips and only periodic trips by the Montana Sheriff Department and maintenance crews to ensure security and operation of the sites. The WAC communication sites are accessible by dirt roads that have little or no daily traffic. Therefore, impacts to roadways are not expected and are not analyzed further in this EA. Potential environmental impacts of improving the access roads to the communication sites is addressed in the appropriate sections of the EA (i.e., soils and geology, biological resources, and cultural resources).

**Medical/Biohazardous Waste.** The WAC communication sites would not involve the generation of medical/biohazardous waste; therefore, impacts from medical/biohazardous waste are not expected and are not analyzed further in this EA.

**Pesticide Usage.** The WAC communication sites would not require the use of pesticides; therefore, impacts from pesticide usage are not expected and are not analyzed further in this EA.

**Polychlorinated Biphenyls.** The WAC communication sites would not utilize equipment containing PCBs; therefore, impacts from PCBs are not expected and are not analyzed further in this EA.

**Radon.** The WAC communication sites are within U.S. Environmental Protection Agency (EPA) radon zone 1 which indicates indoor average radon levels greater than 4 picocuries per liter (pCi/l) (U.S. Environmental Protection Agency, 2007). However, the WAC communication sites would not have permanently inhabited structures; therefore, impacts from radon are not expected and are not analyzed further in this EA.

**Ordnance.** The WAC communication sites would not require the use of ordnance; therefore, impacts from ordnance are not expected and are not analyzed further in this EA.

**Radioactive Materials.** The WAC communication sites would not require the use or storage of radioactive materials; therefore, impacts from radioactive materials are not expected and are not analyzed further in this EA.

**Water Resources.** No surface water resources are situated near the WAC communication site locations and proposed activities would not require the use of groundwater resources. Proposed upgrades at existing communication sites would not increase the amount of impervious surfaces; at new communication sites, less than 1,000 square feet of impervious surface area would be established. This small increase in impervious surfaces at new communication sites would not be considered significant. Therefore, impacts to water resources are not expected and are not analyzed further in this EA.

**Air Quality.** No increases to existing operating conditions at the communication sites would occur as a result of implementing proposed WAC communication upgrades. Temporary impacts are expected from fugitive dust associated with building demolition, clearing and grading of the sites for new equipment shelters, and worker vehicles traveling on unpaved access roads to the sites. Dust emissions would also be generated by construction/improvement of access roads and electrical power lines at several of the communication sites. Best management practices (BMPs) (such as wetting exposed areas and roads during construction) would be implemented during demolition and construction activities to minimize fugitive dust emissions. The communication sites are situated in an area that is in attainment with the National Ambient Air Quality Standards (NAAQS). Therefore, a conformity determination is not required. The temporary increase in emissions during construction activities and intermittent operation of emergency generators at the sites is not expected to impact the existing air quality within the region. Therefore, impacts to air quality are not expected and are not analyzed further in this EA.

**Noise.** Noise generated from construction activities at the WAC communication sites would be minor and short term. In addition, the communication sites are situated in remote locations away from populated areas (no sensitive receptors such as schools, hospitals, or residential areas are nearby). Operation of the communication equipment at the sites would not generate elevated noise levels. Therefore, impacts from noise are not expected and are not analyzed further in this EA.

**Environmental Justice.** Because the communication sites would be situated in remote locations away from populated areas (i.e., no minority or disadvantaged populations near any of the proposed sites) and potential impacts would be confined to the immediate area of the communication sites, impacts to low-income, minority, and child populations are not expected and are not analyzed further in this EA.

## **1.5 FEDERAL, STATE, AND LOCAL PERMITS AND LICENSES**

The interested parties would work together to apply for or seek to modify various permits or licenses (as necessary) in accordance with federal, state, or local regulatory requirements. In collaboration with the Air Force, the IM Project would acquire the Forest Service permit for the Highwood Baldy communication site and any required access agreement(s) to cross state and private land. In addition, the height of the communication tower would be taken into consideration when choosing the site location and design of the tower in accordance with the

Highwood Baldy Communications Site Management Plan. State building permits and other licenses and permits, as required for site construction and site user agreements, would be acquired. The proposed power line replacement to the Highwood Baldy communication site would be conducted by Fergus Electric, which would obtain appropriate and necessary permits and licenses to conduct this activity. The installation of underground power lines to the Garneill communication site would be conducted by the Air Force, which would obtain appropriate and necessary permits and licenses to conduct this activity.

## **2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION**

---

This EA evaluates the potential environmental impacts of establishing a joint communications system serving local, state, and federal agencies in central Montana.

### **2.1 DESCRIPTION OF THE PROPOSED ACTION**

Proposed construction and modification activities at the WAC communication sites would occur in fiscal year (FY) 2008. Construction and modification activities are anticipated to occur over a 1 year period.

The WAC communication system would consist of a combination of relay and trunked communication sites. A trunked communication system is one that integrates multiple channel pairs into a single system. When a user wants to transmit a message, the trunked system automatically selects a currently unused channel pair and assigns it to the user, decreasing the probability of having to wait for a free channel. A relay communication site receives signals on one frequency, processes and retransmits out on another frequency in order to extend the communication range.

Estimated ground disturbance as a result of demolition and construction at each site would be less than one acre. However, approximately 2 miles of access road improvements are proposed for the Garneill communication site (approximately 3.5 acres of disturbance anticipated). Construction employees would access the communication site via existing dirt access roads.

The construction contractor would be required to transport and dispose of construction debris off-site at approved or permitted facilities for that type of waste in accordance with federal, state, and local regulations. If a spill occurs during construction, it would be cleaned up by the construction contractor. If asbestos, lead-based paint, or other hazardous material are identified in areas proposed for demolition and cannot be avoided, removal and disposal would be conducted by a certified contractor in accordance with applicable federal, state, and local regulations.

The communication sites would be constructed in compliance with R56 grounding standards, which provide protective grounding to establish an electrical connection, between a structure and the earth, adequate for lightning, high voltage, or static discharges. The primary ground is a conducting connection between the structure and the earth. A secondary ground is a conducting connection between an appurtenance and the structure. Equipment structures would be directly grounded to a primary ground. At a minimum, the grounding will consist of two 5/8 inch diameter galvanized steel grounding rods driven not less than 8 feet into the ground, 180 degrees apart, adjacent to the structure base. The grounding rods would be bonded with a lead of not smaller than No. 6 [5 millimeter] tinned bare copper connected to the base of the structure. A similar grounding rod would be installed at each guy anchor and similarly connected to

each guy at the anchor. Self-supporting towers that exceed 5 feet in base width would have one grounding rod per leg. Equipment on and within the structure would be connected by a secondary ground.

As a best management practice (BMP) during construction activities, a biological monitor would be present during the Montana bird breeding season (February-September). The biological monitor would be responsible for conducting pre-construction nesting bird surveys of proposed road alignments and areas requiring clearance for new communication related equipment. The biologist would be responsible for coordinating with the construction lead concerning ingress/egress routes, staging areas, construction schedule, and any other activity that affects nesting birds at the communication sites. In addition, measures to minimize or even avoid bird collisions with towers would be implemented such as installation of visual markers on guy wires, the installation of obstruction avoidance lighting required by the Federal Aviation Administration (FAA), and installation of down-shielding on security lighting for on-ground facilities.

Specific construction and site modification actions at each WAC communication site are discussed below.

#### **Belgian Hill Communication Site**

This is an existing communication site and is a NTIP site (Figure 2-1). NTIP has upgraded Belgian Hill to include microwave links to other communication sites. The site also provides very high frequency (VHF) radio communication to Pondera County. This site is in Pondera County approximately 70 miles northwest of Great Falls (Figure 2-2). Proposed activities at the Belgian Hill communication site include adding trunked radio equipment and microwave equipment to the existing shelter and tower.

#### **Teton Ridge Communication Site**

This is an existing communication site and is a NTIP site (Figure 2-3). Teton Ridge has been upgraded to include microwave links to other communication sites. The site also provides VHF radio communication to Teton County. This site is in Teton County approximately 28 miles northwest of Great Falls (Figure 2-4). Proposed activities at the Teton Ridge communication site include adding trunked radio equipment and microwave equipment to the existing shelter and tower.

#### **Sullivan Communication Site**

This is an existing communication site that is being upgraded by the CMICC (Figure 2-5). The existing site is leased from Falls Communications and located in a small, approximately 8 x 10 foot wood framed shelter, by the Montana Highway Patrol for the Mobile Data Consortium. This site is in Lewis and Clark County approximately 35 miles southwest of Great Falls (Figure 2-6). Proposed activities at the Sullivan communication site include:



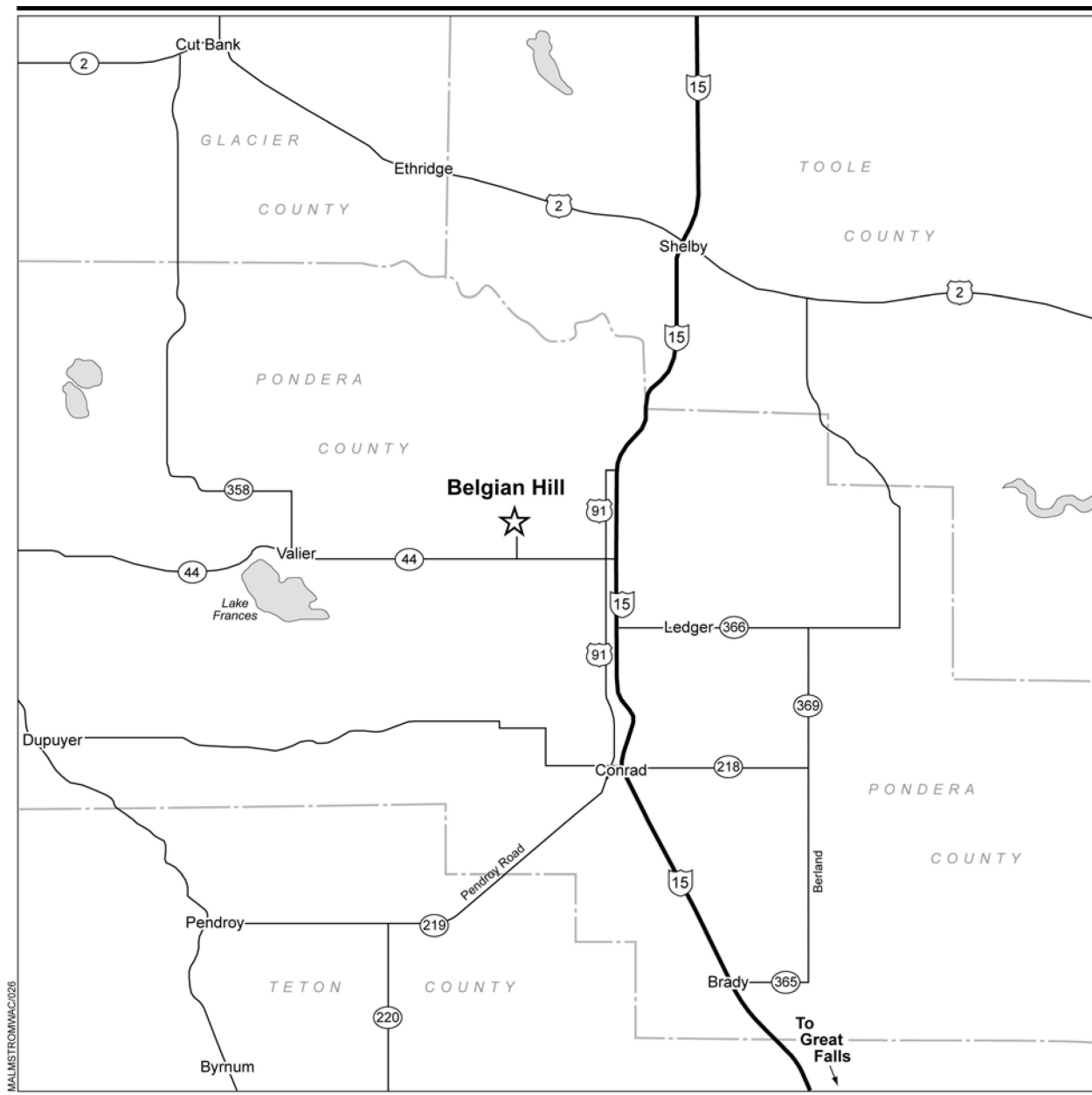
MALMSTROMWAC005

**EXPLANATION**

**Belgian Hill  
Communication Site**

---

**Figure 2-1**



**EXPLANATION**

☆ Communication Site

**Belgian Hill  
Location Map**



**Figure 2-2**



MALMSTROMWAC015

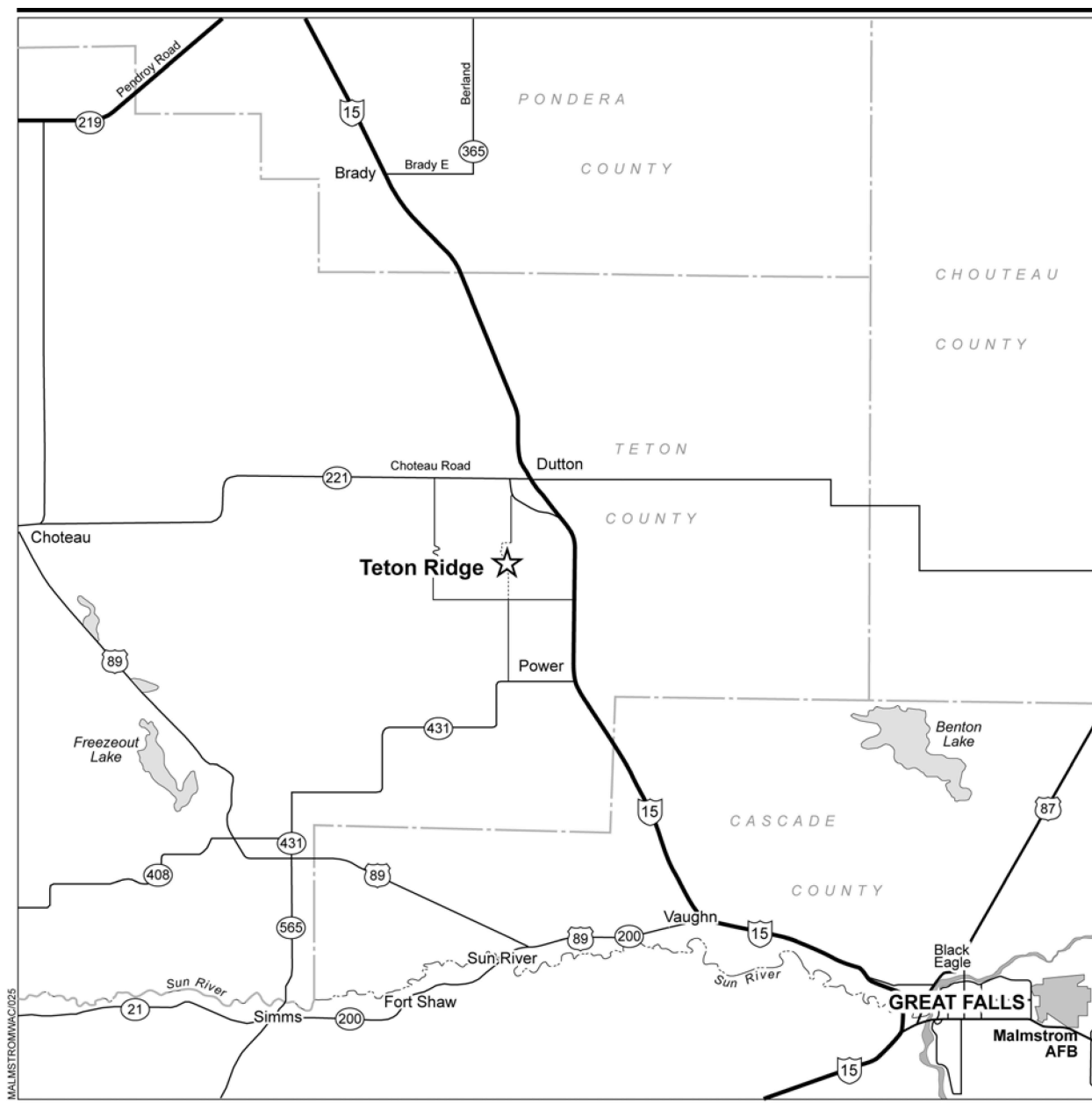


**EXPLANATION**

**Teton Ridge  
Communication Site**

---

**Figure 2-3**



#### EXPLANATION

☆ Communication Site

#### Teton Ridge Location Map



Figure 2-4



MALMSTROMWAC014

**EXPLANATION**

**Sullivan  
Communication Site**

---

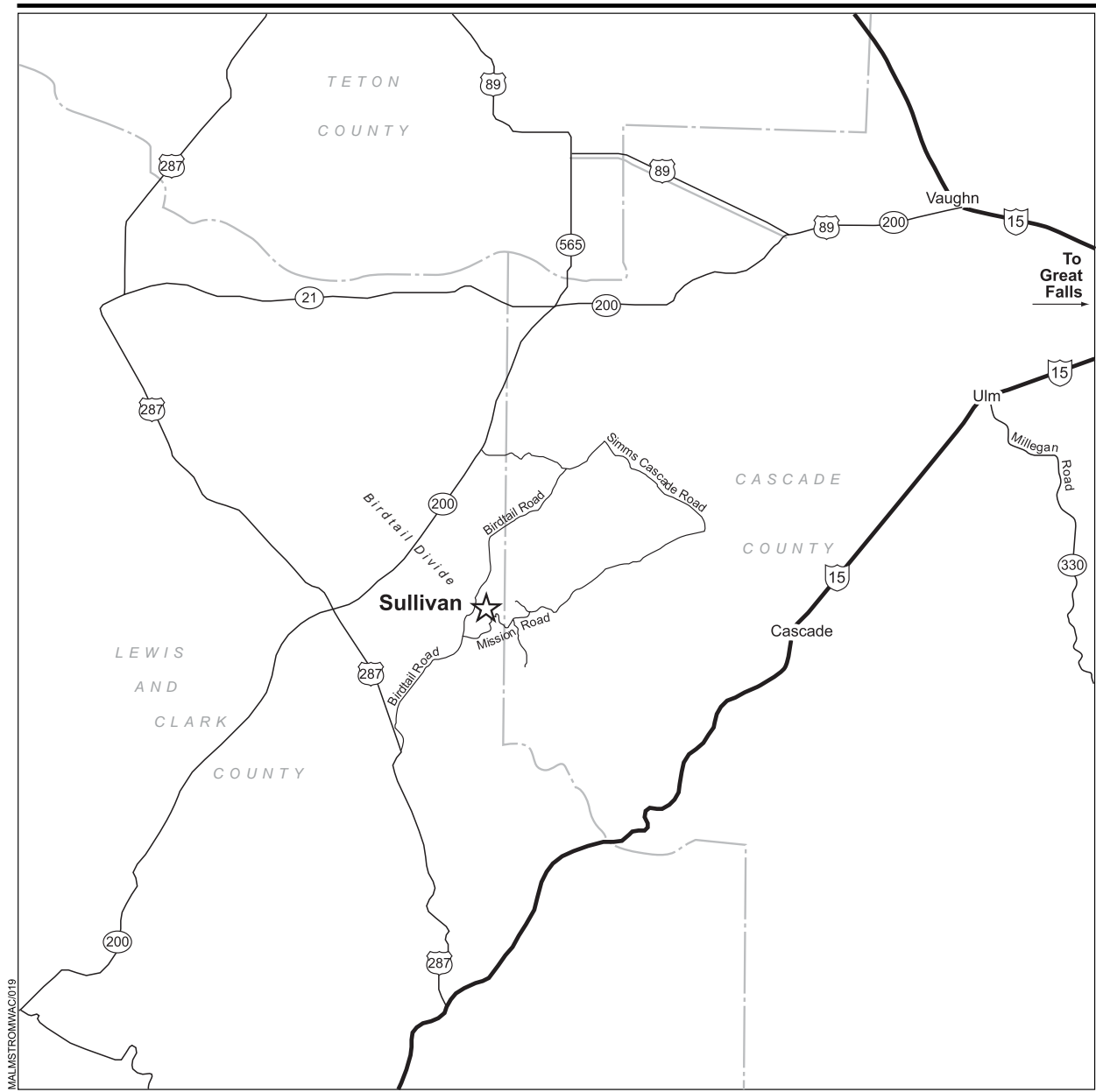
**Figure 2-5**

- Installing a 12 x 24 foot equipment shelter with heating, ventilating, and air conditioning (HVAC) onto a concrete pad,
- Installing a “Thermobond” expansion to the equipment shelter to support Air Force equipment,
- Installing a 60 kilowatt (KW) generator with muffled exhaust onto a concrete pad,
- Installing a 500-gallon propane tank on a concrete pad at least 10 feet away from the equipment shelter,
- Installing/burying approximately 275 yards of power line from the main transformer to the new equipment shelter,
- Upgrading electrical service to 200 amperes (amps) with a new meter base and master breaker,
- Erecting a 100-foot self-supporting tower (stackable to 150 feet) to accommodate the new microwave system on a new monolithic slab,
- Installing microwave dishes, trunked antennas, and conventional antennas on the tower,
- Installing new equipment inside the equipment shelter to provide conventional, trunked, and microwave radio communications,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and security fence in compliance with R56 grounding standards, and
- Restoring disturbed areas to pre-construction conditions.

### **Flying J Communication Site**

This will be a new communication site with Cascade County as the lease holder for the property (Figure 2-7). This site would be upgraded by the CMICC and is approximately 3 miles southwest of downtown Great Falls (Figure 2-8). Proposed activities at the Flying J communication site include:

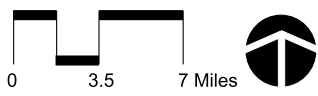
- Installing a 12 x 28 foot equipment shelter with HVAC onto a concrete pad,
- Installing/burying approximately 300 feet of power line from the road to the equipment shelter,
- Upgrading electrical service to 200 amps with a new meter base and master breaker,
- Installing a 120-foot self-supporting tower on a concrete foundation,



**EXPLANATION**

☆ Communication Site

**Sullivan Location Map**



**Figure 2-6**



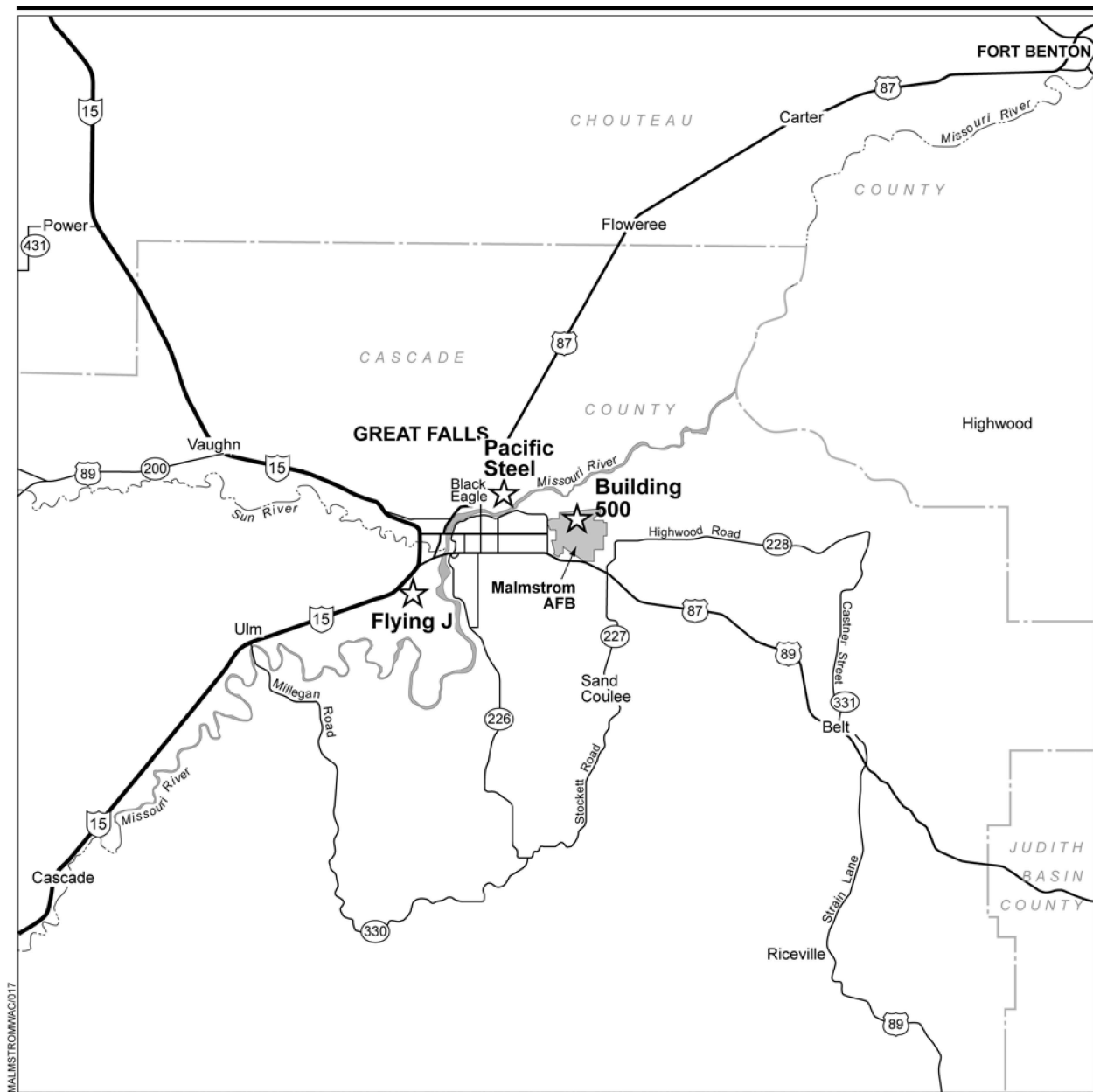
MALMSTROMWAC008

**EXPLANATION**

**Flying J  
Communication Site**

---

**Figure 2-7**



#### EXPLANATION

★ Communication Site

#### Flying J, Pacific Steel, and Building 500 Location Map



Figure 2-8



- Installing a 60 KW generator with muffled exhaust onto a monolithic concrete pad,
- Installing a 1,000-gallon propane tank on a concrete pad at least 10 feet away from the equipment shelter,
- Moving Montana Highway Patrol/National Guard microwave equipment and antennas from the Gore Hill site to the Flying J communication site,
- Realigning both ends of microwave antenna hops moved from the Gore Hill site,
- Installing microwave dishes and conventional antennas on the new tower,
- Providing space for future IM Project trunking equipment,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and fence in compliance with R56 grounding standards, and
- Restoring disturbed areas to pre-construction conditions.

This site supports a shared microwave antenna with the IM Project, National Guard, Highway Patrol, and Department of Transportation (DOT) to provide the microwave connection to Building 500 at Malmstrom AFB.

#### **Pacific Steel Communication Site**

There are no current communication structures on this site (Figure 2-9). This site would be constructed by the CMICC. Cascade County holds the lease for the site from Pacific Steel. The site is situated on the Pacific Steel property directly behind a former smelter facility (a superfund site with a potential remedy in place), approximately 2 miles northeast of downtown Great Falls (see Figure 2-8). Proposed activities at the Pacific Steel communication site include:

- Installing a 12 x 30 foot equipment shelter with HVAC onto a monolithic concrete pad with 200 amp electrical service including a meter and master breaker,
- Installing a buried commercial power line approximately 1/4 mile to the communication site,
- Installing a 60 KW generator with muffled exhaust onto a monolithic concrete pad adjacent to the equipment shelter,
- Installing a 1,000-gallon propane tank on a concrete pad placed at least 10 feet from the equipment shelter to provide backup fuel source to run the generator,



- Installing a 150-foot self-supporting radio tower to accommodate the new antennas and microwave dishes needed for this site. A new foundation will be constructed on the site for the tower,
- Installing Microwave dishes, VHF trunking antennas, and conventional antennas on the new tower,
- Installing new equipment inside the shelter to provide conventional, trunked, and microwave radio communications,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and the security fence in compliance with R56 grounding standards, and
- Restoring disturbed areas to pre-construction conditions.

This site will support a shared microwave antenna with the IM Project, National Guard, Highway Patrol, and Montana DOT to provide the microwave connection to Building 500 at Malmstrom AFB and the Air Force trunking controller.

#### **Building 500 Communication Site**

This is an existing Air Force owned trunked radio site within Building 500 on Malmstrom AFB (Figures 2-8 and 2-10). It is the Air Force's central controller, which communicates with the Air Force Zone controller at Peterson AFB, Colorado. Proposed activities at the Building 500 communication site include upgrading existing facility with microwave equipment.

#### **Judith Peak Communication Site**

This is an existing communication site that is being upgraded by the CMICC (Figure 2-11). The Montana DOT, Communications Bureau holds the Bureau of Land Management (BLM) permit for this site. This is a former Air Force North American Air Defense (NORAD) site with a good gravel road. This site is in Fergus County approximately 15 miles northeast of Lewistown (Figure 2-12). The existing tower is a guyed 70 foot tower that is not capable of supporting microwave dish antennas and an 8 x 12 foot aluminum equipment shelter. The existing shelter is too small for IM Project and Air Force equipment and lacks the proper grounding and a back up generator. Proposed activities at the Judith Peak communication site include:

- Removing the existing shelter and tower from the site,
- Installing a 12 x 30 foot equipment shelter with HVAC onto a monolithic concrete pad with 200 amp electrical service including a meter and master breaker. A "Thermobond" expansion to the equipment shelter will be installed to support Air Force equipment,
- Installing a 60 KW generator with muffled exhaust onto a monolithic concrete pad adjacent to the equipment shelter,



MALMSTROMWAC012

**EXPLANATION**

**Pacific Steel  
Communication Site**

---

**Figure 2-9**



MALMSTROMWAC006

EXPLANATION

**Building 500  
Communication Site**

---

**Figure 2-10**



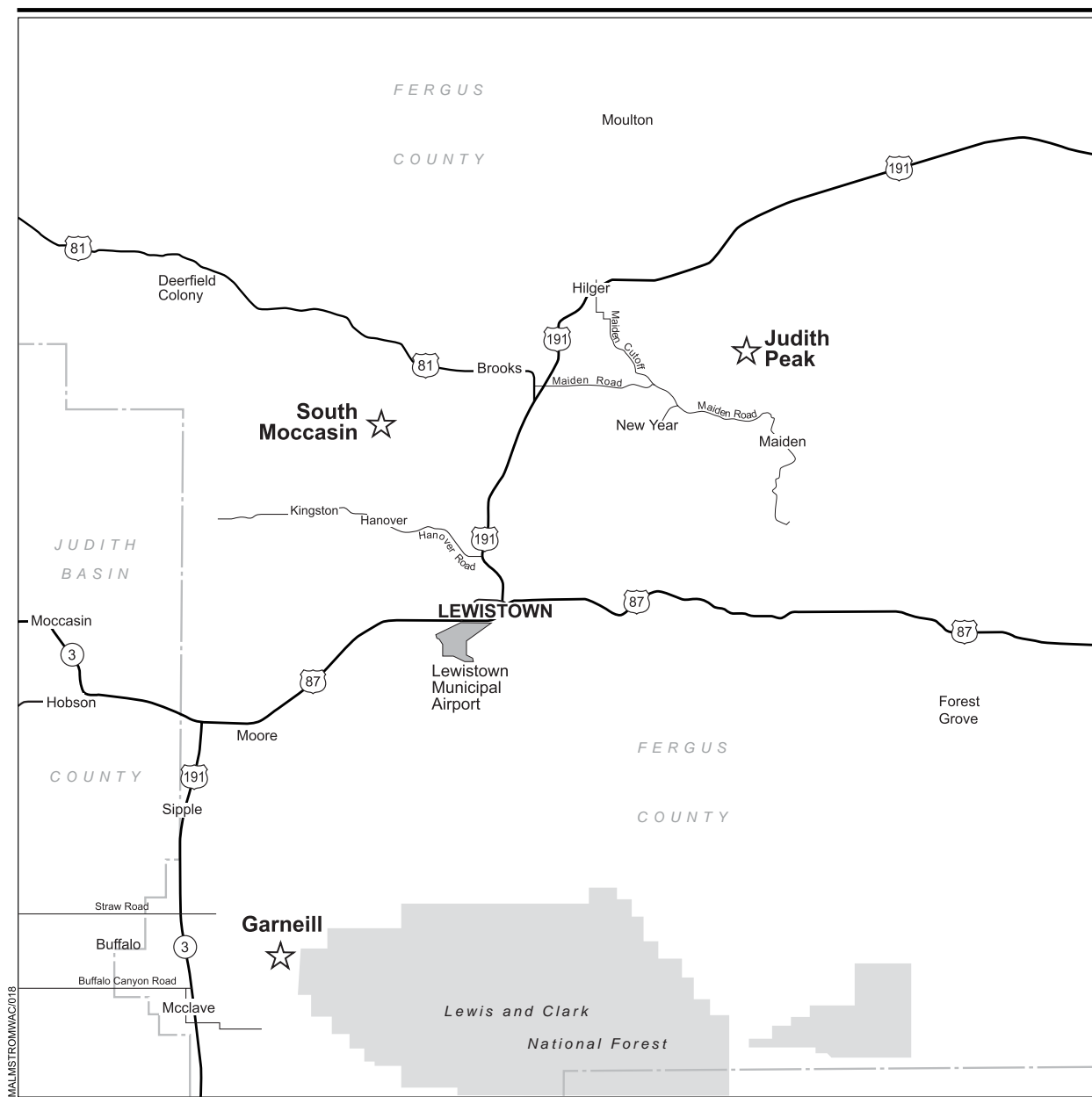
MALMSTROMWAC011

EXPLANATION

**Judith Peak  
Communication Site**

---

**Figure 2-11**



#### EXPLANATION

☆ Communication Site

#### Judith Peak, South Moccasin, and Garneill Location Map

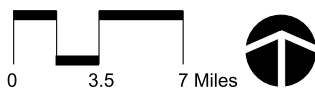


Figure 2-12

- Installing a 1,000-gallon propane tank on a concrete pad placed at least 10 feet from the equipment shelter to provide backup fuel source to run the generator,
- Replacing the existing 70-foot tower with a 150-foot self-supporting radio tower to accommodate the new antennas and microwave dishes needed for this site. A new foundation will be constructed on the site for the tower,
- Installing microwave dishes, VHF trunking antennas, and conventional antennas on the new tower,
- Installing new equipment inside the shelter to provide conventional, trunked, and microwave radio communications,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and the security fence in compliance with R56 grounding standards, and
- Restoring disturbed areas to pre-construction conditions.

#### **South Moccasin Communication Site**

This is an existing communication site being upgraded by the CMICC (Figure 2-13). Fergus County holds an existing BLM permit for this site. This site is in Fergus County approximately 8 miles northwest of Lewistown (see Figure 2-12). The property is a 100 square foot plot; the existing building is too small for the IM Project and Air Force equipment, lacks the proper grounding, and there is no back up generator. The existing tower is a guyed 100-foot tower that is not capable of supporting microwave dish antennas. Proposed activities at the South Moccasin communication site include:

- Demolishing/removing the existing equipment shelter and tower,
- Installing a 12 x 30 foot equipment shelter with HVAC and a separate generator room onto a concrete pad. A “Thermobond” expansion to the equipment shelter will be installed to support Air Force equipment,
- Installing a 130-foot self-supporting radio tower to accommodate the new antennas and microwave dishes,
- Installing a 60 KW generator with muffled exhaust in the generator room of the equipment shelter,
- Installing a 1,000-gallon propane tank on a concrete pad placed at least 10 feet from the equipment shelter to provide backup fuel source to run the generator,
- Extending the electrical service from the existing Northwest Energy power line and installing a new meter base and master breaker,



MALMSTROMWAC013



EXPLANATION

**South Moccasin  
Communication Site**

---

**Figure 2-13**

- Installing microwave dishes, Air Force trunked antennas, and conventional antennas on the new tower. Space will be reserved for the IM Project trunking antennas,
- Installing new microwave equipment and some existing VHF equipment inside the equipment shelter,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and security fence in compliance with R56 grounding standards, and
- Reclaiming all disturbed areas to pre-construction state.

### **Garneill Communication Site**

The Garneill communication sites is a microwave relay site (not a trunking site) and the Air Force will not have any equipment at this site. The Consortium would place all microwave equipment and dishes at the site for IM Project use. The site is owned by the Montana DOT. There is no building, electrical service, or security fencing at the site. A self-supporting, 3-angle leg, 80-foot tower with two 8 or 10 foot dishes mounted at the top is present at the site (Figure 2-14). This site is in Fergus County approximately 20 miles southwest of Lewistown (see Figure 2-12). Proposed activities at the Garneill communication site include:

- Installing the equipment shelter from the Judith Peak communication site onto the existing piers; upgrades to the equipment shelter would include new cable entrance and racks, HVAC, and a 200 amp distribution panel,
- Installing a 25 KW generator with muffled exhaust on a concrete pad adjacent to the equipment shelter,
- Installing a 1,000-gallon propane tank on a concrete pad at least 10 feet away from the equipment shelter,
- Installing new equipment inside the shelter to provide microwave radio communications,
- Installing an 8-foot security fence around the site,
- Removing existing dishes and install new microwave dishes on the existing tower,
- Installing an ice bridge (cable support rack) to the existing tower,
- Bringing the site into compliance with R56 grounding standards,
- Installing approximately 2 miles of new underground power line (within the access road alignment) to the site; the electric service will be upgraded to 200 amp with a new meter base and master breaker,





MALMSTROMWAC009

**EXPLANATION**

**Garneill  
Communication Site**

---

**Figure 2-14**

- Regrading/repairing approximately 2 miles of access road, and
- Restoring disturbed areas to pre-construction conditions.

### **Cooney Communication Site**

This is an existing communication site that would be upgraded by the Air Force (Figure 2-15). This site is in Wheatland County approximately 50 miles south of Lewistown (Figure 2-16). The existing equipment shelter is an approximately 100 square foot cinder block building that is too small for the IM Project and Air Force equipment, lacks the proper grounding, and there is no back up generator. The existing tower is a wood structure that is not capable of supporting microwave dish antennas. Proposed activities at the Cooney communication site include:

- Demolishing/removing the existing equipment shelter and antenna,
- Installing a 12 x 30 foot equipment shelter with HVAC and a separate generator room onto a monolithic concrete pad with 200 amp electrical service including a meter and master breaker,
- Installing a 60 KW generator with muffled exhaust in the generator room of the equipment shelter,
- Installing a 1,000-gallon propane tank on a concrete pad placed at least 10 feet from the equipment shelter to provide backup fuel source to run the generator,
- Installing a 100-foot self-supporting radio tower (stackable to 150 feet) to accommodate the new antennas and microwave dishes needed for this site. This will require a new foundation to be built for the tower,
- Extending electrical service approximately 300 feet to the site,
- Installing microwave dishes, trunked antennas, and conventional antennas on the new tower,
- Installing new equipment inside the equipment shelter to provide conventional, trunked, and microwave radio communications,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and the security fence in compliance with R56 grounding standards, and
- Restoring disturbed areas to pre-construction conditions.



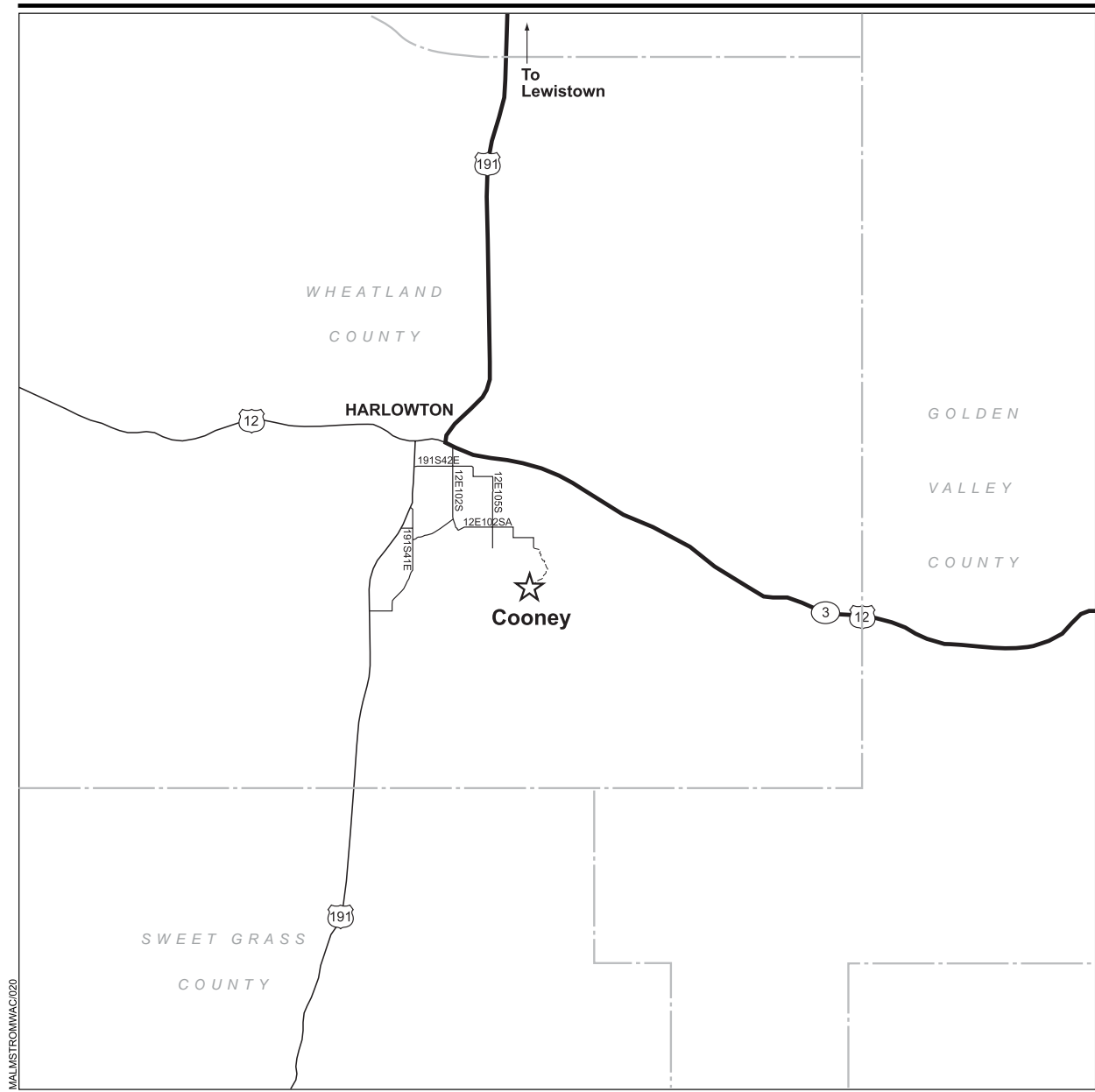
MALMSTROMWAC007

**EXPLANATION**

**Cooney  
Communication Site**

---

**Figure 2-15**



#### EXPLANATION

☆ Communication Site

#### Cooney Location Map

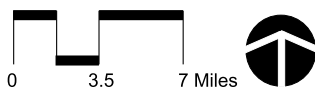


Figure 2-16

## Highwood Baldy Communication Site

This is an existing communication site on forest service land (Figure 2-17). This site is in Chouteau County approximately 32 miles east of Great Falls within the Lewis and Clark National Forest (Figure 2-18). The existing equipment shelter is an approximately 25 x 30 foot building, constructed of corrugated metal and fiberglass. The site includes an emergency generator and two 1,000-gallon diesel storage tanks (contained in an individual convault). Electrical service is provided via buried and aboveground cable. Proposed activities at the Highwood Baldy communication site include:

- Removing the existing Air Force equipment and antennas,
- Installing a 12 x 30 foot equipment shelter with HVAC and a separate generator room onto a monolithic concrete pad with 200 amp electrical service including a meter, master breaker, and an underground extension from the power transformer to the shelter,
- Installing a new tower that will be designed for a height not more than 85 feet in order to be in compliance with the maximum tower height of 7,710 feet. A new slab or pier type foundation will be built on the site for the tower. Soil tests will be conducted as a part of the tower and shelter foundation design,
- Regrading/repairing portions of the access road,
- Installing a 60 KW generator with muffled exhaust in the generator room of the equipment shelter,
- Installing a 2,000-gallon propane tank on a concrete pad placed at least 10 feet from the equipment shelter to provide backup fuel source to run the generator,
- Installing microwave dishes, Air Force, and IM Project trunked antennas, and conventional antennas on the new tower,
- Installing new equipment inside the equipment shelter to provide conventional, trunked, and microwave radio communications,
- Installing an 8-foot security fence around the site,
- Installing the tower, shelter, propane tank, and the security fence in compliance with R56 grounding standards, and
- Restoring disturbed areas to pre-construction conditions. Disturbed open areas would be reseeded with native vegetation, depending on Forest Service directives. Approximately 10 cubic yards of gravel would be used inside the fenceline to level the area and support weed control.



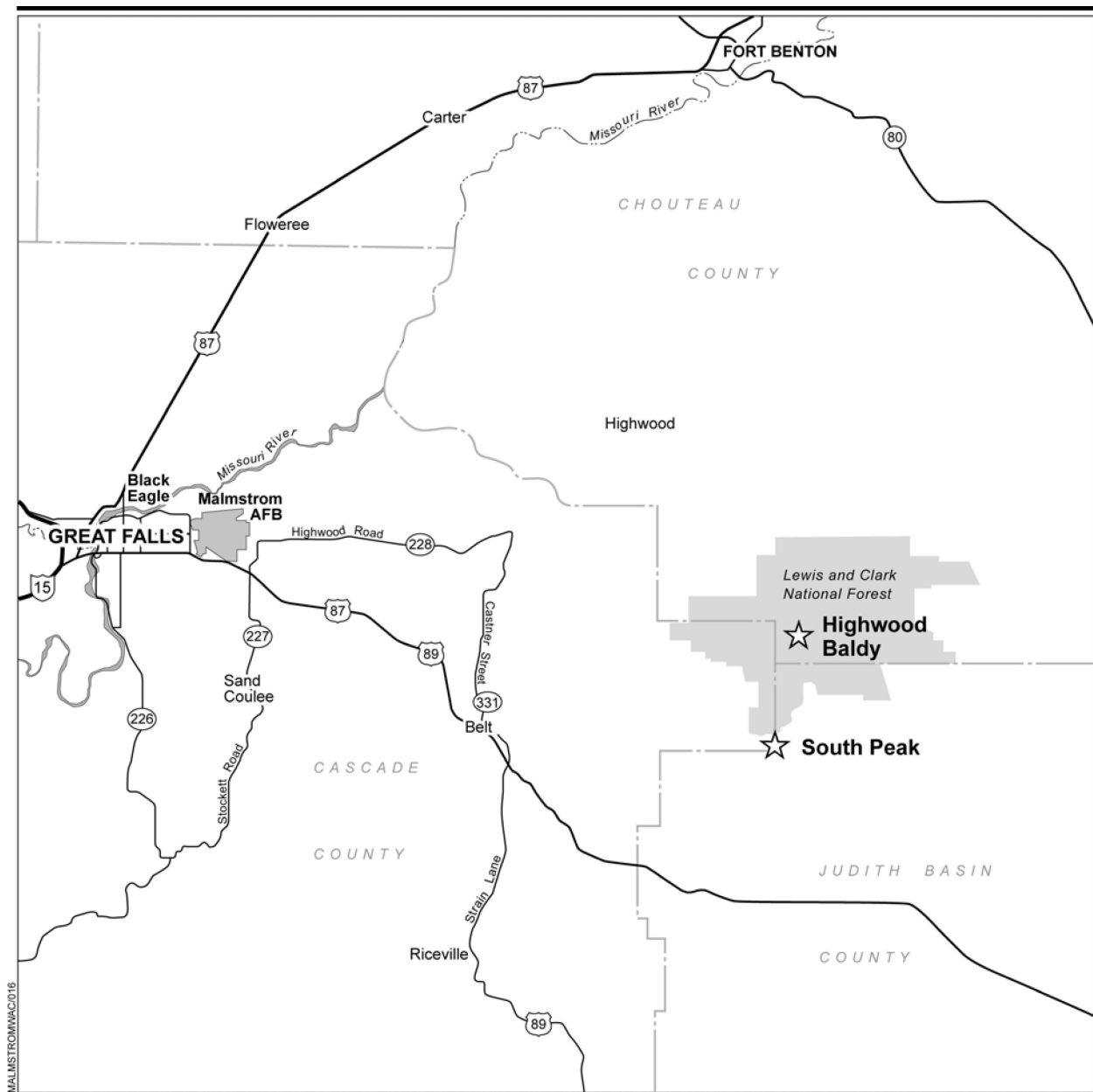
MALMSTROMWAC010

EXPLANATION

**Highwood Baldy  
Communication Site**

---

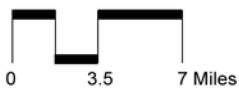
**Figure 2-17**



#### EXPLANATION

☆ Communication Site

#### Highwood Baldy and South Peak Location Map



Note: South Peak communication site is the alternative to using Highwood Baldy communication site.

Figure 2-18

## 2.2 DESCRIPTION OF ALTERNATIVES TO THE PROPOSED ACTION

### 2.2.1 South Peak Alternative

Under the South Peak Alternative, proposed construction and modification activities at the WAC communication sites would be the same as discussed under the Proposed Action; however, South Peak would be used as an alternative communication site in the event that the Highwood Baldy site is unavailable (Figure 2-19). This site is in Judith Basin County approximately 32 miles east of Great Falls (see Figure 2-18).

Estimated ground disturbance as a result of demolition and construction at the South Peak site would be less than one acre; however, approximately 3 miles of new access road is proposed (approximately 5.5 acres of disturbance anticipated). Construction employees would access the site via existing dirt access roads to the base of South Peak.

The construction contractor would be required to transport and dispose of construction debris off-site at approved or permitted facilities for that type of waste in accordance with federal, state, and local regulations. If a spill occurs during construction, it would be cleaned up by the construction contractor. If asbestos, lead-based paint, or other hazardous material are identified in areas proposed for demolition and cannot be avoided, removal and disposal would be conducted by a certified contractor in accordance with applicable federal, state, and local regulations.

Construction actions at the South Peak communication site will be as follows:

- Develop a new radio site with a 150-foot self-supporting tower to accommodate the antennas and microwave dishes needed for the site.
- Install a 12 x 30 foot "Thermobond" equipment shelter with HVAC and a separate generator room onto a monolithic concrete pad.
- Install a 60 KW generator with muffled exhaust in the generator room of the equipment shelter.
- Install a 1,000-gallon propane tank on a concrete pad placed at least 10 feet from the equipment shelter to provide backup fuel source to run the generator.
- Construct approximately 3 miles of new road with switch backs across private and state land to the site. Soil tests would be conducted and a report provided prior to initiating road construction.
- Install 200 amp electrical service and new meter base with a main service disconnect.
- Replace the existing overhead power line to the lower South Peak site and extend the electrical service approximately 0.5 mile to the new South Peak site (total distance is approximately 2 miles).





MALMSTROMWAC004

**EXPLANATION**

**South Peak  
Communication Site**

---

**Figure 2-19**

- Install microwave dishes, Air Force and IM Project trunked antennas, and conventional antennas on the new tower.
- Install new equipment inside the shelter to provide conventional, Air Force, and IM trunked, and microwave radio communications.
- Install an 8-foot security fence around the site.
- The tower, shelter, propane tank, and security fence would be installed in compliance with R56 grounding standards.
- All disturbed areas would be reclaimed to pre-construction state.

#### **2.2.2 No-Action Alternative**

Under the No-Action Alternative, proposed WAC communication system improvements would not be implemented. No demolition, construction, or equipment upgrades would occur. Safety and emergency management agencies would continue to utilize the existing communication system, which does not support effective communication between local, state, and federal agencies during emergency situations.

### **2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER STUDY**

Other than the Proposed Action, South Peak Alternative, and No-Action Alternative, no other alternatives were considered.

### **2.4 OTHER FUTURE ACTIONS IN THE REGION**

Cumulative impacts result from “the incremental impact of actions when added to other past, present, and reasonably foreseeable future actions regardless of what agency undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (Council on Environmental Quality, 1978).

Other future actions in the vicinity of the communication sites were evaluated to determine whether cumulative environmental impacts could result due to the implementation of WAC improvements in conjunction with other past, present, or reasonably foreseeable future actions. Other actions that would occur in the vicinity of the communication sites include:

- The continued remediation/monitoring efforts at the Anaconda Mineral Company – Great Falls Smelter cleanup site near the Pacific Steel communication site
- Continued operation of other communication systems at Belgian Hill, Cooney, Flying J, Highwood Baldy, Judith Peak, South Moccasin, Sullivan, and Teton Ridge communication sites.

## **2.5 COMPARISON OF ENVIRONMENTAL IMPACTS**

Table 2-1 presents a comparative analysis of the Proposed Action and alternatives for each resource (i.e., land use and aesthetics, hazardous materials management, hazardous waste management, storage tanks, ACM, lead-based paint, soils and geology, biological resources, and cultural resources) evaluated in this EA. A detailed discussion of potential effects is presented in Chapter 4.0, Environmental Consequences. Neither the Proposed Action nor the alternatives are anticipated to have a significant impact on the environment.

**Table 2-1. Summary of Influencing Factors and Environmental Impacts**  
**Page 1 of 4**

Resource	Proposed Action	South Peak Alternative	No-Action Alternative
<b>Influencing Factors</b>			
Land Use and Aesthetics	<ul style="list-style-type: none"> <li>No changes in land use</li> <li>The minor change in appearance of the communication sites would not be readily noticeable from a distance and would not change the existing visual character of the area</li> </ul>	<ul style="list-style-type: none"> <li>Improvements would change the land use of the South Peak area from an undeveloped mountain top to a communication site and a dirt access road would be constructed across range/pasture</li> <li>Due to the remote nature of the site, changes to the local land use would not be considered significant</li> <li>The change in appearance of South Peak to a communication site would not be readily noticeable from a distance and would not change the existing visual character of the area</li> </ul>	<ul style="list-style-type: none"> <li>No changes in land use</li> </ul>
<b>Hazardous Materials and Hazardous Waste Management</b>			
Hazardous Materials Management	<ul style="list-style-type: none"> <li>Hazardous materials would be stored, used, and disposed in accordance with applicable regulations</li> </ul>	<ul style="list-style-type: none"> <li>Potential impacts would be the same as those described under the Proposed Action</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous materials would continue to be stored, used, and generated in accordance with applicable regulations</li> </ul>
Hazardous Waste Management	<ul style="list-style-type: none"> <li>Any hazardous waste generated would be disposed in accordance with applicable regulations</li> <li>The Anaconda Mineral Company - Great Falls Refinery VCP site (near the Pacific Steel communication site) would remain the responsibility of ARC-BP until regulator concurrence on a no further action decision has been obtained</li> </ul> <p>Right of access would be coordinated to allow construction and improvements on the site and to inspect/maintain communication equipment as needed</p>	<ul style="list-style-type: none"> <li>Potential impacts would be the same as those described under the Proposed Action</li> </ul>	<ul style="list-style-type: none"> <li>Any hazardous waste generated would be disposed in accordance with applicable regulations</li> </ul>

**Table 2-1. Summary of Influencing Factors and Environmental Impacts**

**Page 2 of 4**

Resource	Proposed Action	South Peak Alternative	No-Action Alternative
Storage Tanks	<ul style="list-style-type: none"> <li>ASTs at Highwood Baldy communication site would be removed and replaced with a propane tank</li> <li>Propane tanks would be used at all communication sites to support emergency generators</li> <li>Proper management of ASTs would minimize the potential for impacts</li> </ul>	<ul style="list-style-type: none"> <li>The ASTs at Highwood Baldy communication site would not be removed</li> <li>Propane tanks would be used at all communication sites including South Peak to support emergency generators</li> <li>Proper management of ASTs would minimize the potential for impacts</li> </ul>	<ul style="list-style-type: none"> <li>Proper management of the ASTs associated with the existing communication sites would continue</li> </ul>
Asbestos-Containing Material	<ul style="list-style-type: none"> <li>ACM could be encountered during demolition activities</li> <li>Demolition activities would be subject to applicable federal, state, and local regulations to minimize the potential risk to human health and the environment</li> <li>The contractor would be advised, to the extent known, of the type, condition, and amount of ACM present within the equipment shelters</li> </ul>	<ul style="list-style-type: none"> <li>Potential ACM impacts would be the same as those described under the Proposed Action</li> </ul>	<ul style="list-style-type: none"> <li>ACM would continue to managed in accordance with applicable regulations</li> </ul>
Lead-Based Paint	<ul style="list-style-type: none"> <li>Lead-based paint could be encountered during demolition activities</li> <li>Demolition activities would be subject to applicable federal, state, and local regulations to minimize the potential risk to human health and the environment</li> <li>The contractor would be advised, to the extent known, of the type, condition, and amount of lead-based paint present at the communication sites</li> </ul>	<ul style="list-style-type: none"> <li>Potential impacts would be the same as those described under the Proposed Action</li> </ul>	<ul style="list-style-type: none"> <li>Lead-based paint would continue to managed in accordance with applicable regulations</li> </ul>

**Table 2-1. Summary of Influencing Factors and Environmental Impacts**

**Page 3 of 4**

Resource	Proposed Action	South Peak Alternative	No-Action Alternative
<b>Natural Environment</b>			
Soils and Geology	<ul style="list-style-type: none"> <li>• Short-term impacts would occur as a result of ground disturbance associated with demolition and construction activities</li> <li>• Compliance with Construction Site Storm Water MPDES permit and SWPPP and implementation of standard construction practices would reduce the potential for erosion effects</li> <li>• Once demolition and construction activities are complete, disturbed areas would be covered with pavement or gravel to reduce erosion potential</li> </ul>	<ul style="list-style-type: none"> <li>• Potential impacts would be similar to those described under the Proposed Action</li> </ul>	<ul style="list-style-type: none"> <li>• No demolition activities would occur</li> </ul>
Biological Resources	<ul style="list-style-type: none"> <li>• Demolition and construction activities would create a short-term impact to wildlife</li> <li>• Most species near the sites are disturbance-tolerant</li> <li>• No federal or state listed plant or animal species are expected to inhabit the communication sites</li> <li>• No sensitive habitats would be affected as a result of proposed activities</li> </ul>	<ul style="list-style-type: none"> <li>• Potential impacts would be similar to those described under the Proposed Action</li> </ul>	<ul style="list-style-type: none"> <li>• Demolition and construction activities would not occur</li> </ul>

**Table 2-1. Summary of Influencing Factors and Environmental Impacts**

**Page 4 of 4**

Resource	Proposed Action	South Peak Alternative	No-Action Alternative
Cultural Resources	<ul style="list-style-type: none"> <li>No prehistoric or historic archaeological properties, historic buildings or structures, or traditional cultural resources are known to be present at the communication sites</li> </ul>	<ul style="list-style-type: none"> <li>Potential impacts would be similar to those described under the Proposed Action</li> <li>Because the proposed South Peak communication site has not been developed and no road access to this site exists, there is a potential for discovery of archaeological resources.</li> <li>Prior to initiating any ground disturbing activities, a qualified archaeologist would survey the proposed areas of development</li> <li>Prior to construction, consultation with Native American tribes will be initiated to ensure that no traditional cultural properties will be affected by the project</li> </ul>	<ul style="list-style-type: none"> <li>Demolition and construction activities would not occur</li> </ul>

---

ACM	=	asbestos-containing material
ARC-BP	=	Atlantic Richfield Company – British Petroleum
AST	=	aboveground storage tank
MPDES	=	Montana Pollutant Discharge Elimination System
SHPO	=	State Historic Preservation Officer
SWPPP	=	Storm Water Pollution Prevention Plan
VCP	=	Voluntary Cleanup Plan

**THIS PAGE INTENTIONALLY LEFT BLANK**



## **3.0 AFFECTED ENVIRONMENT**

---

### **3.1 INTRODUCTION**

This chapter describes the existing environmental conditions within the area potentially affected by proposed WAC activities. It provides information to serve as a baseline from which to identify and evaluate potential environmental changes resulting from implementing improvements at communication sites. The environmental components addressed include relevant natural or human environments likely to be affected by the Proposed Action and alternatives.

Based upon the nature of the activities that would occur under the Proposed Action and alternatives, it was determined that the potential exists for the following resources to be affected or to create environmental effects: land use and aesthetics, hazardous materials management, hazardous waste management, storage tanks, asbestos, lead-based paint, soils and geology, biological resources, and cultural resources.

The region of influence (ROI) to be studied will be defined for each resource area affected by the proposed activities. The ROI determines the geographical area to be addressed as the Affected Environment.

### **3.2 LAND USE AND AESTHETICS**

The ROI for land use is the areas of land immediately adjacent to each of the communication sites. The ROI for aesthetics is the area containing views of these communication sites.

#### **3.2.1 Land Use**

Land within central Montana where the communication sites are situated is generally rural. Central Montana is sparsely populated and most communities are small with exceptions such as Great Falls, Lewistown, and Stanford. With the exception of the Building 500, Flying J, and Pacific Steel communication sites (all near Great Falls), the communication sites are not situated within or adjacent to communities. The communication sites are situated primarily in remote undeveloped areas that consist of cropland, grazed rangeland, grassland, or woodland areas. The Highwood Baldy site is situated within the Lewis and Clark National Forest boundary.

Each communication sites is less than an acre in area. The communication sites are typically within a fenced (barbed wire or chain link) area with an equipment shelter and antenna (varying height). A dirt or gravel access road is used to access the sites. In some cases, an aboveground storage tank (AST) is positioned nearby to power an emergency generator at the site. Eight of the communication sites (Belgian Hill, Cooney, Flying J, Judith Peak, South Moccasin, Sullivan, Highwood Baldy, and Teton Ridge) have other

communication system users nearby which have equipment shelters, storage tanks, fencing, and antennas associated with their property.

### **3.2.2 Aesthetics**

Visual sensitivity is characterized in terms of high, medium, and low levels. High visual sensitivity exists in areas where views are rare, unique, or in other ways special, such as in a remote pristine environment. Medium visual sensitivity is characteristic of areas where human influence and modern civilization are evident and the presence of motorized vehicles is commonplace. Low visual sensitivity areas tend to have minimal landscape features with little change in form, line, color, and texture.

The most visible features at a communication site are the security fencing, an equipment shelter (approximately 10 feet tall), a storage tank, and an adjacent antenna (ranging from 40 to 120 feet in height). Eight of the communication sites (Belgian Hill, Cooney, Flying J, Judith Peak, South Moccasin, Sullivan, Highwood Baldy, and Teton Ridge) have other communication system users nearby which have equipment shelters, storage tanks, fencing, and antennas associated with their property as well. The developed communication sites are considered to have a low visual sensitivity.

With the exception of the Building 500, Flying J, and Pacific Steel communication sites, the landscape in which the communication sites are situated is generally rural. Much of the areas contain views of wide-open cropland and grassland areas on rolling hills, or buttes and mountains. Some communication sites are situated within forested and mountainous areas. Because of the open views, many of the communication sites can be considered to have a high visual sensitivity. Many communication sites are situated in open, treeless areas and are visible at a distance from public roads. The appearance of the communication sites in the generally wide open landscape is not too different from the views of the widely scattered antennas, and farm and ranch buildings in the surrounding landscape.

## **3.3 HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT**

Hazardous materials and hazardous waste management activities at the communication sites are governed by specific environmental regulations. For the purpose of this analysis, the term hazardous material or hazardous waste will mean those substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Section 9601, et seq., as amended, and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901-6992, as amended. In general, these include substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may present substantial danger to public health, welfare, or the environment when released into the environment. The state regulations, which are at least as stringent as the federal regulations, are found in Administrative Rules of Montana (ARM) Title 17, Chapter 53.

The ROI for hazardous materials and hazardous waste, including non-regulated waste such as used motor oil, encompasses those areas that could potentially be exposed to a release during site upgrades. Hazardous materials management, hazardous waste management, storage tanks, asbestos, and lead-based paint are discussed in this section.

### **3.3.1 Hazardous Materials Management**

Minimal hazardous materials are utilized at the communication sites. The hazardous materials associated with the sites are those utilized during the operation and maintenance of emergency generators and HVAC systems, and facility maintenance. Hazardous materials utilized at communication sites include petroleum, oils, and lubricants (POL); fuels; and ethylene glycol which are used for the emergency generators, and refrigerant which is utilized in facility HVAC systems.

Additionally, small amounts of hazardous materials such as paints, solvents, and household cleaning products are utilized during periodic repair/maintenance activities at the communication sites.

Hazardous material usage at communication sites is conducted in accordance with applicable regulations. Hazardous materials usage at communication sites where Air Force equipment is installed is also managed in accordance with Air Force Occupational Safety and Health (AFOSH) Standard 161-21, Hazard Communication, Air Force Instruction (AFI) 32-7086, Hazardous Materials Management, and Federal Standard 313D.

### **3.3.2 Hazardous Waste Management**

No hazardous wastes are generated at the communication sites during normal operations. Hazardous wastes would only be generated during repair/maintenance of the equipment and emergency generator at the sites. Any hazardous wastes generated are properly containerized, labeled, and transported for disposal.

Hazardous wastes generated at the communication sites are regulated by RCRA (Title 40 CFR 260-280). The U.S. EPA has authorized the State of Montana to enforce RCRA regulations in the state as set forth in ARM Title 17, Chapter 53. These regulations require that hazardous waste be handled, stored, transported, disposed, or recycled according to defined procedures.

Remote facilities that are associated with Malmstrom AFB are managed in accordance with the installation Hazardous Waste Management Plan, which implements the above regulations and outlines the procedures for disposing of hazardous waste to ensure the proper identification, management, and disposition of hazardous waste, and compliance with applicable federal, state, and Department of Defense (DOD) requirements. Malmstrom AFB also maintains an Integrated Hazardous Materials Emergency Response Plan (IHMERP) and Spill Prevention Control and Countermeasures Plan (SPCCP) that establish responsibilities and contingency plans in the event of a hazardous

substance release and identifies the BMPs for preventing a release of a hazardous substance.

#### **3.3.2.1 Contaminated Sites.**

The Pacific Steel communication site is the only site affected by previous contamination. A discussion of the site of contamination is provided below.

**Anaconda Mineral Company - Great Falls Smelter.** This site is situated east of 15th Street in the City of Black Eagle and was a roughly 250-acre metals smelter complex that operated from 1893 to 1980. The facility produced primarily copper, zinc, cadmium, and indium metal in various forms. Waste products including flue dust, concentrator tailings, slag, and metallurgical residues were generated and stored on-site in various locations including waste piles, slag heaps, sludge ponds, and a settling pond. After closure, the operator removed most of the stockpiled materials from the facility, entombed flue dust in an on-site concrete vault, covered dump areas, and pumped groundwater away from the former zinc plant to prevent groundwater contamination. Access to the facility is restricted by fencing.

In 1981, the U.S. EPA conducted a post-closure solid waste inventory of the facility including evaluations of 27 areas within the facility such as slag heaps, sludge piles, waste dumps, and discharge sites. A 1982 CERCLA preliminary assessment prepared by the U.S. EPA concluded that further investigation of the facility was not warranted. In December 1982, the U.S. EPA declared the facility “No Further Action” under CERCLA.

In 1983, a site investigation by Atlantic Richfield Company-British Petroleum (ARC-BP) for the U.S. EPA and the Montana Department of Health and Environmental Sciences documented on-site and off-site surface water exceeding federal maximum contaminant levels (MCLs) for aquatic life and human health in the Missouri River downstream from the facility. The investigation also found extremely high levels of zinc and cadmium in on-site monitoring wells (above Montana’s water quality standards) and also identified on-site waste material containing high levels of heavy metals.

From 1981-1999, ARC-BP conducted demolition, salvage, and cleanup on the facility including burying waste on-site, covering parts of the property with varying thicknesses of soil from on-site borrow pits, revegetation, and erosion control.

In June 2000, ARC-BP submitted a draft Voluntary Cleanup Plan (VCP) with Cascade County as a co-applicant to the Montana Department of Environmental Quality (MDEQ). ARC-BP planned to transfer the property to the county upon delisting of the facility. MDEQ deemed the VCP incomplete and provided substantial comments to ARC-BP. The facility was reevaluated and ranked by MDEQ (under the State Superfund law) as a high priority facility in 2001. In February 2002, MDEQ requested that the U.S. EPA reevaluate and rank the facility because of concerns regarding heavy metal contamination on or near the facility that may pose potential risks to human health and the environment.

Recent analytical results from a U.S. EPA Expanded Site Inspection (June 2004) indicate that high levels of lead, arsenic, cadmium, antimony, and other metals contaminate the Missouri River surface water and sediment, as well as on-site groundwater and soil. Large parts of the facility appear to have inadequate soil covering. Waste material (flue dust, slag, tailings), which may be hazardous, has been stored on-site without compliance with either solid or hazardous waste regulations. Additional sampling and cleanup of the property is required (State of Montana, 2007b).

### **3.3.3 Storage Tanks**

The MDEQ manages ASTs in accordance with ARM Title 17, Chapter 57, which has adopted, by reference, the National Fire Protection Association standards for ASTs that contain flammable and combustible liquids, the Uniform Fire Code, as well as other standards.

ASTs are presently in use at three communications sites for the storage of diesel fuel (Highwood Baldy) and propane (Belgian Hill and Teton Ridge). Fuel storage tanks are closely regulated and must meet stringent guidelines for spill and leak protection. The Highwood Baldy communication site uses two 1,000-gallon diesel fuel ASTs (both within an individual convault). The Belgian Hill communication site uses a 250-gallon AST and the Teton Ridge communication site uses a 500-gallon AST to store propane.

### **3.3.4 Asbestos**

Asbestos-Containing Material (ACM) and ACM abatement are regulated by the U.S. EPA and the Occupational Safety and Health Administration (OSHA). Release of asbestos fiber emissions into the ambient air is regulated in accordance with Section 112 of the Clean Air Act (CAA), which established the National Emissions Standards for Hazardous Air Pollutants (NESHAP). Under NESHAP, the owner of a structure must, prior to demolition or renovation of buildings with ACM, provide notice to the regulator with CAA authority (i.e., either the U.S. EPA or its state counterpart). The NESHAP regulations (40 CFR Part 61, Subpart M) address the demolition or renovation of buildings with ACM. The Asbestos Hazard Emergency Response Act (AHERA), Public Law (P.L.) 99-519 and P.L. 101-637, addresses worker protection for employees who work around or remediate ACM.

The state of Montana also manages asbestos under ARM Title 17, Chapter 74, and the Clean Air Act of Montana, Montana Code Annotated (MCA) Title 75, Chapter 2, Part 5.

Because renovation or demolition of buildings with ACM can release asbestos fibers into the air, the current Air Force practice is to manage or abate ACM in active facilities, and abate ACM per regulatory requirements prior to facility demolition. Abatement of ACM occurs when there is a potential for asbestos fiber releases that would affect the environment or human health.

The equipment shelters at the communication sites have not been surveyed for ACM. The Flying J, Garneill, and South Peak communication sites have no equipment structures; therefore, ACM is not likely to be present at these communication sites.

### **3.3.5 Lead-Based Paint**

Lead is a heavy ductile metal commonly found in association with organic compounds, as well as in oxides, salts, or as metallic lead. Human exposure to lead has been determined to be an adverse health risk by agencies such as OSHA and the U.S. EPA. Sources of exposure to lead are through paint, dust, and soil. In 1973, the Consumer Product Safety Commission (CPSC) established a maximum lead content in paint of 0.5 percent by weight in a dry film of newly applied paint. In 1978, the Consumer Product Safety Act (P.L. 101-608 as implemented by 16 CFR Part 1303) lowered the allowable lead level in paint to 0.06 percent by weight in a dry film of newly applied paint. Hazardous waste containing lead is disposed of in accordance with 40 CFR Part 260, et seq., and 29 CFR Part 1910.120. The Air Force does not actively pursue removal of lead-based paint. Instead, it is managed in place or removed as necessary.

Malmstrom AFB currently samples project areas prior to initiating any renovation or demolition of structures to verify the presence or absence of lead-based paint. This process allows the Air Force to confidently disclose to workers the type, condition, and estimated amount of lead-based paint that could be present so that appropriate safety measures can be implemented to protect workers potentially exposed.

A lead-based paint survey of the equipment shelter and antenna at the communication sites has not been conducted. The Flying J, Garneill, and South Peak communication sites have no equipment structures or are not painted; therefore, lead-based paint is not likely to be present at these communication sites.

## **3.4 SOILS AND GEOLOGY**

The ROI for evaluation of potential impacts to soils and geology from proposed WAC upgrade activities is central Montana, with specific impacts anticipated to occur at the individual communication sites being upgraded. The westernmost communication sites are adjacent to the eastern edge of the Rocky Mountains and the easternmost communication sites are bounded by the Judith Mountains, with the Belt Mountains to the south, and the northern Great Plains to the north. Sedimentary rocks dominate the geologic landscape for most of the ROI with particular soil types being specific to the parent material and the topography upon which it rests. The physiography plays an important role as to the type of soil developed at the sites. Soil types range from thick, well-drained soils found on terraces and foothill areas to well-drained, clay rich soils in the glaciated areas.

### **3.4.1 Soils**

Various soil types are present within the ROI. Soil types vary depending on which area the communication sites are situated in. The primary reasons for diverse soils include the diverse geologic materials from which the soils form from, and the landforms from which the soils are formed on. Near the City of Great Falls, soils are dominated by deep, well drained to moderately well drained soils that are present on floodplains, fans, terraces, foot slopes, glaciated terraces, and uplands. Throughout central Montana, the plains rise up to meet the mountains. Streams leaving the mountains deposited gravelly and cobbly outwash as broad alluvial fans and terraces. Soils on these broad plains and terraces are typical Mollisols (dark colored, calcium rich soil) and Argiborolls (clay rich, dark colored soil). Alluvial surfaces emanating from the mountains with a significant component of limestone have Calicborolls (calcium carbonate rich soil). These soils are characterized by thin dark grayish brown calcareous clay loam. The calcium carbonate content ranges from 30 to 50 percent. Gravels, cobbles, and rock fragments are common in most soil types. The soils are typically well drained (U.S. Department of Agriculture, 1982).

### **3.4.2 Geology**

Central Montana is characterized by predominantly Cretaceous formations of horizontal to slightly inclined beds of shale, siltstone, sandstone, and coal overlying slightly warped Paleozoic rocks. These sedimentary formations have been intruded by Tertiary igneous laccoliths and volcanic rocks forming domal, circular mountain masses and small mountain chains. In addition, glacial and fluvial processes have covered extensive areas of the plains with unconsolidated deposits of gravel, sands, silts, and clay of Quaternary age.

The communication sites are situated within Seismic Zone 1 (International Conference of Building Officials, 1991). In Seismic Zone 1, there is a one in ten chance of experiencing a ground acceleration of 1/10th the acceleration due to gravity (0.1 g) once in fifty years.

## **3.5 BIOLOGICAL RESOURCES**

Biological resources include the native and introduced plants and animals within the project area. For discussion purposes, these are divided up into vegetation, wildlife, threatened and endangered species, and sensitive habitats. One of the communication sites is located within the Lewis and Clark National Forest. In addition to Forest Service sensitive plant, animal, and fish, Management Indicator Species (MIS) for the subject Forest Service area will be evaluated as part of this section. Human activity has already altered the natural environment at the communication sites through grading, graveling, and paving of the sites.

The ROI for biological resources includes those portions of the 6-county area where the communication sites are situated, focusing on the area around the developed communication site and access route. This ROI includes the area within which potential impacts could occur and provides a basis for evaluating the level of impact.

Relevant legislation pertaining to biological resources are briefly discussed below.

The Endangered Species Act (16 U.S.C. Sections 1531-1544) is intended to protect, maintain, and restore ecosystems upon which threatened and endangered species depend, to provide for the conservation of threatened and endangered species, and to take steps appropriate to achieve these purposes.

The Migratory Bird Treaty Act (16 U.S.C. Sections 703-712) stipulates that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. The Act implements the United States' commitment to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each of the conventions protect selected species of birds that are common to any two or more countries.

The Sikes Act (16 U.S.C. 670a-670o, 74 Stat. 1052), as amended (P.L. 86-797) provides for cooperation by the Departments of the Interior and Defense with state agencies in planning, development, and maintenance of fish and wildlife resources on military reservations throughout the United States.

### **3.5.1 Vegetation**

The proposed communication sites are located within a variety of habitat types. There are nine separate vegetation types the communication sites can be classified as: foothill grassland, central grassland, northern grassland, Teton River-Judith Basin grassland, lodgepole pine-Douglas fir forest, ponderosa pine savannah, western Montana ponderosa pine forest, agricultural/pasture land, and disturbed.

Foothill grasslands occur in rolling foothills from the edge of the forest to the plains. Species that distinguish this vegetation type include a mixture of plains and mountain species and the predominance of wheatgrasses and fescues. The dominant wheatgrasses are bluebunch wheatgrass (*Pseudoroegneria spicata*) and western wheatgrass (*Agropyron smithii*). The dominant fescues are Idaho (*Festuca idahoensis*) and sheep fescue (*Festuca ovina*). Other common species include prairie Junegrass (*Koeleria pyramidata*), blue grama (*Bouteloua gracilis*) and shrubby cinquefoil (*Potentilla fruticosa*) (Montana Agricultural Experiment Station, Montana State University, 1973). Communication sites that are within this vegetation type include Flying J, Graneill, Highwood Baldy, Pacific Steel, and South Peak.

Central grasslands occur in plains to rolling and rough topography. Species that distinguish this vegetation type include the presence of sagebrush (*Artemisia* Sp.) in minor quantities. Other species common to this vegetation type are plains pricklypear (*Opuntia* sp.), broom snakeweed (*Gutierrezia sarothrae*), Sandberg bluegrass (*Poa secunda*), green needle grass (*Stipa viridula*), bluebunch wheatgrass, phlox (*Phlox* sp.), buckwheat (*Eriogonum* sp.), and scarlett globemallow (*Sphaeralcea coccinea*) (Montana Agricultural Experiment Station, Montana State University, 1973). Cooney is the only communication with this vegetation type.



Northern Grasslands occur in glaciated and rolling topography. Common species within this vegetation type include blue grama, western wheatgrass, dryland sedges (threadleaf [*Carex filifolia*] and needleleaf [*Carex elecharis*]), needle-and-thread (*Stipa comata*), prairie Junegrass and plains reedgrass (*Calamagrostis montanensis*) (Montana Agricultural Experiment Station, Montana State University, 1973). Belgian Hill is the only communication site with this vegetation type.

Teton River-Judith Basin grasslands occur in gently sloping to rolling topography. Common species to this vegetation type include Sandberg bluegrass, prairie Junegrass, western wheatgrass, bluebunch wheatgrass, needleleaf sedge, and threadleaf sedge (Montana Agricultural Experiment Station, Montana State University, 1973). Communication sites that are within this vegetation type include Belgian Hill, Cooney, and Teton Ridge.

Lodgepole pine-Douglas fir forests occur in rough and mountainous topography. Common species within this vegetation type include lodgepole pine (*Pinus contorta*), Douglas fir (*Pseudotsuga douglasii*), big whortleberry (*Vaccinium membranaceum*), shinyleaf spirea (*Spiraea betulifolia*), showy aster (*Gaillardia aristata*), pine reedgrass (*Calamagrostis rubescens*), elk sedge (*Carex geyeri*), and bluegrass (Montana Agricultural Experiment Station, Montana State University, 1973). Communication sites that are within this vegetation type include Highwood Baldy, Judith Peak, South Moccasin, and South Peak.

Ponderosa pine savannahs occur in rolling or hilly topography. Dominant species include ponderosa pine (*Pinus ponderosa*), western wheatgrass, bluebunch wheatgrass, and blue grama. Common species to this vegetation type include common snowberry (*Symphoricarpos albus*), needle-and thread, phlox, lupine (*Lupinus* sp.), and buckwheat (Montana Agricultural Experiment Station, Montana State University, 1973). Judith Peak is the only communication site with this vegetation type.

Western Montana ponderosa pine forest occurs in foothill and mountainous topography. Dominant species include ponderosa pine, needle-and-thread, and blue grama. Common species include common snowberry, Oregon grape (*Berberis aquifolium*), bluegrass, western wheatgrass, lupine, yarrow (*Achillea millefolium*), and clover (*Trifolium* sp.) (Montana Agricultural Experiment Station, Montana State University, 1973). Sullivan is the only communication site with this vegetation type.

Agricultural/pasture land is most often associated with the grassland habitats and contains many of the dominant and common species associated with these vegetation types. In addition to the native species, the agricultural/pasture land contains low to high densities of planted non-native grasses and other species often associated with the grazing livestock. Communication sites that are within this vegetation type include Belgian Hill, Garneill, and Teton Ridge.

The disturbed vegetation type consists of severely manipulated habitat due to human activity. The habitat has been invaded by non-native grasses and/or forbs, or has been landscaped with lawn and other regionally common landscape

related vegetation. Communication sites that are within this vegetation type include Building 500, Flying J, and Pacific Steel.

### 3.5.2 Wildlife

Because the location of the communication facilities occur within a variety of habitat types, the variation of common wildlife with the potential to be encountered during the Proposed Action would be significant. Common wildlife that could occur regionally within the identified habitat types include the ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), golden eagle (*Aquila chrysaetos*), sage grouse (*Centrocercus urophasianus*), mountain plover (*Charadrius motanus*), long-billed curlew (*Numenius americanus*), upland sand piper (*Bartramia longicauda*), white tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), mountain goat (*Oreamnos americanus*), prairie dog (*Cynomys* sp.), badger (*Taxidea taxus*), porcupine (*Erethizon dorsatum*), raccoon (*Procyon lotor*), deer mouse (*Peromyscus* sp.), ground squirrel (*Spermophilus* sp.), coyote (*Canis latrans*), bobcat (*Lynx rufus*), cougar (*Puma concolor*), and western rattlesnake (*Crotalus viridis*) (Montana Fish, Wildlife, & Parks, 2007).

### 3.5.3 Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (Lewis and Clark National Forest), and the Montana Fish Wildlife and Parks (MFW&P) websites were used to determine the potential of occurrence for listed Threatened and Endangered species. In addition, personal communications between the Earth Tech biologist and Caroline Sime, a wolf program biologist with Montana Fish, Wildlife, and Parks, and Laura Conway, a biologist with Lewis and Clark National Forest Service, were conducted to gather additional special-status species information. The MFW&P website lists the federally threatened and endangered species by county. The counties in which the communication sites occur are Cascade, Chouteau, Fergus, Pondera, Teton, and Wheatland. Each species natural history and preferred habitat were researched and compared to the habitat available at each of the communication sites to determine whether potential for occurrence was low, moderate, or high.

Federally threatened and endangered species that occur or have the potential to occur within the ROI are listed in Table 3-1. Figures 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, and 3-7 illustrate the occurrences of threatened and endangered species as well as designated habitat conservation areas in relation to the communication sites.

The federally endangered pallid sturgeon (*Scaphirhynchus albus*) prefers large, turbid rivers over sand and gravel bottoms, usually in strong current, and also impoundments of these rivers. In Montana, pallid sturgeon use large turbid streams including the Missouri and Yellowstone rivers. They use all channel types, primarily straight reaches with islands. They prefer areas with substrates containing sand (especially bottom sand dune formations) and fines (93% of observations) (Montana Fish Wildlife and Parks, 2007). There are no turbid streams or any other bodies of water associated with any of the communication

**Table 3-1. Threatened and Endangered Species within the ROI**

Common Name	Scientific Name	Federal Status
<b>Fish</b>		
Pallid Sturgeon	<i>Scaphirynchus albus</i>	E
<b>Birds</b>		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted
Piping plover	<i>Charadrius melodus</i>	T
<b>Mammals</b>		
Grizzly Bear	<i>Ursus arctos horribilis</i>	T
Canada lynx	<i>Lynx canadensis</i>	T
Gray Wolf	<i>Canis lupus</i>	E
Black-footed ferret	<i>Mustela nigripes</i>	E

E = endangered

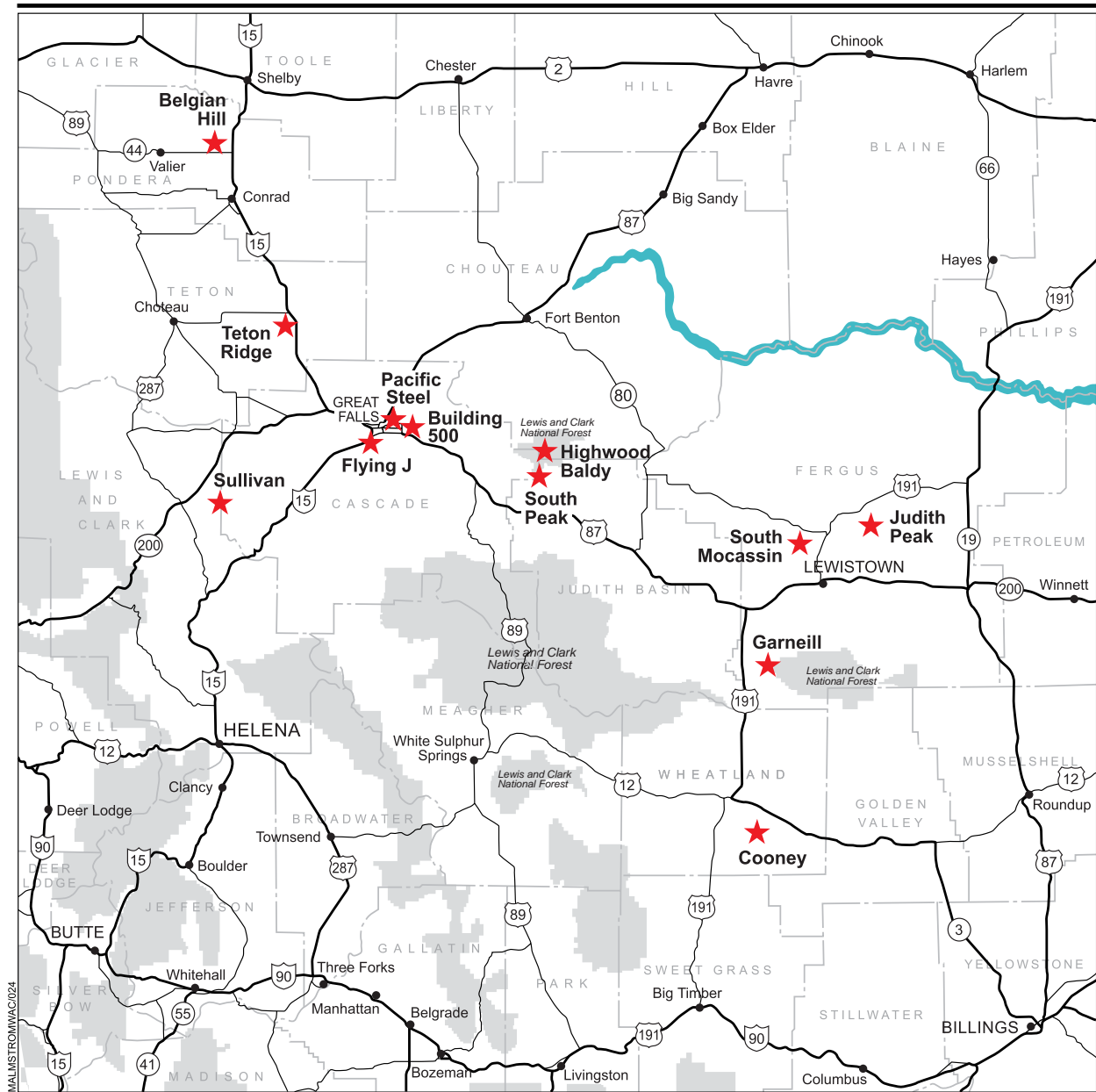
T = threatened

Source: U.S. Fish and Wildlife Service, 2006.

sites. There is no potential for this species to occur at any of the communication sites.

The federally threatened piping plover (*Charadrius melodus*) prefers habitat that is comprised of unvegetated sand or pebble beaches on shorelines or islands in freshwater and saline wetlands. Vegetation, if present at all, consists of sparse, scattered clumps. Open shorelines and sandbars of rivers and large reservoirs in the eastern and north-central portions of Montana provide prime breeding habitat. In Montana, and throughout the species' range, nesting may occur on a variety of habitat types. If conditions are right, alkali wetlands, lakes, reservoirs, and rivers can all provide the essential features required for nesting. The alkali wetlands and lakes found in the northeastern corner of the state generally contain wide, unvegetated, gravelly, salt-encrusted beaches. Rivers that flood adequately can supply open sandbars or gravelly beaches, as can large reservoirs, with their shoreline beaches, peninsulas, and islands of gravel or sand (Montana Fish Wildlife and Parks, 2007b). Although the Belgian Hill communication site is identified as being within the range of occupied habitat, the preferred habitat for this species does not occur at the Belgian Hill site, nor does it occur at any of the other communication sites. The potential for this species to occur, other than incidentally, at any of the communication sites is low.

The recently federally de-listed bald eagle (*Haliaeetus leucocephalus*) is primarily a species of riparian and lacustrine habitats (forested areas along rivers and lakes), especially during the breeding season. Important year-round habitat in Montana includes wetlands, major water bodies, spring spawning streams, ungulate winter ranges and open water areas. Wintering habitat may include upland sites. Nesting sites are generally located within larger forested areas near large lakes and rivers where nests are usually built in the tallest, oldest, large diameter trees. Nesting site selection is dependent upon maximum local food availability and minimum disturbance from human activity (Montana Fish Wildlife and Parks, 2007c). Although this species can be observed throughout a variety of habitats within Montana, observations of this species at any of the



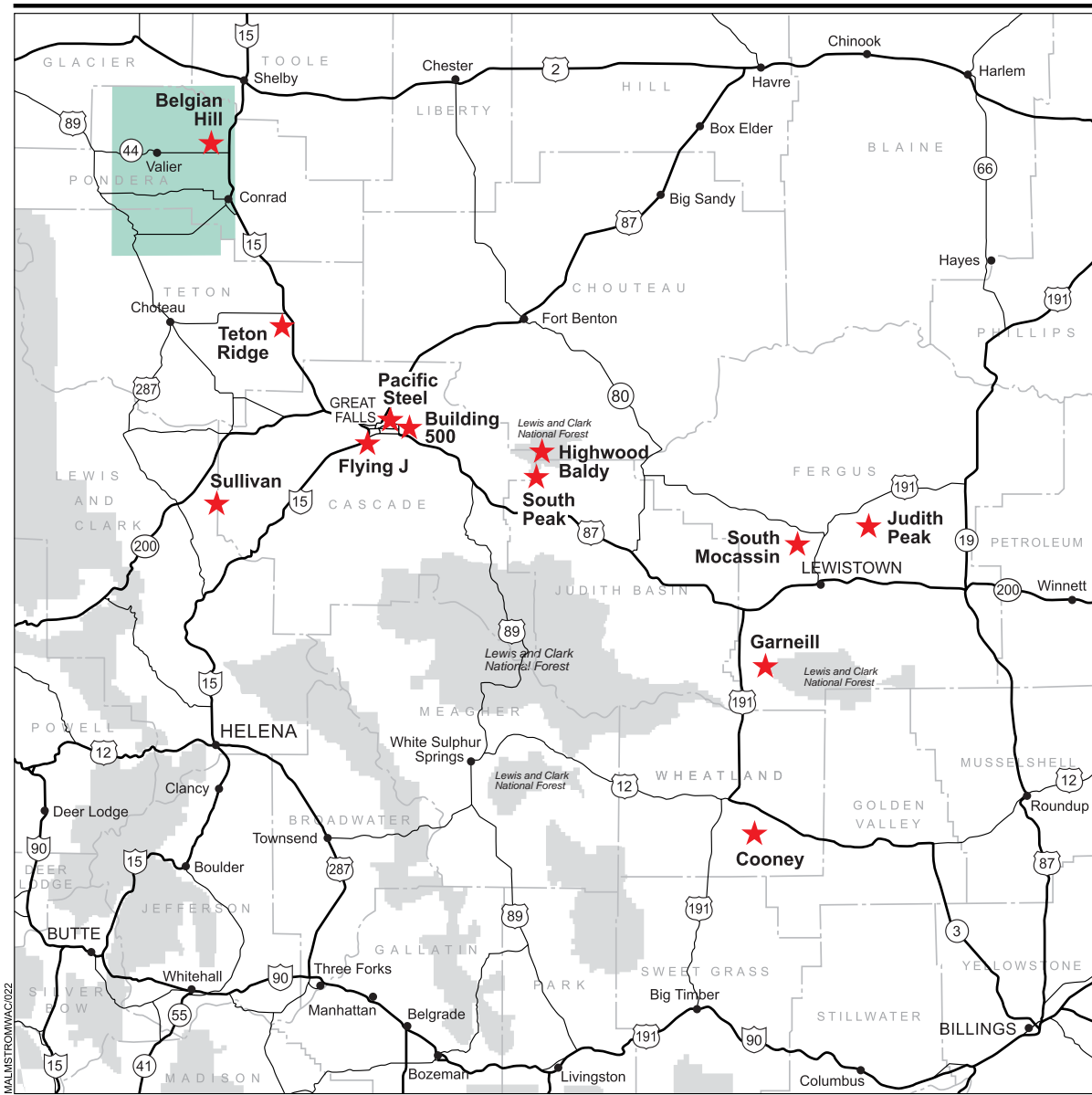
#### EXPLANATION

- Pallid Sturgeon Habitat
- Communication Site
- National Forest



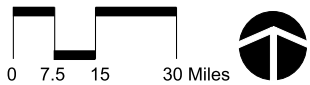
#### Pallid Sturgeon Habitat

Figure 3-1



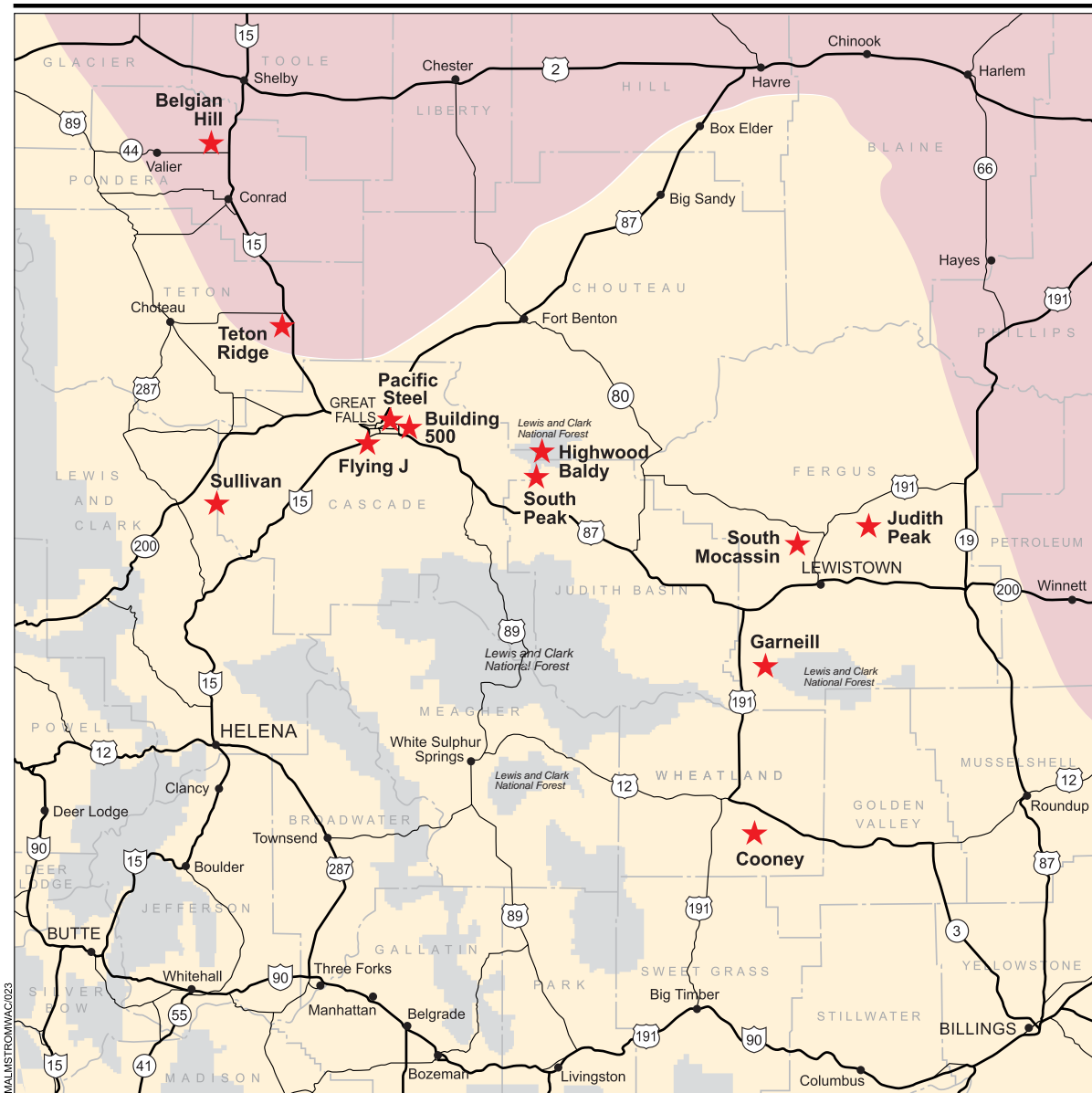
**EXPLANATION**

- Piping Plover Habitat
- Communication Site
- National Forest



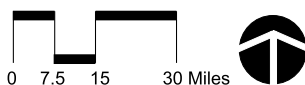
**Piping Plover Habitat**

**Figure 3-2**



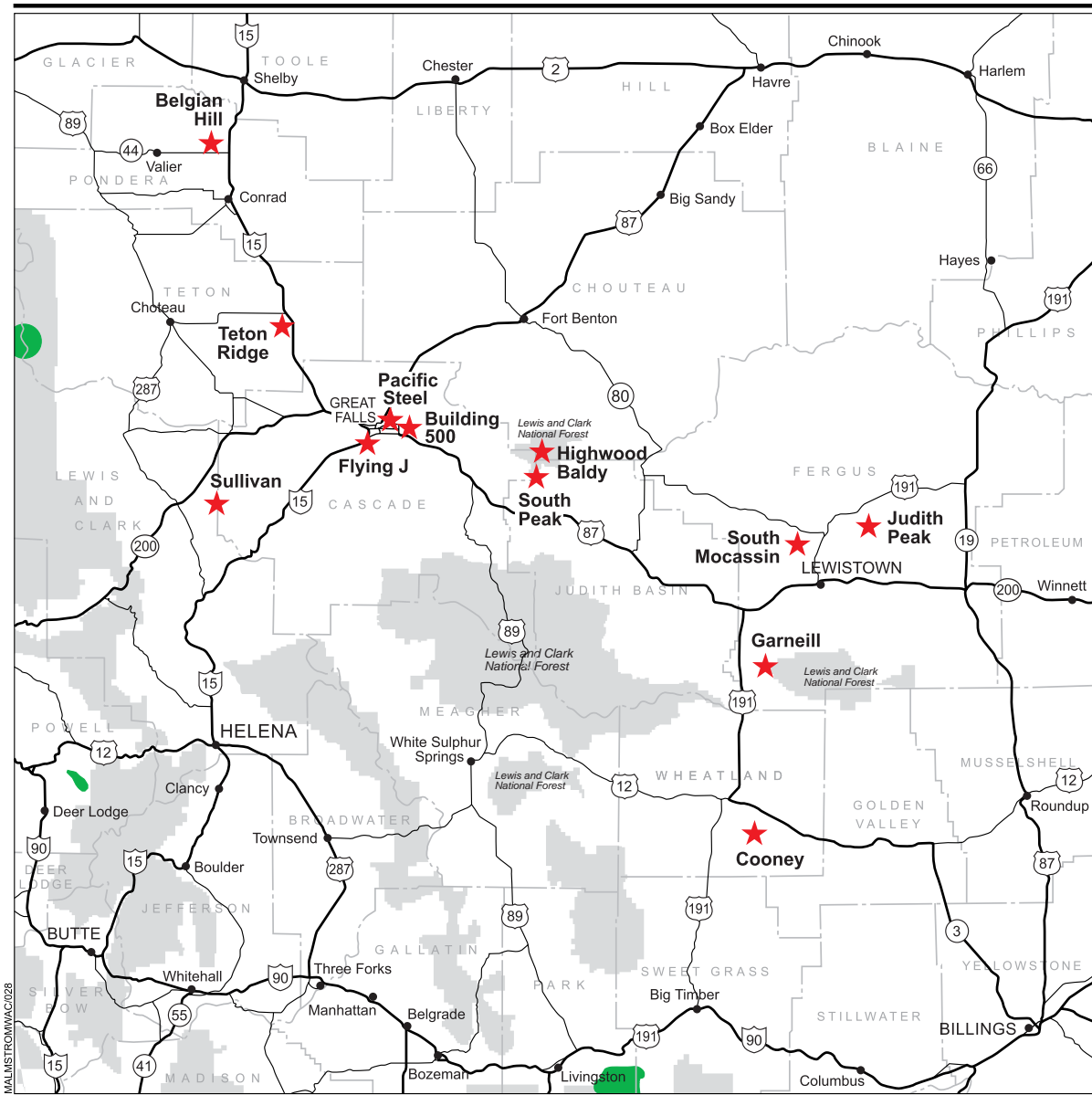
#### EXPLANATION

- Winter
- Yearlong
- ★ Communication Site
- National Forest



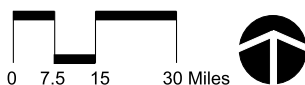
#### Bald Eagle Habitat

Figure 3-3



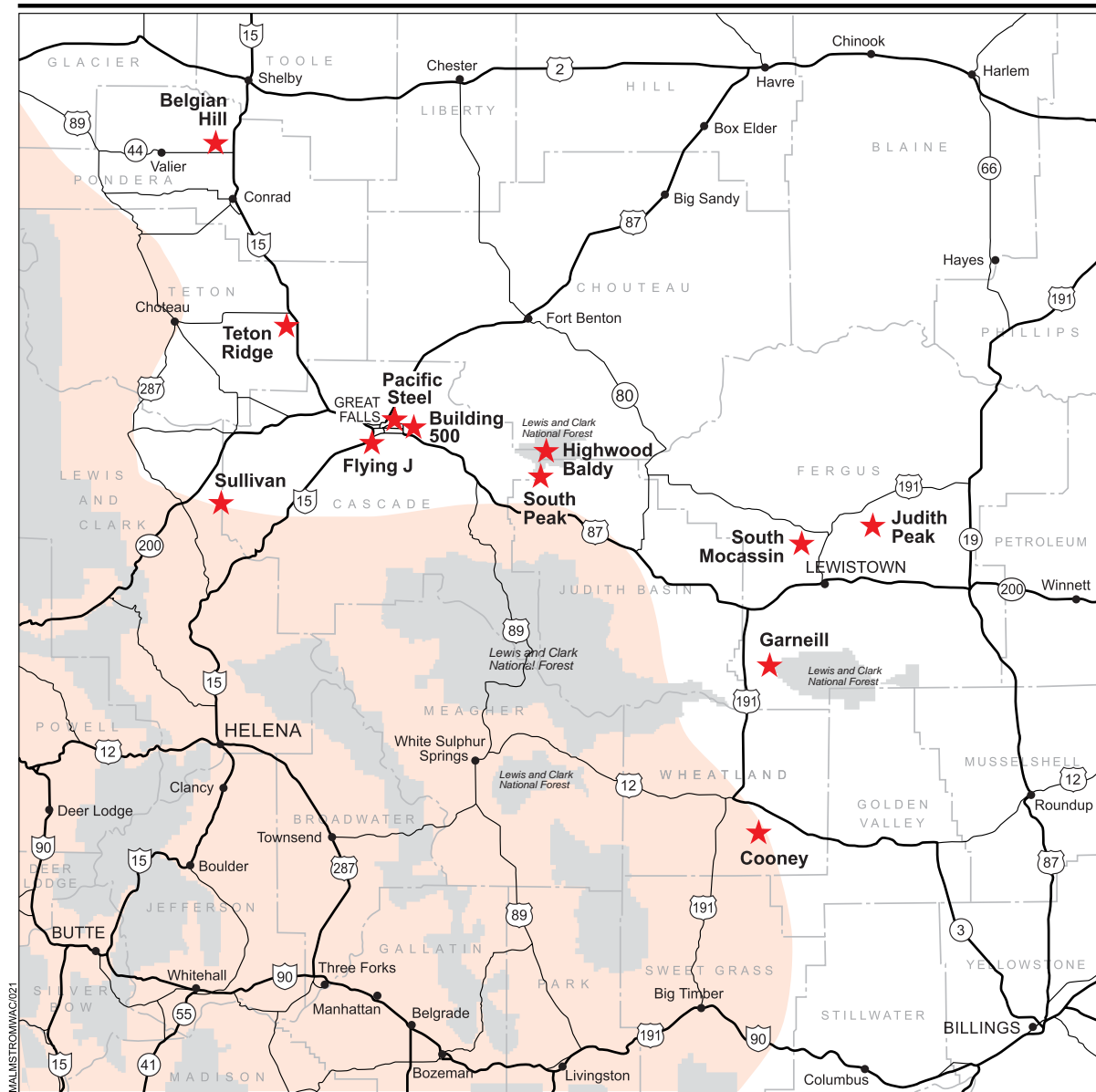
#### EXPLANATION

- Verified Gray Wolf Pack Location
- Communication Site
- National Forest



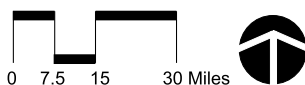
#### Gray Wolf Habitat

Figure 3-4



#### EXPLANATION

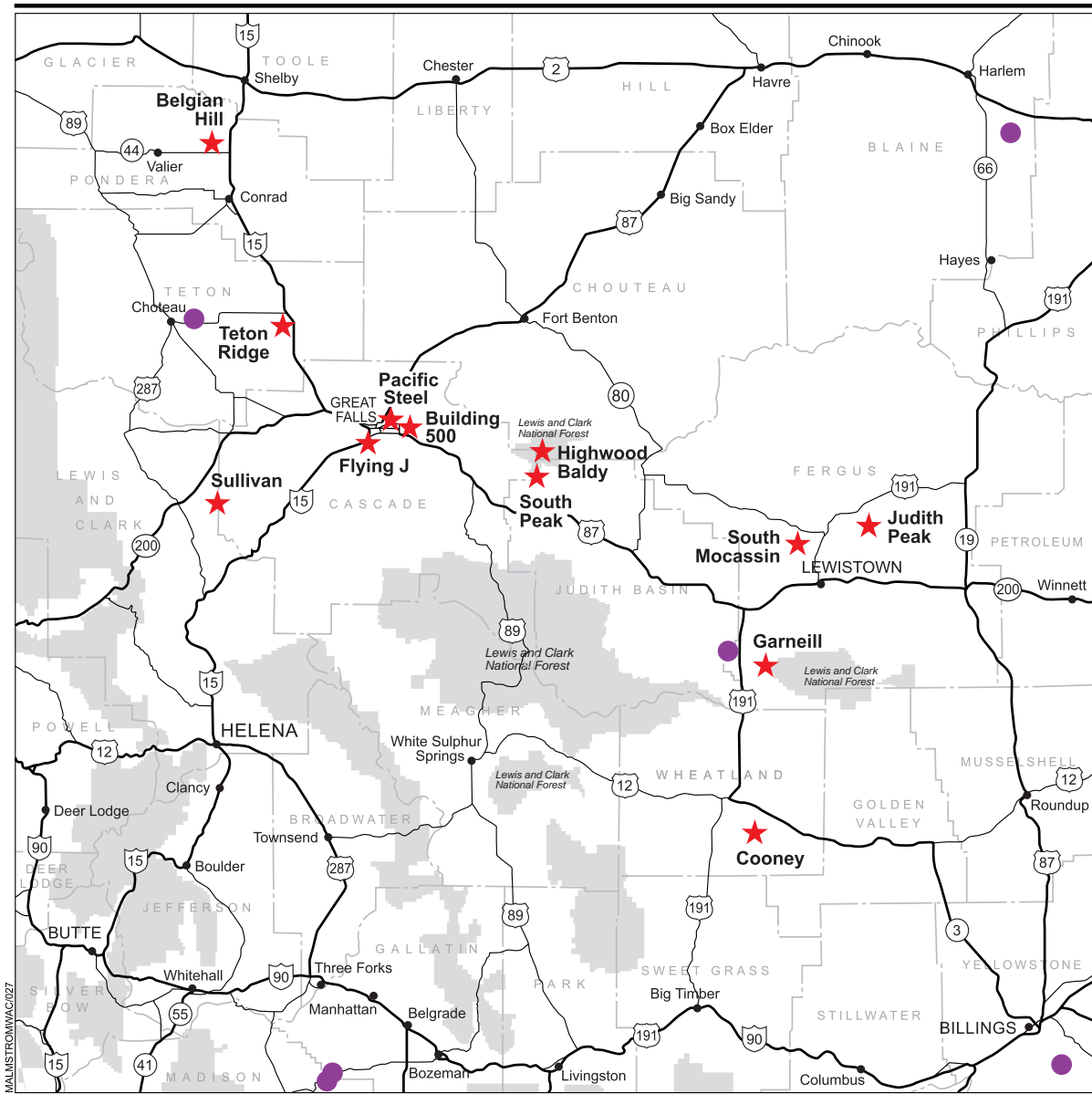
- Canada Lynx Habitat
- Communication Site
- National Forest



#### Canada Lynx Habitat

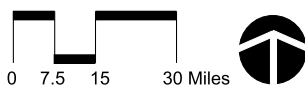
Figure 3-5





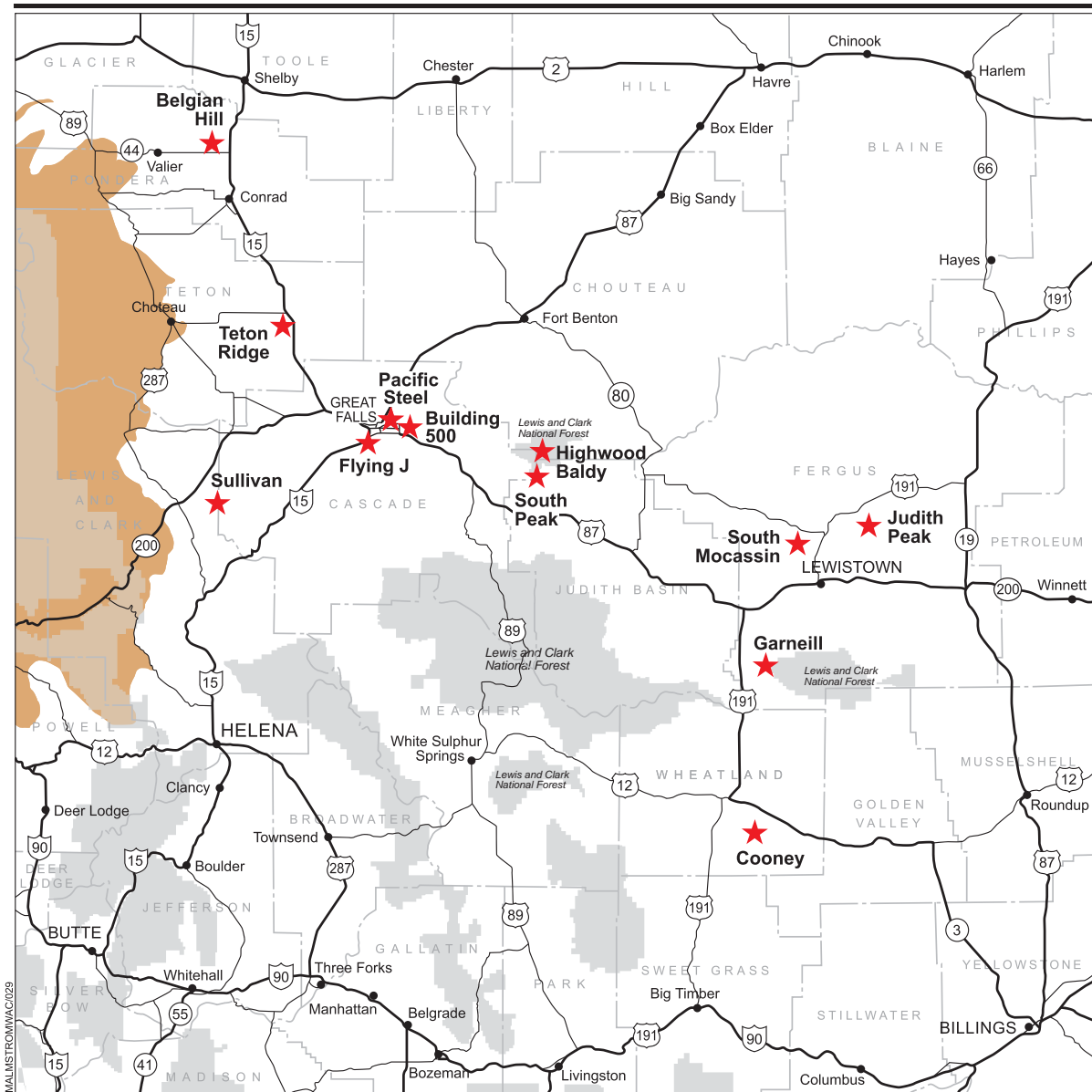
#### EXPLANATION

- Black-footed Ferret Habitat
- ★ Communication Site
- National Forest



#### Black-footed Ferret Habitat

Figure 3-6



#### EXPLANATION

- Occupied Grizzly Bear Range
- Communication Site
- National Forest



#### Grizzly Bear Habitat

Figure 3-7

communication sites would be considered incidental. Although the communication sites occur within the known winter and summer range of this species, there are no major aquatic habitats necessary for appropriate habitat conditions adjacent to any of the communication sites. The potential for this species to occur, other than incidentally, at any of the communication sites is low.

The gray wolf (*Canis lupus*) exhibits no particular habitat preference except for the presence of native ungulates within its territory on a year-round basis. Wolves usually prefer areas with few roads and human disturbance. Wolves establishing new packs in Montana have demonstrated greater tolerance of human presence and disturbance than previously thought characteristic of this species. They have established territories where prey are more abundant at lower elevations than expected, especially in winter (Montana Fish Wildlife and Parks, 2007d). According to the December 2006 gray wolf range maps provided within Montana Gray Wolf Conservation and Management Plan, there have been no verified observations of wolf pairs or packs within the vicinity of any of the communication sites (Montana Fish Wildlife and Parks, 2006, 2007h). The potential for this species to occur at any of the communication sites is low.

Canada lynx (*Lynx Canadensis*) found east of the Continental Divide, prefer the higher elevations (1,650 to 2,400 meters) and subalpine forests that are composed mostly of subalpine fir. Secondary habitat is intermixed Engelmann spruce and Douglas-fir habitat types where lodgepole pine is a major seral species. Throughout their range, shrub-steppe habitats may provide important linkage habitat between the primary habitat types described above. Typical snow conditions are important factors for lynx, with lynx occurring primarily in habitats that also receive relatively uniform and moderately deep snowfall amounts (total annual snowfall of 100 to 127 centimeters). Within these habitat types, disturbances that create early successional stages such as fire, insect infestations, and timber harvest, provide foraging habitat for lynx by creating forage and cover for snowshoe hares, although older forests also provide habitats for snowshoe hares and lynx for longer periods of time than disturbance-created habitats (Montana Fish Wildlife and Parks, 2007e). Canada lynx avoid large openings but often hunt along edges in areas of dense cover. When inactive or birthing, they occupy dens typically in hollow trees, under stumps, or in thick brush. Den sites tend to be in mature or old-growth stands with a high density of logs. These habitats must be near or adjacent to foraging habitat because the hunting range of the female is reduced during this time (Montana Fish Wildlife and Parks, 2007e). According to the Canada lynx range maps provided by MFW&P, the Cooney, Highwood Baldy, South Peak, and Sullivan communication sites are located within the periphery of occupied habitat. The Cooney and Sullivan communication sites are open and do not have the preferred cover this species is known to occupy. The higher elevation mountainous Highwood Baldy and South Peak sites, within the Highwood Mountain range, are considered currently unoccupied, but appropriate, peripheral habitat for this species. Based on the current land use for all of the communication sites, the potential for this species to be observed at any of the communication sites is low.

Black-footed ferrets (*Mustela nigripes*) are intimately tied to prairie dogs (*Cynomys* spp.) throughout their range and have only been found in association with prairie dogs. They are therefore limited to the same open habitat used by prairie dogs: grasslands, steppe, and shrub steppe. Black-footed ferrets do not dig their own burrows and rely on abandoned prairie dog burrows for shelter. Only large complexes (several thousand acres of closely spaced colonies) can support and sustain a breeding population of black-footed ferrets (Montana Fish Wildlife and Parks, 2007f). The above described conditions required to support black-footed ferrets do not exist at any of the communication sites. According to the black-footed ferret range maps provided by MFW&P, there is no known occupied habitat within the general vicinity of the communication sites. The potential for this species to occur at any of the communication sites is low.

In Montana, grizzly bears (*Ursus arctos horribilis*) primarily use meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber, sidehill parks, snow chutes, and alpine slabrock habitats. Habitat use is highly variable between areas, seasons, local populations, and individuals. Historically, the grizzly bear was primarily a plains species occurring in higher densities throughout most of eastern Montana. Currently, the grizzly bear is often observed in western Montana within alpine/subalpine forests (Montana Fish Wildlife and Parks, 2007g). All of the communication sites are outside the known range for this species. The potential for this species to occur at any of the communication sites is low.

### **3.5.3.1 Lewis and Clark National Forest Sensitive Species and Management Indicator Species**

**Lewis and Clark National Forest Sensitive Plant Species.** There are currently eleven sensitive plant species that either occur or are suspected to occur within the Jefferson Division of the Lewis and Clark National Forest. More specifically these sensitive plant species have the potential to occur on or adjacent to the Highwood Baldy communication site and the associated road improvements which will be required under the project scope. These sensitive plant species include the short-styled columbine (*Aquilegia brevistyla*), Northern wild-rye (*Elymus innovatus*), Northern rattlesnake-plantain (*Goodyera repens*), Missoula phlox (*Phlox kelseyi* var. *missoulensis*), Austin's knotweed (*Polygonum douglasii* ssp. *Austinae*), English sundew (*Drosera anglica*), linear-leaved sundew (*Drosera linearis*), Hall's rush (*Juncus hallii*), Barratt's willow (*Salix barrattiana*), water bulrush (*Scirpus subterminalis*), and alpine meadowrue (*Thalictrum alpinum*) (U.S. Department of Agriculture, 2005b).

**Lewis and Clark National Forest Sensitive Wildlife Species.** There are currently sixteen sensitive fish and wildlife species that either occur or are suspected to occur within the Jefferson Division of the Lewis and Clark National Forest. More specifically these sensitive fish and wildlife species have the potential to occur on or adjacent to the Highwood Baldy communication site and the associated road improvements which will be required under the project scope. These fish and wildlife species include the fluvial arctic grayling (*Thymallus arcticus montanus*), westslope cutthroat (*Oncorhynchus clarki lewisi*), American peregrine falcon (*Falco peregrinus anatum*), black-backed woodpecker (*Picoides*

*arcticus*), burrowing owl (*Athene cunicularia*), flammulated owl (*Otus flammeolus*), greater sage grouse (*Centrocercus urophasianus*), Harlequin duck (*Histrionicus histrionicus*), northern goshawk (*Accipiter gentillis*), fisher (*Martes pennanti*), North American wolverine (*Gulo gulo luscus*), northern bog lemming (*Synaptomys borealis*), Townsends big-eared bat (*Corynorhinus townsendii*), Northern leopard frog (*Rana pipiens*), western toad (*Bufo boreas*), and greater short-horned lizard (*Phrynosoma hernandesi*) (U.S. Department of Agriculture, 2005).

**Management Indicator Species.** Indicator species have been selected for the Lewis and Clark Nation Forest Area because their population changes indicate effects of management activities on the plant and animal community. A species whose condition can be used to assess overall condition can be used to assess the impacts of management actions on a particular area (U.S. Department of Agriculture, 1986).

The National Forest Management Act regulations specify that the following wildlife and fish categories will be considered when selecting indicator species.

- Threatened and Endangered species identified on state and federal lists for the planning area,
- Species with special habitat needs that may be influenced significantly by planned management programs,
- Species commonly hunted, fished, or trapped, non-game species of special interest, and
- Additional plant or animal species selected because their population changes are believed to indicate the effects of management activities on the other species of selected major biological communities or on water quality (U.S. Department of Agriculture, 1986).

Table 3-2 is a list of MIS for Lewis and Clark National Forest, which have the potential to occur on or adjacent to the Highwood Baldy communication site.

#### 3.5.4 Sensitive Habitats

Sensitive habitats include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife. There are no sensitive habitats in the vicinity of the communication sites.

### 3.6 CULTURAL RESOURCES

Cultural resources are defined as prehistoric or historic archaeological sites, buildings, structures, districts, artifacts, or other physical evidence of human activity. For ease of discussion, cultural resources have been divided into three categories: prehistoric and historic archaeological resources, historic buildings and structures, and traditional cultural properties (e.g., sacred or ceremonial sites).

**Table 3-2. Lewis and Clark National Forest Management Indicator Species**

Wildlife Category	Indicator Species
Endangered and Threatened	Gray Wolf (E) Bald Eagle (E) Peregrine Falcon (Recovered, Delisted, Monitored) Grizzly Bear (T)
Commonly Hunted and Fished	Elk Mule Deer White-tailed Deer Black Bear Bighorn Sheep Mountain Goat Mountain Lion Blue Grouse Cutthroat Trout Brook Trout Rainbow Trout
Commonly Trapped	Beaver Bobcat
Special Interest	Wolverine Lynx Golden Eagle Prairie Falcon
Special Habitat Needs: <ul style="list-style-type: none"> <li>• Old Growth Forest</li> <li>• Tree Cavity-Conifer</li> </ul>	Goshawk Northern Three-toed Woodpecker

Source: U.S. Department of Agriculture, 1986.

T = threatened  
E = endangered

Numerous laws and regulations require federal agencies to consider the effects of a proposed action on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the federal agency proposing the action, and prescribe the relationships among other involved agencies (e.g., the State Historic Preservation Officer [SHPO], the Advisory Council on Historic Preservation [Advisory Council]). The primary law governing the treatment of cultural resources is the National Historic Preservation Act (NHPA), which requires a federal agency to consider potential impacts on historic properties from any proposed undertaking.

For the purposes of this analysis, the term ROI is synonymous with the “area of potential effect” as defined under cultural resources legislation. The ROI for the analysis of cultural resources within this EA includes any structures and areas that may be affected by WAC upgrade activities.

Only those cultural resources determined to be significant under cultural resources legislation are subject to protection or consideration by a federal agency. Significant cultural resources, whether they are prehistoric and historic

archaeological resources, historic buildings and structures, or traditional cultural properties, are referred to as “historic properties.” Historic properties, under 36 CFR Part 800 are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (National Register). The term “eligible for inclusion in the National Register” includes properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria. Therefore, sites that meet the criteria, but are not yet evaluated, may be considered potentially eligible to the National Register and, as such, are afforded the same regulatory consideration as nominated historic properties. As a federal agency, the Air Force is responsible for identifying any historic properties associated with its property.

### **3.6.1 Prehistoric and Historic Archaeological Resources**

There are eleven existing WAC communication sites where construction and site modifications will occur. At each of these sites, previous construction activities and subsequent use of the facilities have virtually eliminated the possibility that undiscovered archaeological resources exist within their current footprint. All eleven communication sites rest atop hills or ridges where the ground had to be cleared and leveled before the original construction took place. Because these are not depositional environments, archaeological resources, if they existed in the first place, would have been surficial in nature, and removed during the original construction episode.

No archaeological surveys were conducted at the communication sites before they were constructed. As a result, there are no known archaeological resources at any of these sites. In addition, there are no known archaeological resources along the roads leading to these sites. Because the current undertaking will use existing access roads, there is no requirement to survey the dirt/gravel roads that lead to the communication sites. If the roads need to be modified then there is a potential for impacting undiscovered archaeological resources and the roads will need to be surveyed.

The South Peak alternative site does not have an existing facility nor does it have an access road. There are no recorded archaeological surveys in this area.

### **3.6.2 Historic Buildings and Structures**

Other than the existing facilities, there are no historic buildings or structures. The original date of construction for each communication station is unknown; however, none of the equipment shelters or antennas is thought to be more than 50 years old. A historic building inventory and evaluation is not warranted. These communication sites do not directly support the Minuteman III mission throughout central Montana. They support communications between crews traveling to/from launch facilities and missile alert facilities.

### **3.6.3 Traditional Cultural Resources**

Traditional cultural properties are associated with cultural practices and beliefs of a living community that are rooted in its history and are important in maintaining the continuing cultural identity of the community. They may include archaeological resources, locations of historic events, sacred areas, sources of raw materials, topographic features, traditional hunting or gathering areas, and native plants or animals. There are no known traditional cultural resources in the ROI. For the existing eleven facilities, site disturbance that occurred during their construction indicates that it is unlikely that any culturally sensitive areas exist that would be subject to the American Indian Religious Freedom Act or the Native American Graves Protection and Repatriation Act. It is unknown if there are any traditional cultural properties at the proposed South Peak communication site.



## 4.0 ENVIRONMENTAL CONSEQUENCES

---

### 4.1 INTRODUCTION

This chapter presents the results of the analysis of potential environmental effects from upgrading communication sites across central Montana. The Proposed Action, South Peak Alternative, and No-Action Alternative are analyzed. Changes to the natural and human environments that may result from the Proposed Action and alternatives were evaluated relative to the existing environment as described in Chapter 3.0. The potential for significant environmental consequences was evaluated utilizing the context and intensity considerations as defined in CEQ regulations for implementing the procedural provisions of NEPA (40 CFR Part 1508.27).

### 4.2 LAND USE AND AESTHETICS

The potential effects of the Proposed Action and alternatives on land use and aesthetics within the ROI are presented in this section.

#### 4.2.1 Proposed Action

Under the Proposed Action there would be no significant impact to land use. The land use at the communication sites would not change; the sites would continue to be used for communications purposes.

Visual resources would not change significantly. There would be no significant change in the appearance of the communication sites after completion of the upgrade activities. New construction would be reviewed by a landscape architect to ensure potential effects to the visual quality of the area are minimized. Depending on the condition of the communication site, older equipment shelters would be replaced with new “Thermobond” structures, a propane tank would be installed to support operation of an emergency generator, and antenna modifications to support the new equipment would be implemented. Because the developed area of the communication sites is considered to have a low visual sensitivity, these modifications would not result in a substantial degradation of the visual character of the site. The minor change in appearance of the communication sites would not be readily noticeable from a distance and would not change the existing visual character of the area; therefore, significant degradation of the existing visual character of the general area is not anticipated.

#### 4.2.2 South Peak Alternative

Potential impacts to land use and aesthetics would be similar to that discussed under the Proposed Action. However, under the South Peak Alternative, South Peak would be used as an alternative communication site to the Highwood Baldy site. South Peak is currently an undeveloped mountain top. A communication site would be established including a “Thermobond” equipment shelter, antenna, propane tank, fencing, and electrical power. In addition, a dirt access road would

be constructed across private property to access the site. Electrical service to the site would be provided via an existing antenna site approximately 0.5 mile from the proposed South Peak location. These improvements would change the land use of the area from an undeveloped mountain top to a communication site and a dirt access road would be constructed across the range/pasture. These changes to the local land use would not be considered significant due to the remote nature of the site and because the area that the access road would be constructed would still be used for range cattle.

The South Peak site is remote with no access by the general public. An existing antenna site is situated approximately 0.5 mile from the site. Although the communication site would have a low visual sensitivity (compared to the existing high visual sensitivity of an undeveloped mountain top), the general public does not have access to view the site; therefore, the modifications would not be considered a substantial degradation of the visual character of the site. The change in appearance of South Peak to a communication site would not be readily noticeable from a distance and would not change the existing visual character of the area (i.e., an existing communication site is situated approximately 0.5 mile from the site). The new dirt access road would likely be constructed along the south facing slope of South Peak, avoiding Lewis and Clark National Forest land. Other dirt roads are present in the area providing access to the range and various features such as water wells and cattle troughs. Due to the remote nature of the area, the presence of other developed features (i.e., antenna site, water well, fencing, dirt roads), and the limited public access to the area, significant degradation of the existing visual character of the general area is not anticipated.

Potential impacts to land use and aesthetics for the other communication sites would be the same as discussed under the Proposed Action.

#### **4.2.3 No-Action Alternative**

Under the No-Action Alternative, WAC upgrades would not be implemented. No change in land use or aesthetics would occur. No significant impacts to land use and aesthetics would be expected.

#### **Mitigation Measures**

Because no significant impacts to land use and aesthetics have been identified, no mitigation measures would be required.

### **4.3 HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT**

This section addresses the potential impacts of hazardous materials and hazardous waste management activities associated with implementation of WAC upgrades. Hazardous materials management, hazardous waste management, storage tanks, ACM, and lead-based paint are discussed in this section.

#### **4.3.1 Hazardous Materials Management**

##### **4.3.1.1 *Proposed Action.***

During WAC upgrade activities, small amounts of hazardous materials are expected to be used, and the potential for spills would exist. Hazardous materials likely to be used during WAC upgrade activities include adhesives, motor fuels, paints, thinners, solvents, POL, and household products. Operation of the communication sites would primarily involve the use of POL, ethylene glycol, and propane (associated with the operation of emergency generators). All storage, handling, and transportation of hazardous materials associated with WAC upgrades and operation of the communication sites would be conducted in accordance with applicable regulations and established procedures. The communication sites where Air Force equipment is installed would be incorporated into the Malmstrom AFB IHMERP and SPCCP, which establish responsibilities, requirements, and contingency plans in the event a release occurs; therefore, no significant impacts are anticipated.

##### **4.3.1.2 *South Peak Alternative.***

Potential impacts to hazardous materials management would be similar to those discussed under the Proposed Action. The primary difference would be an increase in fuel usage during the construction of the dirt access road and installing electrical service to the South Peak communication site. Storage, handling, and transportation of hazardous materials associated with construction and operation of the communication site would be conducted in accordance with applicable regulations and established procedures. The communication site would be incorporated into the Malmstrom AFB IHMERP and SPCCP, which establish responsibilities, requirements, and contingency plans in the event a release occurs; therefore, no significant impacts are anticipated.

Potential impacts to hazardous materials management for the other communication sites would be the same as discussed under the Proposed Action.

##### **4.3.1.3 *No-Action Alternative.***

Under the No-Action Alternative, the hazardous materials currently used at communication sites would continue to be managed in accordance with applicable regulations and established procedures. Therefore, no significant impacts are anticipated.

#### **4.3.2 Hazardous Waste Management**

##### **4.3.2.1 *Proposed Action.***

During WAC upgrade activities, hazardous waste may be generated from processes that use the hazardous materials mentioned previously. Most of the hazardous materials used would be consumed during use; as a result, only small amounts of waste adhesives, motor fuels, paints, thinners, solvents, and POL

would be generated. The construction contractor would be responsible for following applicable regulations for the management of hazardous waste. Any hazardous materials spilled would be cleaned up as hazardous waste by the construction contractor. The construction contractor would be responsible for the proper off-site disposal of any hazardous waste (including demolition debris and non-regulated waste such as used motor oil) generated on the property in accordance with applicable regulations.

Operation of the communication sites would primarily involve the use of POL, ethylene glycol, and propane with no or minimal hazardous waste generated. The communication sites where Air Force equipment is installed would be incorporated into the Malmstrom AFB IHMERP and SPCCP, which establish responsibilities, requirements, and contingency plans in the event a release occurs. Management of hazardous and non-regulated waste in accordance with applicable regulations would preclude any significant impacts.

The Anaconda Mineral Company - Great Falls Smelter VCP Site could affect proposed WAC improvements at the Pacific Steel communication site. The VCP site would remain the responsibility of ARC-BP until regulator concurrence on a no further action decision has been obtained. Access rights to the communication site would be coordinated to allow construction and improvements on the site as well as access to inspect/maintain communication equipment as needed. No groundwater wells would be installed at the communication site and ARC-BP would be consulted prior to initiating any ground-disturbing activities to ensure construction activities do not impact ongoing remedial actions.

#### **4.3.2.2 South Peak Alternative.**

Potential impacts to hazardous waste management would be similar to those discussed under the Proposed Action. The primary difference would be an increase in fuel usage during the construction of the dirt access road and installing electrical service to the South Peak communication site. Storage, handling, and transportation of hazardous waste associated with the construction and operation of the new communication site would be conducted in accordance with applicable regulations and established procedures. The communication site would be incorporated into the Malmstrom AFB IHMERP and SPCCP, which establish responsibilities, requirements, and contingency plans in the event a release occurs; therefore, no significant impacts are anticipated.

Potential impacts to hazardous waste management for the other communication sites would be the same as discussed under the Proposed Action.

#### **4.3.2.3 No-Action Alternative.**

Under the No-Action Alternative, any hazardous wastes generated as a result of routine operations at the communication sites would continue to be managed in accordance with applicable regulations and established procedures. No significant impacts to the environment are expected.

### **4.3.3 Storage Tanks**

#### **4.3.3.1 Proposed Action.**

The two 1,000-gallon ASTs associated with the emergency generator at Highwood Baldy communication site would remain in place and the propane tanks associated with the Belgian Hill and Teton Ridge communication sites would remain in place. A 500-gallon propane tank would be installed at Sullivan communication site and 1,000-gallon propane tanks would be installed at Cooney, Flying J, Garneill, Judith Peak, and South Moccasin communication sites, and a 2,000-gallon propane tank would be installed at the Highwood Baldy communication site to power emergency generators. Management of the storage tanks in accordance with applicable regulations would minimize the potential for impacts. In addition, the communication sites where Air Force equipment is installed would be incorporated into the Malmstrom AFB IHMERP and SPCCP, which establish responsibilities, requirements, and contingency plans in the event a release occurs; therefore, no significant impacts are anticipated.

#### **4.3.3.2 South Peak Alternative.**

Potential impacts from the installation of storage tanks would be the same as discussed under the Proposed Action. A 1,000-gallon propane tank would be installed at the South Peak communication site to power an emergency generator. Management of the storage tank in accordance with applicable regulations would minimize the potential for impacts. The two 1,000 gallon ASTs at Highwood Baldy would remain in place. No significant impacts are anticipated.

#### **4.3.3.3 No-Action Alternative.**

Under the No-Action Alternative, storage tanks currently in operation at the communication sites would continue to be managed in accordance with appropriate regulations and established procedures. No new storage tanks would be installed. No significant impacts are anticipated.

### **4.3.4 Asbestos**

#### **4.3.4.1 Proposed Action.**

Under the Proposed Action, demolition/removal of existing structures at Belgian Hill, Cooney, Judith Peak, South Moccasin, Sullivan, and Teton Ridge communication sites that may contain ACM would occur. Such activities would be conducted in accordance with applicable federal, state, and local regulations to minimize potential risk to human health and the environment. Any demolition debris that contains ACM would be disposed off-site in a landfill permitted to accept this type of material. No significant impacts are anticipated.

#### **4.3.4.2 South Peak Alternative.**

Installation of the new equipment shelter and antennas at the South Peak communication site would not incorporate the use of ACM. Potential ACM impacts for the other communication sites would be the same as discussed under the Proposed Action. No significant impacts are anticipated.

#### **4.3.4.3 No-Action Alternative.**

Under the No-Action Alternative, any ACM at the communication sites would continue to be managed in accordance with applicable regulations. Management of ACM in accordance with applicable regulations would preclude any significant impacts.

### **4.3.5 Lead-Based Paint**

#### **4.3.5.1 Proposed Action.**

Under the Proposed Action, demolition/removal of existing structures at Judith Peak, Teton Ridge, Belgian Hill, Cooney, South Moccasin, and Sullivan communication sites that may contain lead-based paint would occur. Such activities would be conducted in accordance with applicable federal, state, and local regulations to minimize potential risks to human health and the environment. Any demolition debris that contains lead-based paint would be disposed off-site in a landfill permitted to accept this type of material. No significant impacts are anticipated.

#### **4.3.5.2 South Peak Alternative.**

Installation of the new equipment shelter and antennas at the South Peak communication site would not incorporate the use of lead-based paint. Potential lead-based paint impacts for the other communication sites would be the same as discussed under the Proposed Action. No significant impacts are anticipated.

#### **4.3.5.3 No-Action Alternative.**

Under the No-Action Alternative, any lead-based paint at the communication sites would continue to be managed in accordance with applicable regulations. Management of lead-based paint in accordance with applicable regulations would preclude any significant impacts.

### **Mitigation Measures**

Because no significant impacts to hazardous materials management, hazardous waste management, storage tanks, asbestos, and lead-based paint have been identified, no mitigation measures would be required.

## 4.4 SOILS AND GEOLOGY

### 4.4.1 Proposed Action

**Soils.** Construction and demolition activities associated with WAC upgrade activities would disturb less than one acre at each of the communication sites. In addition, approximately 2 miles of access road improvements is proposed for the Garneill communication site (approximately 3.5 acres of disturbance anticipated). Grading activities associated with the placement of the equipment shelter foundation could increase the potential for erosion effects. However, these impacts would be short-term and minimal because the disturbed areas would be covered with pavement/structure or gravel when construction activities are completed. Some access road repair (filling of ruts in dirt roads) may be required to allow vehicle access to some of the communication sites.

The soils on the communication sites would be susceptible to wind and water erosion during ground disturbing activities; however, standard construction practices would be implemented to limit soil erosion during construction activities. During construction, the length of time vegetation or other cover is absent would be minimized. Standard construction practices that could be implemented to minimize soil erosion include:

- Adding protective cover, such as mulch or straw, to exposed soil,
- Implementing site grading procedures that limit the time that soils are exposed prior to being covered by impermeable surfaces or gravel,
- Implementing storm water diversions to reduce water flow through exposed sites during construction activities,
- Implementing temporary impoundments to catch soil eroded from the site prior to flowing into the drainage network, and
- Implementing soil erosion plans in coordination with the local Natural Resources Conservation Service.

Grading activities associated with the 2 miles of access road improvements to the Garneill communication site could increase the potential for erosion effects. The construction contractor would be required to obtain a Construction Site Storm Water Montana Pollutant Discharge Elimination System (MPDES) permit before initiating any ground-disturbing activity. Because the ground disturbance associated with the road and utility improvements would exceed one acre, the construction activity would fall under the “General Permit for Storm Water Discharges Associated with Construction Activity” (General Permit). A Storm Water Pollution Prevention Plan (SWPPP) would be prepared for proposed ground-disturbing activity. The Construction Site Storm Water MPDES permit, together with the required SWPPP, would outline site management practices designed to protect the quality of the surface water, groundwater, and natural environment through which they flow. The SWPPP would identify specific areas of existing and potential soil erosion, location of structural measures for sediment

control, and management practices and controls. Use of these management practices and controls would reduce the potential for erosion of disturbed soils.

**Geology.** The communication sites are situated within Seismic Zone 1, which represents a low potential risk for large seismic events. Ground-disturbing actions that would occur under the Proposed Action include the grading of small areas (less than one acre) to place foundations, the repair of access roads (filling of ruts), regrading the access road to the Garneill communication site, and replacement of the power line to Highwood Baldy. These ground-disturbing activities would occur on previously disturbed areas; therefore, no potential affects to geology are anticipated.

#### **4.4.2 South Peak Alternative**

Potential impacts to soils and geology would be similar to that discussed under the Proposed Action. However, under the South Peak Alternative, South Peak would be used as an alternative communication site to the Highwood Baldy site. South Peak is currently an undeveloped mountain top. A communication site would be established on South Peak and a dirt access road would be constructed across private and state property to access the site. Electrical service (overhead distribution system) to the site would be provided via an existing antenna site approximately 0.5 mile from the proposed South Peak location.

Grading activities associated with the construction of the dirt access road could increase the potential for erosion effects. The construction contractor would be required to obtain a Construction Site Storm Water MPDES permit before initiating any ground-disturbing activity. Because the ground disturbance associated with constructing the access road would exceed one acre, the construction activity would fall under the "General Permit for Storm Water Discharges Associated with Construction Activity" (General Permit). A SWPPP would be prepared for proposed ground-disturbing activity. The Construction Site Storm Water MPDES permit, together with the required SWPPP, would outline site management practices designed to protect the quality of the surface water, groundwater, and natural environment through which they flow. The SWPPP would identify specific areas of existing and potential soil erosion, location of structural measures for sediment control, and management practices and controls. Use of these management practices and controls would reduce the potential for erosion of disturbed soils.

Potential impacts to soils and geology for the other communication sites would be the same as discussed under the Proposed Action.

Because management practices required by the Construction Site Storm Water MPDES permit and SWPPP would be implemented during ground disturbing activities, no significant impacts to soils and geology are anticipated.



#### **4.4.3 No-Action Alternative**

Under the No-Action Alternative, WAC upgrade activities would not be implemented. No ground-disturbing activities would occur. No significant impacts to soils and geology would be expected.

#### **Mitigation Measures**

Because management practices required by the Construction Site Storm Water MPDES permit and SWPPP would be implemented, no significant impacts to soils and geology are anticipated. Therefore, no mitigation measures would be required.

### **4.5 BIOLOGICAL RESOURCES**

#### **4.5.1 Proposed Action**

**Vegetation.** Most of the communication site improvements would occur in unvegetated areas already occupied by communication related facilities. All of the communication sites have access roads directly to the existing facilities. However, some of the sites (i.e., Cooney, Garneill, and South Moccasin) will require access road improvements (vegetation clearance, road widening, and grading). The improvements of an access road could result in a permanent loss of vegetation. With respect to the communication sites located in grassland habitat, this vegetation type is abundant to the area and the ratio lost compared to what would remain as a result of the road improvement/construction is minimal. The small amount of tree trimming required for road improvement represents a small percentage of the existing forest habitat in the region. To the extent possible, impacts to the forested areas adjacent to existing access roads and the existing communication sites would be avoided.

After the communication site improvements have been completed, the sites would be contoured for proper runoff, and vegetated areas disturbed would be reseeded. Exposed bare soil can lead to invasion by different plant communities, such as non-native plants and noxious weeds. As a BMP, specific areas would be revegetated when construction activities are complete.

The potential to directly and indirectly impact Forest Service sensitive plant species exists as part of the proposed Highwood Baldy project activities. Ground disturbing activities, particularly when the soil surface is disturbed, can cause negative impacts to sensitive plant populations. These factors include the direct physical impacts to populations and the alteration of habitats adjacent to these populations (U.S. Department of Agriculture, 2007).

Any increase in bare soil that is likely to cause an increase in invasive plant species may have a long-term negative effect on sensitive plants and potential sensitive plant habitats. These invading species often out-compete native flora. Soil disturbance and erosion are all likely to increase the opportunity for invasive species to become established. Road management activities such as grading, widening, and other improvements provide fresh seedbeds for noxious weeds

and constitute an important threat to native flora. The use of herbicides is the most effective treatment for noxious weed occurrence particularly along roadsides. Herbicides can kill sensitive plants, however, and known populations must be buffered from herbicide application (U.S. Department of Agriculture, 2007).

As a BMP, a biologist will survey the proposed Highwood Baldy communication site and associated road improvements for the presence of Forest Service sensitive plant species. All known populations of sensitive species would be avoided during ground disturbing activities. Herbicide applications (spraying) of roadsides and trail-ways would not occur within a specific buffer, as described in the Lewis and Clark National Forest Noxious Weed EIS, depending on the herbicide uses and the plant population involved.

**Wildlife.** Wildlife species occupying the proposed tower sites and adjacent areas may be removed or temporarily displaced by ground-disturbing activities and by noise during construction activities. Construction activities would be short term and wildlife displaced by noise would be expected to return to adjacent areas upon completion of construction activities. The communication sites would result in the permanent loss of a minimal area of vegetation, the loss of this habitat would not represent a significant impact to these wildlife species.

Once the towers at each communication site are constructed and operational, the potential for impacts to birds would exist. Birds flying in poor visibility that do not see the structure in time to avoid it could collide with the tower (i.e., blind collision). This is more of a threat for faster flying birds such as waterfowl or shorebirds; variables in bird vision and flight agility are factors – slower, more agile flying birds, such as songbirds, are not as likely to succumb to blind collision. This mechanism can occur during the day when the tower is obscured by fog, or at night, theoretically more often with unlighted towers (Towerkill.com, 2003).

The USFWS Division of Migratory Bird Management has issued recommendations intended to minimize or even avoid bird collisions with towers. Some of these recommended measures could be incorporated into the Proposed Action to reduce the likelihood of bird strike related impacts. These include the following:

- Minimize the area necessary for construction and the footprint of the tower to reduce habitat impacts
- Daytime visual markers would be installed on the guy wires to reduce collisions by birds
- The minimum amount of pilot warning and obstruction avoidance lighting required by the Federal Aviation Administration (FAA)
- If any, security lighting for on-ground facilities and equipment would be down-shielded to keep light within the boundaries of the site
- Towers no longer in use or determined to be obsolete would be removed within 12 months of cessation of use.

The Air Force will take reasonable steps to conserve migratory birds in accordance with Executive Order 13186--*Responsibilities of Federal Agencies to Protect Migratory Birds*. Pursuant to Executive Order 13186, the Department of Defense (DOD) entered into a Memorandum of Understanding (MOU) with the USFWS to promote the conservation of migratory birds (Appendix C). The MOU identifies specific activities where cooperation between the DOD and the USFWS will contribute substantially to the conservation of migratory birds and their habitats. The MOU does not allow the take of migratory birds. No intentional takings would occur as part of the Proposed Action.

**Threatened and Endangered Species.** Known occupied habitat for the threatened and endangered species discussed in Section 3 does not exist for any of the species at any of the communication sites under the Proposed Action. Based on the potential of occurrence for each of the threatened and endangered species discussed in Section 3.0, there are no anticipated impacts expected to any listed species as a result of the Proposed Action. However, nesting and roosting habitat for migratory bird species could be lost as a result of improvements to, or construction of access roads at the communication sites. Under the Migratory Bird Treaty Act, nesting birds are fully protected. Loss of grassland habitat could impact ground nesting bird species, and tree trimming in forested areas could impact bird species that utilize tree canopy as nesting or roosting habitat. As a BMP, a biological monitor would be present during the Montana bird breeding season (February-September) when the improvement/construction of access roads and the construction of communication equipment pads is required as a result of the Proposed Action. The biological monitor would be responsible for conducting pre-construction nesting bird surveys of proposed road alignments and areas requiring clearance for new communication related equipment. The biologist will be responsible for coordinating with the construction lead concerning ingress/egress routes, staging areas, construction schedule and any other activity that affects nesting birds at the communication sites.

In addition to the above described BMPs, an additional source of BMPs for the Proposed Action with regard to avian species could include those addressed within the document entitled: *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee, 2006).

The Air Force has conducted informal consultation with the USFWS to confirm the threatened and endangered species list is complete, and is seeking concurrence in the decision that potential effects of proposed activities would not likely affect these identified sensitive species (Appendix B).

Impacts to Forest Service sensitive fish and wildlife species, as well as MIS with respect to the project activities proposed for the Highwood Baldy communication site would be similar to those described within the Wildlife Section. Wildlife species may be removed or temporarily displaced by ground-disturbing activities and by noise during construction activities. Construction activities would be short-term and wildlife displaced by the noise would be expected to return to adjacent areas upon completion of construction activities.

BMPs proposed previously to avoid disturbance of nesting bird species and to minimize or avoid bird collisions with newly constructed towers at the Highwood Baldy communication site would be applicable to the Forest Service sensitive bird species with the potential to be impacted by project activities.

Impacts to Forest Service sensitive fish species are not anticipated. If road improvements are required adjacent to or within a stream crossing along the access road to Highwood Baldy, minimization measures discussed in Section 4.4.2 address the requirement for a Storm Water MPDES permit before grading activities occur and that a SWPPP would be prepared that outlines site management practices (i.e., BMPs) to protect the quality of surface water, ground water, and the natural environment.

A Biological Evaluation (BE) has been prepared and submitted to the Lewis and Clark National Forest Service, per the USDA-FS Code in support of a Biological Assessment (BA). The BE was prepared to address project related impacts to the threatened and endangered species with the potential to occur on or adjacent to the Highwood Baldy site.

**Sensitive Habitats.** No jurisdictional wetlands have been identified. None of the communication sites are within or adjacent to designated critical habitat for any listed species. No significant impacts are anticipated because sensitive habitats would not be affected by proposed activities.

#### **4.5.2 South Peak Alternative**

Construction of a communication site on South Peak would result in similar impacts to biological resources as those described under the Proposed Action, except that the communication site and access road construction would occur within undeveloped areas within grassland and forest habitat. There are no anticipated impacts expected to any threatened, endangered, or sensitive species as a result of the South Peak Alternative. Biological BMPs described under the Proposed Action would be implemented. Federal consultation requirements with respect to threatened and endangered species described under the Proposed Action would occur. No significant impacts to biological resources are anticipated.

#### **4.5.3 No-Action Alternative**

Under the No-Action Alternative, WAC upgrade activities would not be implemented. Therefore, no significant impacts to biological resources would be expected.

#### **Mitigation Measures**

Because BMPs would be implemented, no significant impact to biological resources is anticipated. Therefore, no mitigation measures would be required.

## 4.6 CULTURAL RESOURCES

The potential effects of the Proposed Action and alternatives on cultural resources (i.e., prehistoric and historic archaeological resources, historic buildings and structures, and traditional cultural resources) within the ROI are presented in this section.

### 4.6.1 Proposed Action

**Prehistoric and Historic Archaeological Resources.** Because ground disturbance occurred during the original construction of the eleven communication sites (and access roads), the potential for discovery of archaeological resources is considered low. In the unlikely event that archaeological resources are encountered during demolition and construction activities, the contractor would suspend work in the immediate area, protect the site in place, and report the discovery to the SHPO to determine if additional investigation is required. In the event further investigation is required, any data recovery would be performed in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the Council's publication, Treatment of Archaeological Properties. Due to the developed (disturbed) nature of the communication sites and access roads, no significant impacts to prehistoric and historic archaeological resources are anticipated. If construction activities occur outside the current facilities or access roads need to be rerouted, widened, or upgraded, then a qualified archaeologist would survey the impacted areas. Findings of the survey would be provided to the SHPO.

**Historic Buildings and Structures.** None of the equipment shelters or antennas at the communication sites are over 50 years old. Therefore, removal or demolition of existing equipment shelters at the communication sites would not cause a significant impact to historic buildings or structures.

**Traditional Cultural Properties.** There are no known traditional cultural properties at the communication sites. No significant impacts to traditional cultural properties are expected.

### 4.6.2 South Peak Alternative

Potential impacts to cultural resources would be similar to those discussed under the Proposed Action. However, under the South Peak Alternative, South Peak would be used as an alternative communication site to the Highwood Baldy site. South Peak is currently an undeveloped mountain top. A communication site would be established on South Peak and a dirt access road would be constructed across private property to access the site. Electrical service (overhead distribution system) to the site would be provided via an existing antenna site approximately 0.5 mile from the proposed South Peak location.

Potential impacts to cultural resources for the other communication sites would be the same as discussed under the Proposed Action.

**Prehistoric and Historic Archaeological Resources.** Because the proposed South Peak communication site has not been developed and no road access to this site exists, there is a potential for discovery of archaeological resources. Prior to initiating any ground disturbing activities, a qualified archaeologist would survey the proposed areas of development (i.e., communication site, access road, and electrical service corridor). Findings of the survey would be provided to the SHPO.

In the event that archaeological resources are encountered during site development and road construction activities, the contractor would suspend work in the immediate area, protect the site in place, and report the discovery to the SHPO to determine if additional investigation is required. In the event further investigation is required, any data recovery would be performed in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the Council's publication, Treatment of Archaeological Properties.

**Historic Buildings and Structures.** The proposed South Peak communication site is currently undeveloped with no equipment shelter or antenna. Therefore, no significant impact to historic buildings or structures are expected.

**Traditional Cultural Properties.** There are no known traditional cultural properties at the proposed South Peak communication site. Prior to construction, consultation with Native American tribes will be initiated to ensure that no traditional cultural properties will be affected by the project.

#### **4.6.3 No-Action Alternative**

Under the No-Action Alternative, WAC upgrade activities would not be implemented. There would be no change from existing conditions. No significant impacts to cultural resources are expected.

#### **Mitigation Measures**

If eligible sites are affected during construction activities, the SHPO and the Advisory Council would be consulted to implement an appropriate mitigation approach, if one is required. Consultation would proceed in compliance with Section 106 of the NHPA and its implementing regulations (36 CFR 800). A Memorandum of Agreement (MOA) may be developed to document the accepted mitigations. A MOA for cultural resources must be coordinated with, at a minimum, the SHPO, the Advisory Council, and the Air Force. Other parties may be included as appropriate.

### **4.7 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS**

The Proposed Action and alternative would not result in any unavoidable adverse environmental effect provided BMPs identified in this EA are implemented.

#### **4.8 COMPATIBILITY OF THE PROPOSED ACTION WITH OBJECTIVES OF FEDERAL, STATE, REGIONAL, AND LOCAL LAND USE PLANS AND POLICIES**

The Proposed Action and alternatives would be compatible with federal, state, regional, and local land use plans and policies. The proposed access road to the South Peak communication site would not impact designated roadless areas within the adjacent Lewis and Clark National Forest.

#### **4.9 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY**

The Proposed Action and alternatives would not affect the long-term productivity of the environment because no significant environmental impacts are anticipated, provided appropriate BMPs identified in this EA are implemented. Natural resources would not be depleted.

#### **4.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

Implementation of the Proposed Action or alternatives would result in an irreversible or irretrievable commitment of small quantities of fuel that would be required for activities such as operation of equipment used to upgrade the communication sites and improve/establish access roads to the sites.

#### **4.11 CUMULATIVE ENVIRONMENTAL CONSEQUENCES**

Cumulative impacts result from “the incremental impact of actions when added to other past, present, and reasonably foreseeable future actions, regardless of what agency undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (Council on Environmental Quality, 1978).

No other reasonably foreseeable actions have been identified in the vicinity of the communication sites that could be considered as contributing to a potential cumulative impact on the environment along with impacts associated with implementation of WAC communication site improvements. The potential impacts from the Proposed Action are short term and minor, and are not expected to contribute to cumulative impacts.

A summary of resource attributes that may contribute to cumulative impacts is provided below:

**Land Use and Aesthetics.** Land use at the existing communication sites would not change; the sites would continue to be used for communications purposes. There would be no significant change in the visual character of the communication sites after completion of the upgrade activities. South Peak is currently an undeveloped mountain top that would be used to establish a communication site. In addition, a dirt access road would be constructed across private property to access the site. The change in land use and appearance of South Peak to a communication site would not be readily noticeable from a distance and would not change the existing visual character of the area. No other

foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative impact to land use and aesthetics when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Hazardous Materials Management.** During WAC upgrade activities, small amounts of hazardous materials are expected to be utilized including adhesives, motor fuels, paints, thinners, solvents, POL, and household products. Operation of the communication sites would primarily involve the use of small quantities of POL, ethylene glycol, and propane (associated with the operation of emergency generators). Use of these materials would not change significantly from current conditions at the communication sites. Storage, handling, and transportation of hazardous materials associated with WAC upgrades and operation of the communication sites would be conducted in accordance with applicable regulations and established procedures. No other foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative hazardous materials impact when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Hazardous Waste Management.** During WAC upgrade activities, hazardous waste may be generated from processes that utilize the hazardous materials mentioned above. Only small amounts of waste adhesives, motor fuels, paints, thinners, solvents, and POL are expected to be generated. Operation of the communication sites would primarily involve the use of POL, ethylene glycol, and propane with no or minimal hazardous waste generated. Generation of hazardous wastes would not change significantly from current conditions at the communication sites. Storage, handling, and disposal of hazardous wastes associated with WAC upgrades and operation of the communication sites would be conducted in accordance with applicable regulations and established procedures.

The only other activity occurring in the vicinity of the communication sites (specifically the Pacific Steel site) that could result in cumulative hazardous waste impacts is the continued investigation/remediation of the Anaconda Mineral Company - Great Falls Smelter VCP Site. Access to the Pacific Steel communication site would be coordinated to allow construction and improvements on the site as well as access to inspect/maintain communication equipment as needed. In addition, ARC-BP would be consulted prior to initiating any ground-disturbing activities to ensure construction activities do not impact ongoing remedial actions. Because activities would be coordinated with ARC-BP, cumulative impacts are not expected from continued investigation/remediation of the Anaconda Mineral Company - Great Falls Smelter VCP Site.

**Storage Tanks.** The two 1,000-gallon ASTs associated with the emergency generator at Highwood Baldy communication site would remain in place. The propane tanks associated with the Belgian Hill and Teton Ridge communication sites would remain in place. Propane tanks would be installed at the remaining communication sites to power an emergency generator. Management of the propane tanks in accordance with applicable regulations would minimize the potential for impacts. No other foreseeable actions have been identified in the



vicinity of the communication sites that would cause a cumulative impact to storage tanks when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Asbestos-Containing Material.** Demolition/removal of existing structures at communication sites that may contain ACM would occur. Such activities would be conducted in accordance with applicable federal, state, and local regulations to minimize potential risk to human health and the environment. No other foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative asbestos impact when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Lead-Based Paint.** Demolition/removal of existing structures at communication sites that may contain lead-based paint would occur. Such activities would be conducted in accordance with applicable federal, state, and local regulations to minimize potential risk to human health and the environment. No other foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative asbestos impact when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Soils and Geology.** Construction and demolition activities associated with WAC upgrade activities would disturb less than an acre at each of the communication sites. In addition, approximately 2 miles of access road improvements is proposed for the Garneill communication site (approximately 3.5 acres of disturbance anticipated), and approximately 3 miles of new access road is proposed for the South Peak communication site (approximately 5.5 acres of disturbance anticipated). No other foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative impact to soils and geology when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Biological Resources.** Most of the communication site improvements would occur in unvegetated areas already occupied by communication related facilities. The improvements of an access road could result in a permanent loss of vegetation. After the communication site improvements have been completed, the sites would be contoured for proper runoff, and vegetated areas that were disturbed would be reseeded. Wildlife species occupying the communication sites and adjacent areas may be temporarily displaced by ground-disturbing activities and by noise during construction activities. Construction activities would be short term and wildlife displaced by noise would be expected to return upon completion of construction activities. There are no anticipated impacts to any threatened and endangered species as a result of communication site improvements. However, nesting and roosting habitat for migratory bird species could be lost as a result of construction activities. None of the communication sites are within or adjacent to designated critical habitat for any listed species. No other foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative impact to biological resources when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

**Cultural Resources.** Because ground disturbance occurred during the original construction of the existing communication sites, the potential for discovery of archaeological resources is considered low. None of the equipment shelters or antennas at the communication sites are over 50 years old; therefore, removal or demolition of existing equipment shelters at the communication sites would not cause an impact to historic buildings or structures. There are no known traditional cultural properties at the communication sites. No other foreseeable actions have been identified in the vicinity of the communication sites that would cause a cumulative impact to cultural resources when combined with implementation of WAC communication site improvements. Cumulative impacts are not expected.

## 5.0 CONSULTATION AND COORDINATION

---

The federal, state, and DOD agencies/organizations/individuals contacted during preparation of this EA are listed below:

### **Federal**

U.S. EPA, Region 8  
U.S. Fish and Wildlife Service  
U.S. Department of Agriculture, Lewis and Clark National Forest

### **State**

Montana Department of Natural Resources  
Montana State Historic Preservation Officer

### **Department of Defense**

341 CES/CEV	Mr. Tony Lucas
341 CS/SCXP	Mr. David Hinds
HQ AFCEE/ICS	Mr. Ashley Allinder

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 6.0 LIST OF PREPARERS AND CONTRIBUTORS

---

Derrick Coleman, Senior Water Resources Professional, Earth Tech  
B.A., 1975, Physical Geography, University of California, Berkeley  
PhD, 1982, Geomorphology, Johns Hopkins University  
Years of Experience: 26

Christopher Doolittle, Senior Cultural Resource Manager, Earth Tech  
B.A., 1987, Anthropology, University of California, Berkeley  
M.A., 1992, Anthropology, University of Arizona, Tucson  
Years of Experience: 17

Meredith Herndon, Staff Environmental Scientist, Earth Tech  
B.S., 2004, Environmental Science, Humboldt State University, Arcata  
Years of Experience: 1

David Jury, REA, Senior Environmental Professional, Earth Tech  
B.A., 1988, Geography, California State University, Long Beach  
Years of Experience: 19

Matthew Malle, Project Biologist, Earth Tech  
B.S., 1999, Environmental Biology, Humboldt State University, Arcata  
Years of Experience: 6

William Muir, Senior Geologist, Earth Tech  
B.S., 1980, Geology, California State University, Long Beach  
M.S., 1984, Geology, California State University, Long Beach  
Years of Experience: 27

Carl Rykaczewski, REA, Senior Environmental Professional, Earth Tech  
B.S., 1981, Environmental Resource Management, Pennsylvania State University,  
University Park  
Years of Experience: 18

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 7.0 DISTRIBUTION LIST

---

### **Federal Agencies**

U.S. Department of Agriculture  
Lewis and Clark National Forest  
1101 15th Street N.  
Great Falls, MT 59401

U.S. Environmental Protection Agency, Region 8  
Director, Office of Federal Activities  
999 18th Street, Suite 200  
Denver, CO 80202-2466

U.S. EPA Montana Operations Office  
Federal Building  
10 West 15th Street, Suite 3200  
Helena, MT 59626

U.S. Fish and Wildlife Service  
Montana Field Office  
100 N. Park, Suite 320  
Helena, MT 59601

### **State Agencies**

Montana Department of Natural Resources and Conservation  
1625 Eleventh Avenue  
Helena, MT 59620-1601

Montana Fish, Wildlife, and Parks  
Region 4 Office  
4600 Giant Springs Road  
Great Falls, MT 59405

Montana Fish, Wildlife, and Parks  
Lewistown Area Resource Office  
2358 Airport Road  
P.O. Box 938  
Lewistown, MT 59457

Montana Fish, Wildlife, and Parks  
P.O. Box 892  
White Sulphur Springs, MT 59645

State Historic Preservation Officer  
Attn: Dr. Mark Baumler  
1410 8th Avenue  
P.O. Box 201202  
Helena, MT 59620-1202

## **Department of Defense**

Department of the Air Force  
HQ AFCEE/ISM  
3300 Sydney Brooks  
Brooks City-Base, TX 78235-5112

Department of the Air Force  
HQ AFSPC/A7PP  
150 Vandenberg Street, Suite 1105  
Peterson AFB, CO 80914-4150

Department of the Air Force  
341 CES/CEV  
39 78th Street North  
Building 470  
Malmstrom AFB, MT 59402

## **Other Agencies**

Blackfeet Tribal Business Council  
P.O. Box 850  
Browning, MT 59417

Chippewa-Cree Cultural Committee  
Box 195  
Box Elder, MT 59521

Confederated Salish & Kootenai Tribes  
P.O. Box 278  
Pablo, MT 59855

Crow Cultural Committee  
Box 159  
Crow Agency, MT 59022

Fort Belknap Indian Community Council  
Rural Route 1, Box 66  
Harlem, MT 59526

American Wildlands  
40 East Main Street, #2  
Bozeman, MT 59715

Montana Wilderness Association  
1400 1<sup>st</sup> Avenue North, #36  
Great Falls, MT 59401

Wildwest Institute  
P.O. Box 7998  
Missoula, MT 59807

Central Montana Wildlands  
135 Carroll Trail  
Lewistown, MT 59457



Native Ecosystem Council  
P.O. Box 125  
Willow Creek, MT 59760

Judith Basin County Commissioners  
Box 427  
Stanford, MT 59479

Chouteau County Commissioners  
Box 459  
Fort Benton, MT 59442

### **Libraries**

Lewistown Public Library  
701 West Main  
Lewistown, MT 59457-2501

Great Falls Public Library  
301 2nd Avenue North  
Great Falls, MT 59401-2593

Arden G. Hill Memorial Library  
7356 4th Avenue North  
Malmstrom AFB, MT 59402-7506

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 8.0 BIBLIOGRAPHY

---

- Avian Power Line Interaction Committee, 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission.
- Council on Environmental Quality, 1978. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act.
- International Conference of Building Officials, 1991. Uniform Building Code.
- Montana Agricultural Experiment Station, Montana State University, 1973. Vegetative Rangeland Types in Montana.
- Montana Fish, Wildlife, & Parks, 2006. Montana Gray Wolf Conservation and Management Plan. <http://fwp.mt.gov/content/10886,800,800.jpg>
- Montana Fish Wildlife and Parks, 2007a. Animal Field Guide: Pallid Sturgeon. [http://fwp.mt.gov/fieldguide/detail\\_AFCAA02010.aspx](http://fwp.mt.gov/fieldguide/detail_AFCAA02010.aspx)
- Montana Fish Wildlife and Parks, 2007b. Animal Field Guide: Piping Plover. [http://fwp.mt.gov/fieldguide/detail\\_ABNNB03070.aspx](http://fwp.mt.gov/fieldguide/detail_ABNNB03070.aspx)
- Montana Fish Wildlife and Parks, 2007c. Animal Field Guide: Bald Eagle. [http://fwp.mt.gov/fieldguide/detail\\_ABNKC10010.aspx](http://fwp.mt.gov/fieldguide/detail_ABNKC10010.aspx)
- Montana Fish Wildlife and Parks, 2007d. Animal Field Guide: Gray Wolf. [http://fwp.mt.gov/fieldguide/detail\\_AMAJA01030.aspx](http://fwp.mt.gov/fieldguide/detail_AMAJA01030.aspx)
- Montana Fish Wildlife and Parks, 2007e. Animal Field Guide: Canada Lynx. [http://fwp.mt.gov/fieldguide/detail\\_AMAJH03010.aspx](http://fwp.mt.gov/fieldguide/detail_AMAJH03010.aspx)
- Montana Fish Wildlife and Parks, 2007f. Animal Field Guide: Black-footed Ferret [http://fwp.mt.gov/fieldguide/detail\\_AMAJF02040.aspx](http://fwp.mt.gov/fieldguide/detail_AMAJF02040.aspx)
- Montana Fish Wildlife and Parks, 2007g. Animal Field Guide: Grizzly Bear. [http://fwp.mt.gov/fieldguide/detail\\_AMAJB01020.aspx](http://fwp.mt.gov/fieldguide/detail_AMAJB01020.aspx)
- Montana Fish Wildlife and Parks, 2007h. Personal communication between Matt Malle, Earth Tech biologist and Caroline Sime, Wolf Program Biologist, regarding the known range of the gray wolf throughout Montana. 30 July 2007.
- Montana Natural Heritage Program, 2000. Montana Species of Special Concern. Internet: <http://orion2.nris.stat.mt.us/mtnhp/plants>
- Montana Partners in Flight, 2006. Website explaining various ecoregions of Montana. <http://biology.dbs.umt.edu/landbird/mhcp/mtpif/>
- State of Montana, 2007a. mt.gov, Information Technology Services Division, Interoperability Montana (IM) Project.

State of Montana, 2007b. mt.gov, Department of Environmental Quality, Remediation Response Sites, Anaconda Minerals Company-Great Falls Refinery.

Towerkill.com, 2003. Bird collision with towers.

U.S. Air Force, 2002. Malmstrom Air Force Base 341st Space Wing, Integrated Hazardous Materials Emergency Response Plan 32-4 (U), August.

U.S. Air Force, 2005a. Headquarters 341st Space Wing, Malmstrom AFB, Montana, Hazardous Waste Management Plan, OPLAN 32-7042, 1 January.

U.S. Air Force, 2005b. Map of Endangered Species, Minuteman Missile Complex, June.

U.S. Department of Agriculture, 1982. Soils of Montana, November.

U.S. Department of Agriculture, 1986. Lewis and Clark National Forest Plan, June.

U.S. Department of Agriculture, 2005a. U.S. Forest Service Region 1 Sensitive Species List – Wildlife.

U.S. Department of Agriculture, 2005b. U.S. Forest Service Region 1 Sensitive Species– Plants.

U.S. Department of Agriculture, 2007. Rocky Mountain Ranger District, Travel Plan Final Environmental Impact Statement.

U.S. Environmental Protection Agency, 2007. EPA Map of Montana Radon Zones.

U.S. Fish and Wildlife Service, 2005. Threatened, Endangered, and Candidate Species in Montana, November.

U.S. Fish and Wildlife Service, 2006. Threatened, Endangered, Proposed, and Candidate Species, Montana Counties, January.

**APPENDIX A**  
**PHOTOGRAPHS**



**A-1  
MALMSTROM  
BUILDING 500**







**Photograph 1.** Building 500 Communication Site, Malmstrom AFB.



**Photograph 2.** Building 500 Communication Site, interior of equipment room.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**A-2**  
**GARNEILL**





**Photograph 1.** Garneill Communication Site, Antenna.



**Photograph 2.** Garneill Communication Site, Former Equipment Area.





**Photograph 3.** Garneill Communication Site, Former Equipment Area.



**Photograph 4.** Garneill Communication Site, Antenna.



**Photograph 5.** Garneill Communication Site, Antenna.



**Photograph 6.** Garneill Communication Site, Antenna.

**THIS PAGE INTENTIONALLY LEFT BLANK**



**A-3**  
**SOUTH PEAK**





**Photograph 1.** South Peak Potential Communication Site.



**Photograph 2.** South Peak Potential Communication Site.





**Photograph 3.** South Peak Potential Communication Site, View from Existing Antenna Structure.



**Photograph 4.** South Peak Potential Communication Site, View South Towards Existing Antenna.



**Photograph 5.** Existing Equipment Shelter and Antenna, Approximately 0.5 mile from Potential Site.



**Photograph 6.** Existing Equipment Shelter and Antenna, Approximately 0.5 mile from Potential Site.





**Photograph 7.** South Peak, View from Access Road.

**A-4**  
**HIGHWOOD BALDY**







**Photograph 1.** Highwood Baldy Communication Site, Equipment Shelter, Antenna, Storage Tank.



**Photograph 2.** Highwood Baldy Communication Site, Equipment Shelter, Antenna, Storage Tank.



**Photograph 3.** Highwood Baldy Communication Site, Antenna.



**Photograph 4.** Highwood Baldy Communication Site, Storage Tank.





**Photograph 5.** Highwood Baldy Communication Site, Equipment Shelter, Antenna, Storage Tank.



**Photograph 6.** Highwood Baldy Communication Site, Equipment Shelter.



**Photograph 7.** Highwood Baldy Communication Site, Transformers.



**Photograph 8.** Highwood Baldy Communication Site, Surrounding Grounds.





**Photograph 9.** Highwood Baldy Communication Site, Underground Power Cables Warning Sign.



**Photograph 10.** Highwood Baldy Communication Site, Access Road and Electrical Box.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**A-5**  
**JUDITH PEAK**







**Photograph 1.** Judith Peak Communication Site, Equipment Shelter and Antenna.



**Photograph 2.** Judith Peak Communication Site, Equipment Shelter and Antenna.



**Photograph 3.** Judith Peak Communication Site, Equipment Shelter and Antenna.



**Photograph 4.** Judith Peak Communication Site, Equipment Shelter and Antenna.





**Photograph 5.** Judith Peak Communication Site, Adjacent Equipment Shelters and Antennas.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**A-6**  
**PACIFIC STEEL**





**Photograph 1.** Pacific Steel Communication Site. \* Unable to access site property.



**Photograph 2.** Pacific Steel Communication Site (in distance). \* Unable to access site property.

**THIS PAGE INTENTIONALLY LEFT BLANK**



**A-7**  
**TETON RIDGE**





**Photograph 1.** Teton Ridge Communication Site, Equipment Shelter and Antenna.



**Photograph 2.** Teton Ridge Communication Site, Equipment Shelter and Propane Tank.





**Photograph 3.** Teton Ridge Communication Site, Pit Latrine Adjacent to Equipment Shelter.



**Photograph 4.** Teton Ridge Communication Site, Equipment Shelter, Antennas, Propane Tank.



**Photograph 5.** Teton Ridge Communication Site, Shed Adjacent to Site.



**Photograph 6.** Teton Ridge Communication Site, Equipment Shelter and Antennas.





**Photograph 7.** Teton Ridge Communication Site, Adjacent Equipment Shelters and Antennas.



**Photograph 8.** Teton Ridge Communication Site (View Looking North from Access Road).

**A-8**  
**BELGIAN HILL**







**Photograph 1.** Belgian Hill Communication Site, Equipment Shelter, Emergency Generator, Propane Tank.



**Photograph 2.** Belgian Hill Communication Site, Equipment Shelter.



**Photograph 3.** Belgian Hill Communication Site, Equipment Shelter, Antenna, Emergency Generator, Propane Tank.



**Photograph 4.** Belgian Hill Communication Site, Equipment Shelter and Antenna.





**Photograph 5.** Belgian Hill Communication Site, (with Adjacent Equipment Shelter and Antenna).



**Photograph 6.** Belgian Hill Communication Site, Adjacent Equipment Shelters and Antennas.



**Photograph 7.** Belgian Hill Communication Site, Adjacent Equipment Shelters and Antennas.



**Photograph 8.** Belgian Hill Communication Site, Adjacent Land (View to the North).

**A-9**  
**COONEY**







**Photograph 1.** Cooney Communication Site, Equipment Shelter and Antenna.



**Photograph 2.** Cooney Communication Site, Equipment Shelter and Antenna.



**Photograph 3.** Cooney Communication Site, (with Adjacent Equipment Shelter).



**Photograph 4.** Cooney Communication Site, (with Adjacent Equipment Shelter).





**Photograph 5.** Cooney Communication Site.



**Photograph 6.** Cooney Communication Site, Adjacent Land (View Looking South).



**Photograph 7.** Cooney Communication Site, Adjacent Land (View Looking East).



**Photograph 8.** Cooney Communication Site, Adjacent Land (View Looking South).

**A-10  
FLYING J**







**Photograph 1.** Flying J Communication Site, Fenced Area.



**Photograph 2.** Flying J Communication Site, Fenced Area.



**Photograph 3.** Flying J Communication Site, Adjacent Equipment Shelters and Antennas.

**A-11**  
**SOUTH MOCCASIN**







**Photograph 1.** South Moccasin Communication Site, Equipment Shelter and Antenna.



**Photograph 2.** South Moccasin Communication Site, Equipment Shelter.





**Photograph 3.** South Moccasin Communication Site, Equipment Shelter and Antenna.



**Photograph 4.** South Moccasin Communication Site, Adjacent Equipment Shelter and Antenna.



**Photograph 5.** South Moccasin Communication Site, Equipment Shelter and Antenna.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**A-12**  
**SULLIVAN**







**Photograph 1.** Sullivan Communication Site, Equipment Shelter and Antenna.



**Photograph 2.** Sullivan Communication Site, Equipment Shelter and Antenna.



**Photograph 3.** Sullivan Communication Site, View from Access Road.



**Photograph 4.** Sullivan Communication Site, View from Access Road.





**Photograph 5.** Sullivan Communication Site, View from Access Road.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**APPENDIX B**  
**CONSULTATION**





**DEPARTMENT OF THE AIR FORCE**  
**HEADQUARTERS 341ST SPACE WING (AFSPC)**



4 September 2007

**FROM:** 341 CES/CEVC

Tony P. Lucas, NEPA Program Manager  
39 78<sup>th</sup> Street South  
Malmstrom AFB, MT 59402-7536

**TO:** U.S. Fish & Wildlife Service  
Ecological Services, Montana Field Office  
Attention: Mr. Mark Wilson, Field Supervisor  
585 Shepard Way  
Helena, MT 59601

**SUBJECT:** Notification of Preparation of an Environmental Assessment examining the potential for environmental impact from establishing/modifying 11 communication sites as Wide Area Coverage (WAC), Construct Land Mobile Network Communications Infrastructure.

Dear Mr. Wilson:

Malmstrom AFB is preparing an Environmental Assessment (EA) to evaluate potential environmental impacts of a proposal to establish/modify 11 communication sites titled Wide Area Coverage (WAC), Construct Land Mobile Network Communications Infrastructure across central Montana.

The Interoperability Montana (IM) Project is initiating a comprehensive communication system to be implemented across a large geographic region (WAC Communication System). Malmstrom proposes to participate in the IM project. The system will provide advanced digital, secure voice and data communications for public safety organizations. The system will operate using current federal and state communication standards in which federal, state and local public safety and emergency management representatives can operate autonomously and communicate effectively during emergency situations.

This action would establish a comprehensive communication system in cooperation with local, state and federal agencies across central Montana. With over 550 miles of Canadian border, Montana law enforcement officials have critical communications interoperability requirements between levels of government and across jurisdictions. The WAC communication system would provide advanced digital, secure voice and data communications for public safety organizations near the border region. The WAC would also improve homeland security by providing the means for military and civil authorities to communicate by radio. The Montana National Guard's homeland security mission will also be enhanced through highly reliable, redundant communications capabilities.

**Location**

The 11 WAC communication sites are situated across central Montana at the following locations: Belgian Hill, Teton Ridge, Sullivan Ridge, Flying J, Pacific Steel, Judith Peak, South Moccasin, Malmstrom AFB Building 500, Garneill, Cooney, Highwood Baldy, and South Peak (Attachment 1).

**GUARDIANS OF THE HIGH FRONTIER**

The proposed South Peak communication site is considered an alternative to using Highwood Baldy. If the Highwood Baldy communication site is approved, the South Peak site would not be required.

### **Proposed Action**

Proposed construction and modification activities at the WAC communication sites would occur in fiscal year (FY) 2008. Construction and modification activities are anticipated to occur over a 1 year period.

Estimated ground disturbance as a result of demolition and construction at each site would be less than one acre. However, approximately 2 miles of access road improvements is proposed for the Garneill communication site (approximately 3.5 acres of disturbance anticipated) and approximately 3 miles of underground power line may be replaced at the Highwood Baldy communication site (approximately 4.0 acres of disturbance anticipated). Construction employees would access the communication sites via existing dirt access roads.

### **Alternatives to the Proposed Action**

#### *South Peak Alternative*

Under the South Peak Alternative, proposed construction and modification activities at the WAC communication sites would be the same as the Proposed Action; however, South Peak would be used as an alternative communication site in the event that the Highwood Baldy site is unavailable.

Estimated ground disturbance as a result of demolition and construction at the South Peak site would be less than one acre; however, approximately 3 miles of new access road are proposed (approximately 5.5 acres of disturbance anticipated). Construction employees would access the site via existing dirt access roads to the base of South Peak.

### **Threatened and Endangered Species**

The Montana Fish Wildlife and Parks (MFW&P) website was used to determine the potential of occurrence for listed Threatened and Endangered species. The MFW&P website lists the federally threatened and endangered species by county. The counties in which the proposed radio sites occur are Cascade, Chouteau, Fergus, Pondera, Teton, and Wheatland. Each species natural history and preferred habitat were researched and compared to the habitat available at each of the proposed radio sites to determine whether potential for occurrence was low, moderate, or high.

Federally threatened and endangered species that occur or have the potential to occur within the counties are listed in Table 1.

**Table 1. Threatened and Endangered Species within the ROI**

Common Name	Scientific Name	Federal Status
<b>Fish</b>		
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	E
<b>Birds</b>		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted
Piping plover	<i>Charadrius melodus</i>	T
<b>Mammals</b>		
Grizzly Bear	<i>Ursus arctos horribilis</i>	T
Canada lynx	<i>Lynx canadensis</i>	T
Gray Wolf	<i>Canis lupus</i>	E
Black-footed ferret	<i>Mustela nigripes</i>	E

Source: U.S. Fish and Wildlife Service, 2007.

E = endangered

T = threatened

The federally endangered pallid sturgeon (*Scaphirhynchus albus*) prefers large, turbid rivers over sand and gravel bottoms, usually in strong current; and also impoundments of these rivers. In Montana, pallid sturgeon use large turbid streams including the Missouri and Yellowstone rivers. They use all channel types, primarily straight reaches with islands. They prefer areas with substrates containing sand (especially bottom sand dune formations) and fines (93% of observations). There are no turbid streams or any other bodies of water associated with any of the communication sites. There is no potential for this species to occur at any of the communication sites.

The federally threatened piping plover (*Charadrius melodus*) prefers habitat that is comprised of unvegetated sand or pebble beaches on shorelines or islands in freshwater and saline wetlands. Vegetation, if present at all, consists of sparse, scattered clumps. Open shorelines and sandbars of rivers and large reservoirs in the eastern and north-central portions of the state provide prime breeding habitat. In Montana, and throughout the species' range, nesting may occur on a variety of habitat types. If conditions are right, alkali wetlands, lakes, reservoirs, and rivers can all provide the essential features required for nesting. The alkali wetlands and lakes found in the northeastern corner of the state generally contain wide, unvegetated, gravelly, salt-encrusted beaches. Rivers that flood adequately can supply open sandbars or gravelly beaches, as can large reservoirs, with their shoreline beaches, peninsulas, and islands of gravel or sand. Although the Belgian Hill communication site is identified as being within the range of occupied habitat, the preferred habitat for this species does not occur at the Belgian Hill site, nor does it occur at any of the other communication sites. The potential for this species to occur, other than incidentally, at any of the communication sites is low.

The recently federally de-listed bald eagle (*Haliaeetus leucocephalus*) is primarily a species of riparian and lacustrine habitats (forested areas along rivers and lakes), especially during the breeding season. Important year-round habitat in Montana includes wetlands, major water bodies, spring spawning streams, ungulate winter ranges, and open water areas. Wintering habitat may include upland sites. Nesting sites are generally located within larger forested areas near large lakes and rivers where nests are usually built in the tallest, oldest, large diameter trees. Nesting site selection is dependent upon maximum local food availability and minimum disturbance from human activity. Although this species can be observed throughout a variety of habitats within Montana, observations of this species at any of the radio sites would be considered incidental. Although the communication sites occur within the known winter and summer range of this species, there are no major aquatic habitats necessary for appropriate habitat

conditions adjacent to any of the communication sites. The potential for this species to occur, other than incidentally, at any of the communication sites is low.

The gray wolf (*Canis lupus*) exhibits no particular habitat preference except for the presence of native ungulates within its territory on a year round basis. Wolves usually prefer areas with few roads and human disturbance. Wolves establishing new packs in Montana have demonstrated greater tolerance of human presence and disturbance than previously thought characteristic of this species. They have established territories where prey are more abundant at lower elevations than expected, especially in winter. According to the gray wolf range maps provided by MFW&P, there is no known occupied habitat within the vicinity of any of the communication sites. The potential for this species to occur at any of the communication sites is low.

Canada lynx (*Lynx Canadensis*) found east of the Continental Divide, prefer the higher elevations (1,650 to 2,400 meters) subalpine forests that are composed mostly of subalpine fir. Secondary habitat is intermixed Englemann spruce and Douglas-fir habitat types where lodgepole pine is a major seral species. Throughout their range, shrub-steppe habitats may provide important linkage habitat between the primary habitat types described above. Typical snow conditions are important factors for lynx, with lynx occurring primarily in habitats that also receive relatively uniform and moderately deep snowfall amounts (total annual snowfall of 100 to 127 centimeters). Within these habitat types, disturbances that create early successional stages such as fire, insect infestations, and timber harvest, provide foraging habitat for lynx by creating forage and cover for snowshoe hares, although older forests also provide habitats for snowshoe hares and lynx for longer periods of time than disturbance-created habitats. Canada lynx avoid large openings but often hunt along edges in areas of dense cover. When inactive or birthing, they occupy dens typically in hollow trees, under stumps, or in thick brush. Den sites tend to be in mature or old-growth stands with a high density of logs. These habitats must be near or adjacent to foraging habitat because the hunting range of the female is reduced during this time. According to the Canada lynx range maps provided by MFW&P, the Cooney, Highwood Baldy, South Peak, and Sullivan communication sites are located within the periphery of occupied habitat. The Cooney and Sullivan communication sites are open and do not have the preferred cover this species is known to occupy. The higher elevation mountainous Highwood Baldy and South Peak sites, within the Highwood Mountain range, could be considered unoccupied, but appropriate, peripheral habitat for this species. Based on the current land use for all of the communication sites, the potential for this species to be observed at any of the communication sites is low.

The black-footed ferret (*Mustela nigripes*) is intimately tied to prairie dogs (*Cynomys* spp.) throughout their range and have only been found in association with prairie dogs. They are therefore limited to the same open habitat used by prairie dogs: grasslands, steppe, and shrub steppe. Black-footed ferrets do not dig their own burrows and rely on abandoned prairie dog burrows for shelter. Only large complexes (several thousand acres of closely spaced colonies) can support and sustain a breeding population of black-footed ferrets. The above described conditions required to support black-footed ferrets do not exist at any of the proposed radio sites. According to the black-footed ferret range maps provided by MFW&P, there is no known occupied habitat within the general vicinity of the communication sites. The potential for this species to occur at any of the communication sites is low.

In Montana, grizzly bear (*Ursus arctos horribilis*) primarily use meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber, sidehill parks, snow chutes, and alpine slabrock habitats. Habitat use is highly variable between areas, seasons, local populations, and individuals. Historically, the grizzly bear was primarily a plains species occurring in higher densities throughout most of eastern Montana. Currently, the grizzly bear is often found observed in western Montana within alpine/subalpine forests. All of the communication sites are outside the known range for this species. The potential for this species to occur at any of the communication sites is low.



## **Migratory Birds**

The Air Force would take reasonable steps to conserve migratory birds in accordance with Executive Order 13186. No intentional takings will occur as part of the Proposed Actions. The federal Proposed Actions will include appropriate best management practices and monitoring, including preconstruction surveys for potential nesting birds and periodic inspection for mortality to minimize incidental takings. The potential for impact of the Proposed Actions on migratory birds and incidental takings is low. Incidental takings will be minimized with use of appropriate best management practices and monitoring.

## **Sensitive Habitats**

Sensitive habitats include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife. There are no sensitive habitats in the vicinity of the communication sites.

## **Conclusion**

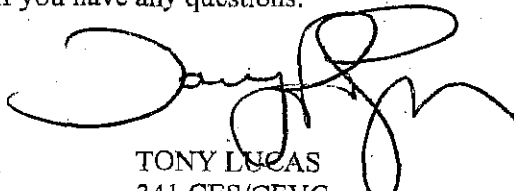
Although the activities associated with establishing/modifying 11 communication sites may alter activities normally conducted at each of the sites, the Proposed Action would not likely adversely affect listed species within the area, nor is it anticipated to cause modification to federally designated critical habitat.

Pursuant to the Endangered Species Act (ESA) and the National Environmental Policy Act (NEPA), we are requesting your input into the preparation of this EA in the following areas:

- Confirmation that our threatened, endangered, candidate, and proposed species list is current and complete.
- Input on the possibility of adversely affecting listed species or critical habitat.

Your cooperation and assistance with the Air Force's efforts to identify important biological resources early in the EA development Phase is greatly appreciated. Upon completion, a copy of the draft EA will be forwarded to your office for review.

Please contact me at (406) 731-7227 if you have any questions.



TONY LUCAS  
341 CES/CEVC  
Environmental Engineer

Attachments:  
Description of Proposed Actions



**APPENDIX C**

**MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
U.S. DEPARTMENT OF DEFENSE  
AND THE  
U.S. FISH AND WILDLIFE SERVICE  
TO PROMOTE THE CONSERVATION OF MIGRATORY BIRDS**



**MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
U.S. DEPARTMENT OF DEFENSE  
AND THE  
U.S. FISH AND WILDLIFE SERVICE  
TO PROMOTE THE CONSERVATION OF MIGRATORY BIRDS**

This Memorandum of Understanding (MOU) is entered into between the U.S. Department of Defense (DoD) and the U.S. Fish and Wildlife Service (FWS) (hereinafter "the Parties").

**A. Purpose and Scope**

Pursuant to Executive Order 13186 (January 17, 2001), Responsibilities of Federal Agencies to Protect Migratory Birds, this MOU outlines a collaborative approach to promote the conservation of migratory bird populations.

This MOU does not address incidental take during military readiness activities, which is being addressed in a rulemaking in accordance with section 315 of the National Defense Authorization Act for Fiscal Year 2003 (Pub. L. 107-314, 116 Stat. 2458).

This MOU specifically pertains to the following categories of DoD activities:

- (1) Natural resource management activities, including, but not limited to, habitat management, erosion control, forestry activities, agricultural outleasing, conservation law enforcement, invasive weed management, and prescribed burning;
- (2) Installation support functions, including but not limited to, the maintenance, construction or operation of administrative offices, military exchanges, road construction, commissaries, water treatment facilities, storage facilities, schools, housing, motor pools, non-tactical equipment, laundries, morale, welfare, and recreation activities, shops, landscaping, and mess halls;
- (3) Operation of industrial activities;
- (4) Construction or demolition of facilities relating to these routine operations; and
- (5) Hazardous waste cleanup.

This MOU identifies specific activities where cooperation between the Parties will contribute substantially to the conservation of migratory birds and their habitats. This MOU does not authorize the take of migratory birds.

## **B. Authorities**

The Parties' responsibilities under the MOU are authorized by provisions of the following laws:

Alaska National Interest Lands Conservation Act of 1980 (16 USC 410hh-3233)  
Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668d)  
Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)  
Fish and Wildlife Act of 1956 (16 U.S.C. 742 et seq.)  
Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901-2911)  
Fish and Wildlife Coordination Act (16 U.S.C. 661-667)  
Migratory Bird Conservation Act (16 U.S.C. 715-715d, 715e, 715f-715r)  
Migratory Bird Treaty Act (16 U.S.C. 703-711)  
National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347)  
Sikes Act Improvement Act of 1997 (16 USC 670a-670o)  
Agreements to limit encroachments and other constraints on military training, testing, and operations (10 U.S.C. § 2684a)

## **C. Background**

The Parties have a common interest in the conservation and management of America's natural resources. The Parties agree that migratory birds are important components of biological diversity and that the conservation of migratory birds will both help sustain ecological systems and help meet the public demand for conservation education and outdoor recreation, such as wildlife viewing and hunting opportunities. The Parties also agree that it is important to: 1) focus on bird populations; 2) focus on habitat restoration and enhancement where actions can benefit specific ecosystems and migratory birds dependent upon them; and 3) recognize that actions taken to benefit some migratory bird populations may adversely affect other migratory bird populations.

The DoD mission is to provide for the Nation's defense. DoD's conservation program works to ensure continued access to land, air, and water resources for realistic military training and testing while ensuring that the natural and cultural resources entrusted to DoD's care are sustained in a healthy condition.

The DoD is an active participant in international bird conservation partnerships including Partners in Flight (PIF) and the North American Bird Conservation Initiative (NABCI). Military lands frequently provide some of the best remaining habitat for migratory bird species of concern, and DoD plans to continue its leadership role in bird conservation partnerships.

Through the PIF initiative, DoD works in partnership with numerous Federal and State agencies and nongovernmental organizations for the conservation of migratory and resident birds and to enhance migratory bird survival. Through DoD PIF, a list of species of concern (see Definitions) has been developed for each Bird Conservation Region where DoD facilities occur, thus improving DoD's ability to evaluate any migratory bird conservation concerns on respective DoD lands.

Integrated Natural Resources Management Plans (INRMPs) offer a coordinated approach for incorporating habitat conservation efforts into installation management.

INRMPs are a significant source of baseline conservation information and conservation initiatives used when preparing National Environmental Policy Act (NEPA) documents for all DoD management activities. This linkage helps to ensure that appropriate conservation and mitigation measures are identified in NEPA documents and committed to, when appropriate, in final decision documents.

The DoD PIF program provides a framework for incorporating landbird, shorebird and waterbird habitat management efforts into INRMPs. DoD's strategy focuses on inventorying and long-term monitoring to determine changes in migratory bird populations on DoD installations. Effective on-the-ground management may then be applied to those areas identified as having the highest conservation value. DoD's PIF goal is to support the military's training and testing mission while being a vital and supportive partner in regional, national, and international bird conservation initiatives. DoD strives to implement cooperative projects and programs on military lands to benefit the health and well-being of birds and their habitats, whenever possible. The Department of Defense implements bird inventories and monitoring programs in numerous ways including Monitoring Avian Productivity and Survivorship (MAPS) and Next Generation Radar (NEXRAD) for studying bird movements in the atmosphere. DoD also maintains an integrated pest management (IPM) program designed to reduce the use of pesticides to the minimum necessary.

The mission of the FWS is to work with others to conserve, protect, manage, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. The FWS is legally mandated to implement the provisions of the Migratory Bird Treaty Act (MBTA), which include responsibilities for population management (e.g., monitoring), habitat protection (e.g., acquisition, enhancement, and modification), international coordination, and regulation development and enforcement. The FWS also promotes migratory bird conservation through its coordination and consultation efforts with other entities.

Many FWS programs are involved in bird conservation activities, including:

1. The Division of Migratory Bird Management and Regional Migratory Birds and Habitat Programs serve as focal points in the United States for policy development and strategic planning, developing and implementing monitoring and management initiatives that help maintain healthy populations of migratory birds and their habitat, and providing continued opportunities for citizens to enjoy bird-related recreation.
2. The Division of Bird Habitat Conservation is instrumental in supporting habitat conservation partnerships through the administration of bird conservation grant programs and development of Joint Ventures that serve as major vehicles for implementing the various bird conservation plans across the country.
3. Ecological Services Field Offices across the country serve as the primary contacts for environmental reviews that include, when requested, projects developed by local military installations and DoD regional offices involving migratory bird issues. The Field Offices coordinate with the Regional Migratory Bird Offices, as necessary, during these reviews regarding permits



and overall migratory bird conservation coordination for DoD activities.

4. The Office of Law Enforcement is the principal FWS program that enforces the legal provisions of the MBTA .

The Parties agree this MOU shall be implemented to the extent permitted by law and in harmony with agency missions, subject to the availability of appropriations and budgetary limits.

**D. Responsibilities**

**1. Each Party shall:**

a. Emphasize an interdisciplinary, collaborative approach to migratory bird conservation in cooperation with other governments, State and Federal agencies, and non-federal partners within the geographic framework of the NABCI Bird Conservation Regions

b. Strive to protect, restore, enhance, and manage habitat of migratory birds, and prevent or minimize the loss or degradation of habitats on DoD-managed lands, by:

(1) Identifying and avoiding management actions that have the potential to adversely affect migratory bird populations, including breeding, migration, or wintering habitats; and by developing and implementing, as appropriate, conservation measures that would avoid or minimize the take of migratory birds or enhance the quality of the habitat used by migratory birds.;

(2) Working with partners to identify, conserve, and manage Important Bird Areas, Western Hemisphere Shorebird Reserve Network sites, and other significant bird conservation sites that occur on DoD-managed lands;

(3) Preventing or abating the pollution or detrimental alteration of the habitats used by migratory birds;

(4) Developing and integrating information on migratory birds and their habitats into outreach and education materials and activities; and

(5) Controlling the introduction, establishment, and spread of non-native plants or animals that may be harmful to migratory bird populations, as required by Executive Order 13112 on Invasive Species.

c. Work with willing landowners to prevent or minimize the loss or degradation of migratory bird habitats on lands adjacent or near military installation boundaries. This cooperative conservation may include:

(1) Participating in efforts to identify, protect, and conserve

important migratory bird habitats or other significant bird conservation sites and ecological conditions that occur in landscapes or watersheds that may be affected by activities on DoD lands;

(2) Developing and integrating information on migratory bird resources found on DoD lands into other partners' outreach and education materials and activities; and

(3) Using available authorities to enter into agreements with other Federal agencies, States, other governmental entities, and private conservation organizations to conserve and enhance habitat in a compatible manner so military operations are not restricted.

d. Promote collaborative projects such as:

(1) Developing or using existing inventory and monitoring programs, at appropriate scales, with national or regional standardized protocols, to assess the status and trends of bird populations and habitats, including migrating, breeding, and wintering birds;

(2) Designing management studies and research projects using national or regional standardized protocols and programs, such as MAPS to identify the habitat conditions needed by applicable species of concern, to understand interrelationships of co-existing species, and to evaluate the effects of management activities on habitats and populations of migratory birds;

(3) Sharing inventory, monitoring, research, and study data for breeding, migrating, and wintering bird populations and habitats in a timely fashion with national data repositories such as Breeding Bird Research and Monitoring Database (BBIRD), National Point Count Database, National Biological Information Infrastructure, and MAPS;

(4) Working in conjunction with each other and other Federal and State agencies to develop reasonable and effective conservation measures for actions that affect migratory birds and their natural habitats;

(5) Participating in or promoting the implementation of existing regional or national inventory and monitoring programs such as Breeding Bird Survey (BBS), BBIRD, Christmas Bird Counts, bird atlas projects, or game bird surveys (e.g., mid-winter waterfowl surveys) on DoD lands where practicable and feasible.

(6) Using existing partnerships and exploring opportunities for expanding and creating new partnerships to facilitate combined funding for inventory, monitoring, management studies, and research.

e. Provide training opportunities to DoD natural resources personnel on migratory bird issues, to include bird population and habitat inventorying,

monitoring methods, and management practices that avert detrimental effects and promote beneficial approaches to migratory bird conservation.

f. Participate in the Interagency Council for the Conservation of Migratory Birds to evaluate implementation of this MOU.

g. Promote migratory bird conservation internationally, as it relates to wintering, breeding and migration habitats of birds that breed on DoD lands.

h. Promote and undertake ecologically sound actions to curb the introduction in the wild of exotic or invasive species harmful to migratory birds.

**2. The Department of Defense Shall:**

a. Follow all migratory bird permitting requirements for non-military readiness activities that are subject to 50 CFR Parts 21.22 (banding or marking), 21.23 (scientific collecting), 21.26 (special Canada goose permit), 21.27 (special purposes), or 21.41 (depredation). No permit is required to take birds in accordance with Parts 21.43 - 21.47 (depredation orders).

b. Encourage incorporation of comprehensive migratory bird management objectives in the preparation of DoD planning documents, including Integrated Natural Resource Management Plans, Pest Management Plans, Installation Master Plans, NEPA analyses, and non-military readiness elements of Bird Aircraft Strike Hazard documents. Comprehensive planning efforts for migratory birds include PIF Bird Conservation Plans, the North American Waterfowl Management Plan, U.S. Shorebird Conservation Plan, and North American Waterbird Conservation Plan and associated regional plans where available.

c. Incorporate conservation measures addressed in Regional or State Bird Conservation Plans in INRMPs.

d. Consistent with imperatives of safety and security, allow the FWS and other partners reasonable access to military lands for conducting sampling or survey programs such as MAPS, BBS, BBIRD, International Shorebird Survey, and breeding bird atlases.

e. Prior to starting any activity that is likely to affect populations of migratory birds:

(1) Identify the migratory bird species likely to occur in the area of the proposed action and determine if any species of concern could be affected by the activity;

(2) Assess and document, through the project planning process, using NEPA when applicable, the effect of the proposed action on species of concern. Use best available demographic, population, or habitat

association data in the assessment of effects upon species of concern;

- (3) Engage in early planning and scoping with the FWS relative to potential impacts of a proposed action, to proactively address migratory bird conservation, and to initiate appropriate actions to avoid or minimize the take of migratory birds.

f. Manage military lands and non-military readiness activities in a manner that supports migratory bird conservation, giving consideration to the following factors:

- (1) Habitat protection, restoration, and enhancement. Military lands contain many important habitats for migratory birds. Some unique, sensitive, endangered and/or declining habitat types that may require special management attention include:
  - (a) Grasslands. Many native grassland communities require intensive management to maintain and restore vigor and species diversity and to provide habitat for migratory birds and other wildlife dependent on native grasslands. Grassland management and restoration tools include controlled burning, mowing, grazing, native species planting, and exotic plant removal. Many grasslands have evolved with a natural fire regime, and the management activities often emulate this fire regime.
  - (b) Riparian and wetland habitats. Military lands contain riparian and wetland habitats that may be critical for migratory birds. DoD will strive to prevent the destruction or degradation of wetlands and riparian vegetation, and also restore those habitats, when feasible, where they have been degraded.
  - (c) Coastal beach, salt marsh, and dune habitats. Military lands support some of the best remaining undisturbed coastal habitats. DoD will strive to protect, restore and prevent the destruction of coastal and island habitats that are important to breeding, migrating and wintering shorebirds, salt marsh land birds and colonial water birds.
  - (d) Longleaf pine ecosystem. Some of the best remaining examples of the longleaf pine ecosystem occur on military lands. Such habitats benefit from prescribed fire and other management measures which DoD regularly implements on thousands of acres in the Southeast. The DoD manages and will continue to manage this ecosystem to benefit and promote migratory bird conservation.
- (2) Fire and fuels management practices. Fire plays an important role in shaping plant and animal communities and is a valuable tool in restoring habitats altered by decades of fire suppression. Fire management may include fire suppression, but also involves fire

prevention and fuels treatment, including prescribed burning and monitoring, to protect communities and provide for healthy ecosystems. Fire management planning efforts will consider the effects of fire management strategies on the conservation of migratory bird populations.

- (3) Invasive Species and Aquatic Nuisance Species management practices. Invasive Species and Aquatic Nuisance Species are a threat to native habitats and wildlife species throughout the United States, including military lands. Efforts to control/contain these species must take into account both the impacts from invasive species and the effects of the control efforts on migratory bird populations. Invasive Species and Aquatic Nuisance Species that can threaten migratory birds and their habitats include, but are not limited to, exotic grasses, trees and weeds, terrestrial and aquatic insects and organisms, non-native birds, and stray and feral cats.
- (4) Communications towers, utilities and energy development. Increased communications demands, changes in technology and the development of alternative energy sources result in impacts on migratory birds. DoD will review wind turbine and powerline guidelines published by FWS and the Avian Power Line Interaction Committee, respectively, and consult with FWS as needed, in considering potential effects on migratory birds of proposals for locating communications towers, powerlines or wind turbines on military lands. Construction of new utility and energy systems and associated infrastructure should be designed to avoid and minimize impacts on migratory bird populations. Existing utilities may also be considered for retrofitting to reduce impacts.
- (5) Recreation and public use. The demand for outdoor recreational opportunities on public lands is increasing. Impacts on migratory birds may occur both through direct and indirect disturbances by visitors and through agency activities associated with providing recreational opportunities to visitors and installation personnel and morale facilities (e.g., facilities construction). DoD provides access to military lands for recreation and other public use, such as Watchable Wildlife and bird watching, where such access does not compromise security and safety concerns or impact migratory birds, other species, or their habitats.

Many conservation measures have been developed to benefit a variety of migratory bird species and their associated habitats. Some of these conservation measures may be directly applicable to DoD non-military readiness related activities; however, the appropriateness and practicality of implementing any specific conservation measure may have to be determined on a case-by-case basis. The FWS will work cooperatively with DoD in providing existing conservation measures and developing new ones as needed. Examples of some conservation measures may be found at <http://www.partnersinflight.org/pubs/BMPs.htm> for landbird

species.

g. Develop and implement new and/or existing inventory and monitoring programs, at appropriate scales, using national standardized protocols, to evaluate the effectiveness of conservation measures to minimize or mitigate take of migratory birds, with emphasis on those actions that have the potential to significantly impact species of concern.

h. Advise the public of the availability of this MOU through a notice published in the Federal Register.

i. In accordance with DoD INRMP guidance, promote timely and effective review of INRMPs with respect to migratory bird issues with the FWS and respective state agencies. During the INRMP review process, evaluate and coordinate with FWS on any potential revisions to migratory bird conservation measures taken to avoid or minimize take of migratory birds.

3. **The Fish and Wildlife Service Shall:**

a. Work with DoD by providing recommendations to minimize adverse effects upon migratory birds from DoD actions.

b. Through the Division of Migratory Bird Management, maintain a Web page on permits that provides links to all offices responsible for issuing permits and permit application forms for take of migratory birds.

c. Provide essential background information to the DoD when requested to ensure sound management decisions. This may include migratory bird distributions, status, key habitats, conservation guidelines, and risk factors within each BCR. This includes updating the FWS publication of *Birds of Conservation Concern* at regular intervals so it can be reliably referenced.

d. Work to identify special migratory bird habitats (i.e., migration corridors, stop-over habitats, ecological conditions important in nesting habitats) to aid in collaborative planning.

e. Through the Ecological Service Field Office, provide to DoD, upon request, technical assistance on migratory bird species and their habitats.

f. In accordance with FWS Guidelines for Coordination with DoD and Implementation of the 1997 Sikes Act (2005), work cooperatively with DoD in the development, review and revision of INRMPs.

g. Review and comment on NEPA documents and other planning documents forwarded by military installations.

E. **It is Mutually Agreed and Understood That:**

1. This MOU will not change or alter requirements associated with the MBTA, Endangered Species Act, NEPA, Sikes Act or other statutes or

legal authority.

2. The responsibilities established by this MOU may be incorporated into existing DoD actions; however, DoD may not be able to implement some responsibilities identified in the MOU until DoD has successfully included them in formal planning processes. This MOU is intended to be implemented when new actions are initiated as well as during the initiation of new, or revisions to, INRMPs, Pest Management Plans, and non-military readiness elements of Bird Aircraft Strike Hazard plans. It does not apply to ongoing DoD actions for which a NEPA decision document was finalized prior to, or within 180 days of the date this MOU is signed.
3. This MOU in no way restricts either Party from participating in similar activities with other public or private agencies, governments, organizations, or individuals.
4. An elevation process to resolve any dispute between the Parties regarding a particular practice or activity is in place and consists of first attempting to resolve the dispute with the DoD military installation and the responsible Ecological Services Field Office. If there is no resolution at this level, either Party may elevate the issue to the appropriate officials at the applicable Military Service's Chain of Command and FWS Regional Offices. In the event that there is no resolution by these offices, the dispute may be elevated by either Party to the headquarters office of each agency.
5. This MOU is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement, contribution of funds, or transfer of anything of value between the Parties will be handled in accordance with applicable laws, regulations, and procedures, including those for government procurement and printing. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the Parties and shall be independently authorized by appropriate statutory authority.
6. The Parties shall schedule periodic meetings to review progress and identify opportunities for advancing the principles of this MOU.
7. This MOU is intended to improve the internal management of the executive branch and does not create any right or benefit, substantive or procedural, separately enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.
8. Modifications to the scope of this MOU shall be made by mutual consent of the Parties, through issuance of a written modification, signed and dated by both Parties, prior to any changes.
9. Either Party may terminate this instrument, in whole or in part, at any time before the date of expiration by providing the other Party with a written statement to that effect.



The principal contacts for this instrument are as follows:

Brian Millsap, Chief  
Division of Migratory Bird Management  
US Fish and Wildlife Service  
4401 N. Fairfax Drive  
MS4107  
Arlington, VA 22203

L. Peter Boice, Conservation Team  
Leader  
Office of the Secretary of Defense  
1225 S. Clark St.  
Suite 1500  
Arlington, VA 22202-4336

This MOU is executed as of the last date signed below and expires no later than five (5) years thereafter, at which time it is subject to review and renewal, or expiration.

#### **F. Definitions**

Action – a program, activity, project, official policy, rule, regulation or formal plan directly carried out by DoD, but not a military readiness activity.

Breeding Biology Research and Monitoring Database (BBIRD) - national, cooperative program that uses standardized field methodologies for studies of nesting success and habitat requirements of breeding birds (<http://pica.wru.umt.edu/BBIRD/>).

Breeding Bird Survey (BBS) – a standardized international survey that provides information on population trends of breeding birds, through volunteer observations located along randomly selected roadside routes in the United States, Canada and Mexico (<http://www.mbr-pwrc.usgs.gov/bbs/bbs.html>).

Bird Conservation Region – a geographic unit used to facilitate bird conservation actions under the North American Bird Conservation Initiative (<http://www.manomet.org/USSCP/bcrmaps.html>).

Birds of Conservation Concern – published by the FWS Division of Migratory Bird Management, refers to the list of migratory and non-migratory birds of the United States and its territories that are of conservation concern. The current version of the list Birds of Conservation Concern 2002 is available at (<http://migratorybirds.fws.gov/reports/bcc2002.pdf>).

Comprehensive Planning Efforts for Migratory Birds – includes Partners in Flight, North American Waterfowl Management Plan, U.S. Shorebird Conservation Plan, Western Hemisphere Shorebird Reserve Network, North American Waterbird Conservation Plan, and other planning efforts integrated through the North American Bird Conservation Initiative.

Conservation Measure – an action undertaken to improve the conservation status of one or more species of migratory birds. Examples include surveys and inventories, monitoring, status assessments, land acquisition or protection, habitat restoration, population manipulation, research, and outreach.

Conservation Planning – strategic and tactical planning of agency activities for the long-

term conservation of migratory birds and their habitats.

Council for the Conservation of Migratory Birds – an interagency council established by the Secretary of the Interior to oversee the implementation of Executive Order 13186.

Ecological Condition – the composition, structure, and processes of ecosystems over time and space. This includes the diversity of plant and animal communities, the productive capacity of ecological systems and species diversity, ecosystem diversity, disturbance processes, soil productivity, water quality and quantity, and air quality. Often referred to in terms of ecosystem health, which is the degree to which ecological factors and their interactions are reasonably complete and functioning for continued resilience, productivity, and renewal of the ecosystem.

Effect (adverse or beneficial) – “effects” and “impacts,” as used in this MOU are synonymous. Effects may be direct, indirect, or cumulative, and refer to effects from management actions or categories of management actions on migratory bird populations, habitats, ecological conditions and/or significant bird conservation sites.

Important Bird Areas (IBAs) – a network of sites that provide essential habitat for the long-term conservation of birds. In the United States, the IBA network is administered by the American Bird Conservancy and the National Audubon Society. (<http://www.audubon.org/nird/iba/>)

Integrated Natural Resources Management Plan (INRMP) – an integrated plan based, to the maximum extent practicable, on ecosystem management that shows the interrelationships of individual components of natural resources management (e.g., fish and wildlife, forestry, land management, outdoor recreation) to military mission requirements and other land use activities affecting an installation’s natural resources. INRMPs are required for all DoD installations with significant natural resources, pursuant to the Sikes Act Improvement Act.

International Shorebird Survey – a monitoring program started in 1974 to survey shorebirds (sandpipers, plovers, etc.) across the Western Hemisphere. (<http://www.manomet.org/programs/shorebirds>).

Management Action – an activity by a government agency that could cause a positive or negative impact on migratory bird populations or habitats. Conservation measures to mitigate potential negative effects of actions may be required.

Migratory Bird – any bird listed in 50 CFR §10.13, Code of Federal Regulations.

Military Readiness Activity – all training and operations of the Armed Forces that relate to combat, including but not limited to the adequate and realistic testing of military equipment, vehicles, weapons and sensors for proper operation and suitability for combat use.

Monitoring Avian Productivity and Survivorship (MAPS) – a program that uses the banding of birds during the breeding season to track the changes and patterns in the number of young produced and the survivorship of adults and young

(<http://www.birdpop.org/maps.htm>).

National Environmental Policy Act (NEPA) – a Federal statute that requires Federal agencies to prepare a detailed analysis of the environmental impacts of a proposed action and alternatives, and to include public involvement in the decision making process for major Federal actions significantly affecting the quality of the human environment 42 U.S.C. §4321, et. seq.

North American Bird Conservation Initiative (NABCI) – an initiative to align the avian conservation community to implement bird conservation through regionally-based, biologically driven, landscape-oriented partnerships across the North American continent. NABCI includes Federal agencies of Canada, Mexico and the United States, as well as most landbird, shorebird, waterbird, and waterfowl conservation initiatives (<http://www.nabci-us.org>).

North American Waterbird Conservation Plan – a partnership of Federal and State government agencies, non-governmental organizations, and private interests focusing on the conservation of waterbirds, primarily including marshbirds and inland, coastal, and pelagic colonial waterbirds ([www.nacwcp.org/pubs/](http://www.nacwcp.org/pubs/)). The vision of the partnership is that the distribution, diversity and abundance of populations and breeding, migratory, and nonbreeding waterbirds are sustained throughout the lands and waters of North America, Central America, and the Caribbean.

North American Waterfowl Management Plan – a partnership of Federal and State agencies, non-governmental organizations, and private interests focusing on the restoration of waterfowl populations through habitat restoration, protection, and enhancement (<http://birdhabitat.fws.gov/NAWMP/nawmphp.htm>).

Partners in Flight (PIF) – a cooperative partnership program of more than 300 partners including Federal and State government agencies, non-governmental organizations, conservation groups, foundations, universities and industry focusing on the conservation of landbirds. DoD was an original signatory to the PIF Federal Agencies' MOA. (<http://www.partnersinflight.org> and <http://www.dodpif.org>).

Species of Concern – refers to those species listed in the periodic report *Birds of Conservation Concern*; priority migratory bird species documented in the comprehensive bird conservation plans (North American Waterbird Conservation Plan, U.S. Shorebird Conservation Plan, Partners in Flight Bird Conservation Plans); species or populations of waterfowl identified as high, or moderately high, continental priority in the North American Waterfowl Management Plan; listed threatened and endangered bird species in 50 CFR. 17.11; and MBTA listed game birds below desired population sizes.

Take – as defined in 50 C.F.R. 10.12, to include pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.

U.S. Shorebird Conservation Plan – an effort undertaken by a partnership of Federal and State government agencies, as well as non-governmental and private organizations to ensure that stable and self-sustaining populations of all shorebird species are restored

and protected (<http://www.fws.gov/shorebird>).

The Parties hereto have executed this agreement as of the date shown below.

Director  
US Fish and Wildlife Service

Assistant Deputy Under Secretary of  
Defense (Environment, Safety and  
Occupational Health)  
US Department of Defense

*A Dale Hall*      *7/7/06*  
Signature                      Date

*Oliver Albert Buehler*      *7/31/06*  
Signature                      Date

—

**APPENDIX D**  
**PUBLIC COMMENTS AND RESPONSES**





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES  
MONTANA FIELD OFFICE  
585 SHEPARD WAY  
HELENA, MONTANA 59601  
PHONE (406) 449-5225, FAX (406) 449-5339

File: M10 (I)

November 6, 2007

Tony Lucas  
341 CES/CEV  
39 78<sup>th</sup> Street North  
Building 470  
Malmstrom AFB, Montana 59402

Dear Mr. Lucas:

This is in response to your request received on October 22, 2007 for U.S. Fish and Wildlife Service (Service) review and comments regarding the draft Environmental Assessment and draft Finding of No Significant Impact for the Wide Area Coverage, Construct Land Mobile Network Communications Infrastructure for Malmstrom Air Force Base, Montana. We appreciate the opportunity to review this project proposal and provide comments. These comments have been prepared under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and the Endangered Species Act (16 U.S.C. 1531 et. seq.).

When building a tall tower, there is potential for birds to fly into it causing death or injury. Regarding construction of towers in general, the Service has concerns with the tower height and site location. We recommend that towers be less than 199 feet above ground level, where guy wires would not be required and towers should not be sited in wetlands. The proposed project includes new construction or modification of structures at 11 communications sites, all of which are disturbed and are occupied by existing communication structures. The draft environmental assessment describes measures that will be taken to minimize impacts to migratory birds. Adoption of the following recommendations may also reduce impacts of communication towers on migratory birds.

- Minimize the area necessary for construction and the footprint of the tower to reduce direct habitat impacts.
- Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.
- Service personnel and/or researchers should be allowed access to the site to conduct dead-bird searches and research as necessary to assess and verify bird migrations and habitat use.

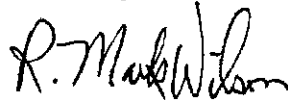
- Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

Power lines could pose electrocution and line strike hazards to listed species and migratory birds. To conserve species of birds protected by federal law, the Service highly recommends that any newly constructed power lines and facilities follow raptor-safe construction guidelines. If wetlands may be impacted by this project, including utilities and roads, Corps of Engineers Section 404 permits may be required. The Service suggests the proposed project be designed to avoid and minimize impacts to any wetland areas, stream channels and surrounding vegetation to the greatest extent possible. The applicant should analyze direct, indirect and cumulative impacts along with future activities required to maintain these improvements.

The Service has reviewed the proposed project and considering the design, scope and location of the action, we do not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species or critical habitat. There may be state species of concern in the vicinity of the project and we recommend contacting the Montana Department of Fish, Wildlife and Parks at 1420 East Sixth Ave., P.O. Box 200701, Helena, MT 59620-0701, 406-444-2535 or the Montana Natural Heritage Program, 1515 East 6<sup>th</sup> Avenue, Box 201800, Helena, MT 59620-1800, 406-444-5354.

The Service appreciates your efforts to incorporate fish and wildlife resource concerns, including threatened and endangered species, into your project planning. If you have questions or comments related to this issue, please contact Katrina Dixon at 406-449-5225 extension 222.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Mark Wilson". The signature is fluid and cursive, with the first name "R." and last name "Wilson" clearly distinguishable.

R. Mark Wilson  
Field Supervisor



Comments on Wide Area Coverage EA

From: Ron B Wiseman [rwiseman@fs.fed.us]  
Sent: Friday, November 02, 2007 1:25 PM  
To: Lucas, Tony P CIV 341 CES/CEVC  
Cc: Robin Strathy; Jennifer J Woods  
Subject: Comments on Wide Area Coverage EA

In order for me to sign a Decision, the following will need to be addressed:

Page 2-1: 4pp "approximately 1.5 miles of power line to be replaced at Highwood Baldy... This does not need to be addressed as it is covered by NEPA completed by USDA-FS.

Page 2-25: first Bullet. Remove this bullet. Existing shelter, etc. is owned by another permit holder. If they have agreed to have the existing structures removed so that they can occupy the new building, then there is no need to have a new building and all can be located in the existing structure!

third Bullet. Does 100 or 150 additional feet meet the requirements of the existing site plan?

fourth Bullet. Does not need to be addressed in this document. See comment above.

tenth bullet. No need for an 8 foot fence. Would be a maintenance problem.

Page 3-1: last pp. Add Highwood Bald to the sites that have other communication systems users.

Page 3-2: 3rd pp. Add Highwood baldy to the sites that have other communication system users.

Page 3-7: 3.5 Biological Resources. Need to add/address Forest Service Sensitive Plant, Animal and Fish species for the Lewis and Clark National Forest. In addition, need to address Management Indicator Species as listed in the LCNF Management Plan.

Page 3-10: Threatened and Endangered Specie. Use USDI-FWS information and USDA-FS Biologists for information on occurrence of species.

Page 3-10: Will need to add sections for Sensitive and MIS. In addition, there should be reference to the Biological Assessment and Biological Evaluation for this project.

Page 4-9: 4.5 Biological Resources. Will need to include effects to Sensitive Species and MIS as outlined above.

Page 4-13 Mitigation Measures. Need to comply with direction of a Landscape Architect for visual scenery.

\*\*\*\*\*

Ron B. Wiseman  
District Ranger  
Judith Ranger District L&C NF  
PO Box 484  
Stanford MT 59479  
406-566-2292 FAX 2408  
rwiseman@fs.fed.us

\*\*\*\*\*

Comments to Draft EA  
From: Jennifer J Woods [jjwoods@fs.fed.us]  
Sent: Thursday, November 08, 2007 8:14 AM  
To: Lucas, Tony P CIV 341 CES/CEVC  
Subject: Comments to Draft EA

Comments on the Draft EA for the Wide Area Coverage Construction Land Mobile Network Communication Infrastructure.

~~~~~  
Jennifer Johnsten Woods, NEPA Coordinator Lewis and Clark National Forest  
(406) 791-7765 jjwoods@fs.fed.us  
~~~~~

----- Forwarded by Jennifer J Woods/R1/USDAFS on 11/08/2007 08:12 AM -----

Linda M  
Casper/R1/USDAFS

11/02/2007 02:57  
PM

To  
Robin Strathy/R1/USDAFS@FSNOTES,  
Jennifer J Woods/R1/USDAFS@FSNOTES  
CC  
Ron B Wiseman/R1/USDAFS@FSNOTES,  
lcasper@fs.fed.us  
Subject  
Linda's Comments to Draft EA

My comments to the Draft EA for comm sites (in particular to Highwood Baldy and South Peak) - even tho S. Peak isn't on Forest.

1. Page 2-25 The maximum height of a tower cannot exceed 7710' (see Highwood Baldy Comm Site Plan, page 12)
2. Page 3-2 As Ron W. stated, Highwood Baldy should be included (second paragraph of 3.2.2) as to having other users in existing building and it has the structures, but no security fence, the site is not accessible by the general public.
3. Page 4-5 (4.3.3.1) - First sentence - there isn't any plan to remove the existing AST's at Highwood Baldy and replace with a 2000 gallon propane tank.
4. Page 4-5 (4.3.4.1) There isn't any plan to remove the existing structure at Highwood Baldy.
5. Page 4-6 (4.3.5.1) Again there isn't any plan to remove the existing structure at Highwood Baldy.
6. Page 4-7 (4.4.1) - Top of Page - The Highwood Baldy powerline is a totally different action - it shouldn't be addressed in this EA.
7. Page 4-7 Line 33 - The road to Highwood Baldy should not be addressed in this EA - it goes along with the powerline to same site.

Comments to Draft EA

8. Page 4-15 Line 36 - 38. There isn't any reason to remove the two 1,000 gallon ASTs associated with the existing Highwood Baldy comm sit. They should stay "as is".
9. Page 4-16 Line 22 & 23. Do not address the power line which is going to be replaced at Highwood Baldy. It is not a part of this proposed EA.

That is what I have found - I may take a re-visit to the document next week in case I missed anything. Also, I made a call to Bresnan's contact and they did not receive this EA and I think they should review it, too being they are a player in this for Highwood Baldy Comm Site. Bob Haddendum will contact MAFB and request a copy of the document.

Linda Casper  
Forestry Tech  
Judith Ranger District  
email: [lcasper@fs.fed.us](mailto:lcasper@fs.fed.us)  
Phone: 406-566-2292

"You have to know how to accept rejection and reject acceptance."  
--Ray Bradbury

Draft EAFONSI

From: Haddenham, Robert [REDACTED]  
Sent: Monday, November 12, 2007 9:23 AM  
To: Lucas, Tony P CIV 341 CES/CEVC  
Subject: Draft EA/FONSI

Mr. Tony Lucas,

I would like to comment on the Draft, pertaining to the Highwoods Baldy Site. The Communications Building there and the fuel tanks are remaining at that location. As the Manager of the Microwave Department for Bresnan Communications, we have relinquished the power line permit to Fergus Electric to accommodate the Department of Defense in there endeavor. This Site is an important site to relay local television channels to communities which would not have the opportunity to receive local programming. We would like to continue the dialog in the upcoming project. My information is below.

Thank you,

Bob H.

Robert C. Haddenham  
Microwave Services Manager

[REDACTED]

Great Falls, Mt. 59405

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

From: Bertellotti, Gary [gbertellotti@mt.gov]  
Sent: Monday, November 19, 2007 7:53 PM  
To: Lucas, Tony P CIV 341 CES/CEVC  
Subject: Draft EA and Draft Finding of No Significant Impact (FONSI) for  
Wide area coverage, Construct Land Mobil Network Communication  
Infrastructure

Mr. Lucas;

Montana Fish, Wildlife & Parks has only a few general comments on this document and action:

- \* The EA didn't provide details regarding road construction effects on streams for South Peak option or Highwood baldy road maintenance.
- \* Crossings would require a 124 permit.
- \* BMP's should be utilized.

Thanks for the opportunity to comment.

Gary Bertellotti  
MEWP  
R-4 Supervisor  
4600 Giant Springs Road  
Great Falls, MT

**Malmstrom AFB**  
**Wide Area Coverage Draft EA Comments and Responses**

No.	Comment	Response
<b>Ron B. Wiseman, District Ranger, Judith Ranger District L&amp;C NF (2 November 2007)</b>		
1	Page 2-1: 4pp "approximately 1.5 miles of power line to be replaced at Highwood Baldy... This does not need to be addressed as it is covered by NEPA completed by USDA-FS.	Text regarding the 1.5 miles of power line to be replaced at Highwood baldy has been removed throughout the EA (pages 2-1, 2-25, 4-7, and 4-16).
2	<p>Page 2-25: first Bullet. Remove this bullet. Existing shelter, etc. is owned by another permit holder. If they have agreed to have the existing structures removed so that they can occupy the new building, then there is no need to have a new building and all can be located in the existing structure!</p> <p>Third Bullet. Does 100 or 150 additional feet meet the requirements of the existing site plan?</p> <p>Fourth Bullet. Does not need to be addressed in this document. See comment above.</p> <p>Tenth bullet. No need for an 8 foot fence. Would be a maintenance problem.</p>	<p>First bullet revised to address removal of existing Air Force equipment.</p> <p>Text has been revised to indicate the height of the tower would not exceed 85 feet in height in order to be in compliance with the maximum tower height limit of 7,710 feet at the site. Text has been deleted.</p> <p>The Air Force requires security fencing around their equipment shelter. No revision made.</p>
3	Page 3-1: last pp. Add Highwood Bald to the sites that have other communication systems users.	Text has been revised to add Highwood Baldy site.
4	Page 3-2: 3rd pp. Add Highwood baldy to the sites that have other communication system users.	Text has been revised to add Highwood Baldy site.
5	Page 3-7: 3.5 Biological Resources. Need to add/address Forest Service Sensitive Plant, Animal and Fish species for the Lewis and Clark National Forest. In addition, need to address Management Indicator Species as listed in the LCNF Management Plan.	Text has been added to address Forest Service sensitive plant, animal, and fish species as well as Management Indicator Species (MIS) for the Lewis and Clark National Forest.

6	Page 3-10: Threatened and Endangered Specie. Use USDI-FWS information and USDA-FS Biologists for information on occurrence of species.	Text has been revised/added to clarify information sources used during the preparation of the EA. Sources include USFWS and USDA-FS.
7	Page 3-10: Will need to add sections for Sensitive and MIS. In addition, there should be reference to the Biological Assessment and Biological Evaluation for this project.	Text has been added regarding MIS and sensitive species. Reference to the BA and BE has been added.
8	Page 4-9: 4.5 Biological Resources. Will need to include effects to Sensitive Species and MIS as outlined above.	Text has been added regarding MIS and sensitive species.
9	Page 4-13 Mitigation Measures. Need to comply with direction of a Landscape Architect for visual scenery.	Text has been added to Section 4.2.1 to clarify that a landscape architect would review new construction plans to ensure potential effects to the visual quality of the areas is minimized.
<b>Linda Casper, Forestry Tech, Judith Ranger District (8 November 2007)</b>		
1	1. Page 2-25 The maximum height of a tower cannot exceed 7710' (see Highwood Baldy Comm. Site Plan, page 12)	Text has been revised to indicate the height of the tower would not exceed 85 feet in height in order to be in compliance with the maximum tower height limit of 7,710 feet at the site.
2	2. Page 3-2 As Ron W. stated, Highwood Baldy should be included (second paragraph of 3.2.2) as to having other users in existing building and it has the structures, but no security fence, the site is not accessible by the general public.	Text has been revised to add Highwood Baldy site.  The Air Force requires security fencing around their equipment shelter.
3	3. Page 4-5 (4.3.3.1) - First sentence - there isn't any plan to remove the existing AST's at Highwood Baldy and replace with a 2000 gallon propane tank.	Text has been revised to indicate that the two 1,000 gallon ASTs at the Highwood baldy site would remain in place.
4	4. Page 4-5 (4.3.4.1) - There isn't any plan to remove the existing structure at Highwood Baldy.	Text has been revised to exclude Highwood Baldy from demolition activities.
5	5. Page 4-6 (4.3.5.1) - Again there isn't any plan to remove the existing structure at Highwood Baldy.	Text has been revised to exclude Highwood Baldy from demolition activities.
6	6. Page 4-7 (4.4.1) - Top of Page - The Highwood Baldy power line is a totally different action - it shouldn't be addressed in this EA.	Text regarding the 1.5 miles of power line to be replaced at Highwood baldy has been removed throughout the EA (pages 2-1, 2-25, 4-7, and 4-16).

7	7. Page 4-7 Line 33 - The road to Highwood Baldy should not be addressed in this EA - it goes along with the power line to same site.	Text has been deleted.
8	8. Page 4-15 Line 36 - 38. There isn't any reason to remove the two 1,000 gallon ASTs associated with the existing Highwood Baldy comm. site. They should stay "as is".	Text has been revised to indicate that the two 1,000 gallon ASTs at the Highwood baldy site would remain in place.
9	9. Page 4-16 Line 22 & 23. Do not address the power line which is going to be replaced at Highwood Baldy. It is not a part of this proposed EA.	Text has been deleted.
--	That is what I have found - I may take a re-visit to the document next week in case I missed anything. Also, I made a call to Bresnan's contact and they did not receive this EA and I think they should review it, too being they are a player in this for Highwood Baldy Comm. Site. Bob Haddendum will contact MAFB and request a copy of the document.	Comment noted.
<b>Robert C. Haddenham, Microwave Services Manager (12 November 2007)</b>		
1	I would like to comment on the Draft, pertaining to the Highwood Baldy Site. The Communications Building there and the fuel tanks are remaining at that location. As the Manager of the Microwave Department for Bresnan Communications, we have relinquished the power line permit to Fergus Electric to accommodate the Department of Defense in there endeavor. This Site is an important site to relay local television channels to communities which would not have the opportunity to receive local programming. We would like to continue the dialog in the upcoming project. My information is below.	Comment noted.



<b>Gary Bertellotti, MFWP R-4 Supervisor (19 November 2007)</b>		
1	<p>Montana Fish, Wildlife &amp; Parks has only a few general comments on this document and action:</p> <ul style="list-style-type: none"> <li>• The EA didn't provide details regarding road construction effects on streams for South Peak option or Highwood baldy road maintenance.</li> <li>• Crossings would require a 124 permit.</li> <li>• BMP's should be utilized.</li> </ul>	<p>No stream crossings are anticipated at the South Peak Alternative site. Text in Section 4.4.2 discusses the requirement for a Storm Water MPDES permit before grading activities occur and that a SWPPP would be prepared that outlines site management practices (i.e., BMPs) to protect the quality of surface water, ground water, and the natural environment.</p>