



*Draft*

## ENVIRONMENTAL ASSESSMENT



Addressing the Privatization of  
Military Family Housing  
at  
Mountain Home Air Force Base,  
Idaho



September 2011

## ACRONYMS AND ABBREVIATIONS

366 FW	366th Fighter Wing	DOD	Department of Defense
ABHZ	Air Base Hazard Zone	EA	Environmental Assessment
ACC	Air Combat Command	EIAP	Environmental Impact Analysis Process
ACHP	Advisory Council on Historic Preservation	EIS	Environmental Impact Statement
ACM	asbestos-containing material	EISA	Energy Independence and Security Act
ACZ	Air Base Commercial Zone	EMS	Environmental Management Systems
AFB	Air Force Base	EO	Executive Order
AFCEE	Air Force Center for Engineering and the Environment	ERP	Environmental Restoration Program
AFH	Air Force Handbook	ESA	Endangered Species Act
AFI	Air Force Instruction	ESCP	erosion-and-sediment-control plan
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health	FAA	Federal Aviation Administration
AFPAM	Air Force Pamphlet	FFA	Federal Facilities Agreement
AFPD	Air Force Policy Directive	FPPA	Farmland Protection Policy Act
AFS	Air Force Station	FONSI	Finding of No Significant Impact
AOC	Area of Concern	FY	fiscal year
APE	Area of Potential Effect	GHG	Greenhouse gas
AQCR	Air Quality Control Region	HABS	Historic American Buildings Survey
AST	aboveground storage tank	HAP	hazardous air pollutant
BAH	Basic Allowance for Housing	HAZMART	Hazardous Materials Pharmacy
BASH	Bird/Wildlife Aircraft Strike Hazard	HCP	Housing Community Profile
BMP	best management practice	HMMP	hazardous material management program
BRAC	Base Realignment and Closure	HRMA	Housing Requirements and Marketing Analysis
Btu	British Thermal Unit	HQ	headquarters
CAA	Clean Air Act	HUD	U.S. Department of Housing and Urban Development
CAM	Condition Assessment Matrix	I-84	Interstate 84
CCF	Central Collection Facility	IAAQS	Idaho Ambient Air Quality Standards
CEQ	Council on Environmental Quality	IDAC	Idaho Administrative Code
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	IDEQ	Idaho Department of Environmental Quality
CFR	Code of Federal Regulations	IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
CO	carbon monoxide	INRMP	Integrated Natural Resources Management Plan
CO <sub>2</sub>	carbon dioxide	IRT	Innovative Readiness Training
CWA	Clean Water Act		<i>continued on inside back cover →</i>
dBA	A-weighted decibel		
DDT	dichlorodiphenyltrichloroethane		
DERP	Defense Environmental Restoration Program		
DNL	day-night average A-weighted sound level		

← continued from inside front cover

JP-8	jet propellant-8	PM <sub>2.5</sub>	particulate matter equal to or less than 2.5 microns in diameter
LBP	lead-based paint	PM <sub>10</sub>	particulate matter equal to or less than 10 microns in diameter
LQG	large-quantity generator	PO	Project Owner
LID	Low-Impact Development	POD	point of demarcation
LTM	Long-term Monitoring	POL	petroleum, oils, and lubricants
MFH	Military Family Housing	PPE	personal protective equipment
µg/m <sup>3</sup>	micrograms per cubic meter	ppm	parts per million
mgd	million gallons per day	P.L.	Public Law
mg/m <sup>3</sup>	milligrams per cubic meter	PSD	Prevention of Significant Deterioration
MHPI	Military Housing Privatization Initiative	PVC	polyvinyl chloride
MILCON	military construction	QD	quantity-distance
MSDS	Material Safety Data Sheets	RCRA	Resource Conservation and Recovery Act
NAGPRA	North American Graves Protection and Repatriation Act	ROI	Region of Influence
NCA	National Conservation Area	RSAF	Republic of Singapore Air Force
NEPA	National Environmental Policy Act	SAC	Strategic Air Command
NFRAP	No Further Response Action Planned	SAP	satellite accumulation point
NHPA	National Historic Preservation Act	SDWA	Safe Drinking Water Act
NLR	Noise Level Reduction	SHPO	State Historic Preservation Office
NOI	notice of intent	SIP	State Implementation Plan
NAAQS	National Ambient Air Quality Standards	SO <sub>2</sub>	sulfur dioxide
NPDES	National Pollutant Discharge Elimination System	SWMP	Solid Waste Management Plan
NPL	National Priorities List	SWPPP	Storm Water Pollution Prevention Plan
NRCS	Natural Resources Conservation Service	TCLP	Toxicity Characteristic Leaching Procedure
NRHP	National Register of Historic Places	TMDL	Total Maximum Daily Load
ntu	nephelometric turbidity units	TNW	Traditional Navigable Water
NO <sub>2</sub>	nitrogen dioxide	tpy	tons per year
NO <sub>x</sub>	nitrogen oxides	UFC	Unified Facilities Criteria
O <sub>3</sub>	ozone	USACE	U.S. Army Corp of Engineers
OSHA	Occupational Safety and Health Administration	USAF	U.S. Air Force
OU	operable unit	USEPA	U.S. Environmental Protection Agency
OWS	Operation Walking Shield	USFWS	U.S. Fish and Wildlife Service
Pb	lead	USGS	U.S. Geological Survey
PC	Program Comment	U.S.C.	United States Code
PCB	polychlorinated biphenyl	UST	underground storage tank
pCi/L	picoCuries per liter	UU/UE	unlimited use/unrestricted exposure
		VOC	volatile organic compound



## COVER SHEET

### DRAFT ENVIRONMENTAL ASSESSMENT ADDRESSING THE PRIVATIZATION OF MILITARY FAMILY HOUSING AT MOUNTAIN HOME AIR FORCE BASE, IDAHO

**Responsible Agencies:** U.S. Air Force (USAF), Headquarters Air Combat Command (ACC), and Mountain Home Air Force Base (AFB), Idaho.

**Affected Location:** Mountain Home AFB.

**Proposed Action:** Privatization of Military Family Housing (MFH) at Mountain Home AFB.

**Report Designation:** Draft Environmental Assessment (EA).

**Abstract:** Consistent with the USAF Housing Privatization Program, the ACC proposes to convey MFH units, grant leases of land, and transfer responsibility for providing housing at Mountain Home AFB to a private developer (the Project Owner [PO]). The transition period would begin upon completion of contractual matters initiating the Proposed Action and would last for up to 6 years. At all times during the transition period, sufficient numbers of units at Mountain Home AFB for all eligible pay grades would be maintained.

Specific transactions that would occur between Mountain Home AFB and the PO as part of the Proposed Action are as follows:

- Mountain Home AFB would convey the existing 1,155 MFH units to the PO.
- Mountain Home AFB would grant 50-year leases for four parcels of land:
  - Parcel A (40.76 acres) consisting of the Woodland Groves neighborhood
  - Parcel B (25.25 acres) consisting of the Eagle View neighborhood
  - Parcel C (435.13 acres) consisting of Falcon Estates (the former Gunfighter Manor), Trinity Heights, Coyote Terrace, Elk Heights (formerly Desert Vista), Gunfighter Circle, Gunfighter Manor, Desert Skies Estates, and Sagebrush View (including the former Dunes neighborhood)
  - Parcel D (1.04 acres) consisting of the Housing Office.
- The PO would continue use of 793 units in their present condition and renovate 3 units in the Gunfighter Circle neighborhood. During the first 6 years, it is assumed that 359 inadequate MFH units in Parcels B and C would be demolished and subsequently the PO would construct 263 new MFH units. However, the USAF Housing Privatization Program has identified several desired features for new construction and renovation of MFH, its privatized communities, facilities maintenance, and property management for Mountain Home AFB to include construction of a community center/clubhouse. For the purposes of this EA, it is assumed that construction of a community center/clubhouse would occur as part of the Proposed Action.
- Tot lots, playgrounds, a half-basketball court, bus stops, neighborhood sign marquees, common mailbox clusters, and the housing maintenance facility would be conveyed to the PO.

There are 1,155 existing MFH units on Mountain Home AFB; however, only 793 are adequate. Of the remaining MFH units, 359 are inadequate and are identified for demolition, and 3 would be renovated. The PO would continue use of the 793 adequate units in their current condition and construct 263 new

units. The end-state number would be 1,059 MFH units. Mountain Home AFB would also grant 50-year leases to the PO for land associated with the MFH units totaling approximately 502 acres.

The EA has been prepared to evaluate the Proposed Action and alternatives, including the No Action Alternative, and to aid in determining whether a Finding of No Significant Impact (FONSI) can be prepared or whether an Environmental Impact Statement (EIS) is needed. Resources that are considered in the impact analysis are noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomics and environmental justice, hazardous materials and wastes, infrastructure, and safety.

The USAF has announced that Mountain Home AFB is one of six bases being considered for an F-35 Joint Striker Fighter aircraft operational mission. At this time, no information exists as to the impact this proposal would have on housing at Mountain Home AFB. Basing for the aircraft, scheduled for initial deployment in 2013, is being analyzed in a separate EIS. Should Mountain Home AFB be selected, additional National Environmental Policy Act (NEPA) analysis would be performed to analyze any changes to the housing privatization parcels.

Written comments and inquiries regarding this document should be directed to Ms. Sheri Robertson, 366 CES/CEAN, 1100 Liberator Street, B1297, Mountain Home Air Force Base, Idaho 83648. Telephone calls can be directed to 208-828-4247, and email comments should be directed to [sheri.robertson@mountainhome.af.mil](mailto:sheri.robertson@mountainhome.af.mil). Anyone wishing to view the supporting documents to this action should contact the 366 CES/CEAN office within the next 30 days at 208-828-4247, or view the documents on the Web site at <http://www.mountainhome.af.mil/library/>.

#### **PRIVACY ADVISORY**

Public comments on this Draft EA are requested pursuant to the National Environmental Policy Act, 42 United States Code 4321, *et seq.* All written comments received during the comment period will be made available to the public and considered during Final EA preparation. The provision of private address information with your comment is voluntary. However, the information is used to compile the mailing list for Final EA distribution and failure to provide such information will result in your name not being included on the list. Private address information will not be released for any other purpose unless required by law.

*Draft*

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**ADDRESSING THE PRIVATIZATION**  
**OF MILITARY FAMILY HOUSING**  
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**SEPTEMBER 2011**



## **Executive Summary**

### **Introduction**

The U.S. Air Force (USAF) operates and maintains approximately 104,000 military family housing (MFH) units at its installations throughout the United States. More than 38 percent of all such units do not meet current modern standards and require either major improvement or replacement. At most installations, the demand for adequate on-installation housing exceeds supply. The lack of adequate MFH forces many military members and their families to live in on-installation housing that is in need of repair, renovation, or replacement; or requires them to live off-installation where the cost and quality of housing can vary considerably. Often, the cost to military members and their families to live off-installation is 15 to 20 percent greater than the cost to live on-installation. The USAF estimates that as much as \$7.6 billion would be needed to bring its on-installation housing up to current standards.

In recognition of these problems, Congress enacted Section 2801 of the National Defense Authorization Act for Fiscal Year (FY) 1996 (Public Law [P.L.] 104-106, codified at Title 10 of the United States Code [U.S.C.] Sections 2871–2885). Also known as the Military Housing Privatization Initiative (MHPI), this provision of law creates alternative authorities for improvement and construction of MFH. The MHPI was designed and developed to attract private sector financing, expertise, and innovation to provide necessary housing faster and more efficiently than traditional military construction (MILCON) processes would allow.

The USAF Housing Privatization Program incorporates the MHPI legislation enacted by Congress in 1996. Consistent with the USAF Housing Privatization Program, Headquarters Air Combat Command (ACC) proposes to convey MFH units, grant leases of land, and transfer responsibility for providing housing and ancillary supporting facilities at Mountain Home Air Force Base (AFB), Idaho, to a private developer (the Project Owner [PO]). The Proposed Action is part of the Northern Group MHPI, which includes Mountain Home AFB, Idaho; Cavalier Air Force Station (AFS), Grand Forks AFB, and Minot AFB, North Dakota; Ellsworth AFB, South Dakota; and Cannon AFB, New Mexico.

### **Purpose and Need for the Proposed Action**

The purpose of the Proposed Action is to vest responsibility for MFH at Mountain Home AFB in a private developer. The need for the Proposed Action is to provide affordable, quality housing and ancillary facilities to military members and their families through replacement and renovation of existing family housing units so that they meet current USAF standards.

The goal of the Northern MHPI is to provide uniformed services members and their families access to safe, secure, quality, affordable, well-maintained housing in a military community where they choose to live. MFH privatization would help accelerate housing improvements, alleviate housing shortages, and reduce waiting times for adequate housing, ultimately improving the morale of USAF personnel and their families. The majority of MFH units on Mountain Home AFB were constructed in the past 14 years and are in excellent condition. However, a portion of the MFH inventory at Mountain Home AFB exhibits a principal concern facing MFH throughout the USAF: many MFH units are in poor condition. At Mountain Home AFB, nearly one third of the MFH units show signs of age and continuous use to such an extent that demolition is warranted. Many units are not energy-efficient and many also require extensive maintenance. Housing interiors are inadequate by modern criteria in that bedroom closets, kitchen storage, and kitchen counter space are insufficient; and plumbing, electrical systems, and heating, ventilation, and air conditioning units are inefficient.

## Description of the Proposed Action and Alternatives

**Proposed Action.** Consistent with the USAF Housing Privatization Program, Headquarters ACC proposes to convey 1,155 MFH units, lease four parcels of land totaling approximately 502 acres (Parcel A at 40.76 acres, Parcel B at 25.25 acres, Parcel C at 435.13 acres, and Parcel D at 1.04 acres), and transfer responsibility for providing housing and ancillary supporting facilities at Mountain Home AFB to the PO. Three subparcels within Parcel C are excluded from conveyance. These are the fire house (0.778 acres), the water tank (0.65 acres), and the communications building (northern part of Building 4401, 0.114 acres).

MFH units at Mountain Home AFB are currently organized within 11 neighborhoods. These neighborhoods (and the number of MFH units in each) are Woodland Groves (118 units), Eagle View (64 units), Falcon Estates (the former Gunfighter Manor) (108 units), Trinity Heights (179 units), Coyote Terrace (126 units), Elk Heights (formerly Desert Vista) (199 units), Gunfighter Circle (9 units), Gunfighter Manor (182 units), Desert Skies Estates (106 units), Dunes (64 units), and Sagebrush View (64 units). The housing units in the Dunes neighborhood (64 units) are scheduled for demolition and would not be conveyed to the PO. The land area would become part of Sagebrush View.

In addition, Mountain Home AFB has been authorized by the Department of Defense Appropriations Act of 2010, Section 8032, to convey at no cost to the USAF, relocatable housing units to Operation Walking Shield (OWS) on behalf of Indian Tribes. OWS is a unique civilian and military collaborative program that seeks integration of combined civilian and military activities through the Department of Defense (DOD)'s Innovative Readiness Training (IRT) program. The IRT program is a partnership between the requesting community organizations and the military. Each civil-military project must have mission readiness as the project focus. OWS has provided more than 1,000 housing units to more than 6,000 American Indians on numerous reservations in Montana, North Dakota, South Dakota, and Minnesota. This has been done in collaboration with the USAF.

Results of the latest approved Housing Requirements and Market Analysis (HRMA) indicate that Mountain Home AFB should achieve an end-state of 1,324 units. Per agreement with Headquarters (HQ), Air Force Center for Engineering and the Environment (AFCEE) the housing end-state has been reduced to 1,059 units. The following specific transactions would occur between Mountain Home AFB and the PO to achieve the target 1,059 units as part of the Proposed Action. Specific transactions that would occur between Mountain Home AFB and the PO as part of the Proposed Action are as follows:

- Mountain Home AFB would convey the existing 1,155 MFH units to the PO.
- Mountain Home AFB would grant 50-year leases for four parcels of land:
  - Parcel A (40.76 acres) consisting of the Woodland Groves neighborhood.
  - Parcel B (25.25 acres) consisting of the Eagle View neighborhood.
  - Parcel C (435.13 acres) consisting of Falcon Estates (the former Gunfighter Manor), Trinity Heights, Coyote Terrace, Elk Heights (formerly Desert Vista), Gunfighter Circle, Gunfighter Manor, Desert Skies Estates, and Sagebrush View (including the former Dunes neighborhood).
  - Parcel D (1.04 acres) consisting of the Housing Office.
- The PO would continue use of 793 units in their present condition. During the first 6 years, it is assumed that 359 inadequate MFH units in Parcels B and C will be demolished and, subsequently, the PO would construct 263 new MFH units and renovate 3 MFH units in the Gunfighter Circle neighborhood. Additionally, the USAF Housing Privatization Program has

identified several desired features for new construction and renovation of MFH, its privatized communities, facilities maintenance, and property management for Mountain Home AFB to include construction of a community center/clubhouse. For the purposes of this EA, it is assumed that construction of a community center/clubhouse in the Falcon Estates neighborhood would occur as part of the Proposed Action.

- Tot lots, playgrounds, a half-basketball court, bus stops, neighborhood sign marquees, common mailbox clusters, and the housing maintenance facility would be conveyed to the PO.

***Alternative for the Three Historic Senior Officers' Quarters.*** Three historic homes in the Falcon Estates neighborhood, designated the Senior Officers' Quarters, are eligible for the National Register of Historic Places (NRHP) and are of state and national levels of significance. Under the Proposed Action, the three homes would be conveyed to the PO and demolished. Compliance with the National Historic Preservation Act (NHPA) has been accomplished. However, an alternative to the Proposed Action is considered in this EA that would preserve one or more of the Three Historic Senior Officers' Quarters. Those homes not chosen for preservation under this alternative would undergo demolition as in the Proposed Action. This alternative has three options:

- ***Option 1 – Convey with Conditions and Retain in Historic Setting as Installation Housing.*** Under this option, the Three Historic Senior Officers' Quarters would be conveyed to the PO and one or more of the homes would be retained and maintained in their current historic setting for continued use as installation housing consistent with historic preservation requirements defined in *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (DOI 1995) and pertinent National Park Service Preservation Briefs and guidance. The mature trees and landscaping would be maintained to enhance the historic surroundings.
- ***Option 2 – Convey with Conditions and Retain in Historic Setting as Community Space.*** Option 2 would involve conveying the Three Historic Senior Officers' Quarters to the PO and converting one or more of the homes to alternative uses, such as community space for meetings or social events. As in Option 1, the homes would be conveyed with conditions that one or more of the homes and their setting (trees and landscaping) be maintained in accordance with historic preservation requirements.
- ***Option 3 – Do Not Convey.*** Under Option 3, the Three Historic Senior Officers' Quarters would not be conveyed to the PO.

***No Action Alternative.*** Under the No Action Alternative, Mountain Home AFB would not implement the Proposed Action. Mountain Home AFB would continue to provide for the housing needs of military personnel and family members. Mountain Home AFB would continue to maintain and upgrade infrastructure components, as needed. Based on historical trends, it is assumed that the housing maintenance backlog would continue to increase.

Results of the revised HRMA indicate that Mountain Home AFB should achieve an end-state of 1,324 MFH units (MHAFB 2005a). However, with housing privatization, Mountain Home AFB and HQ AFCEE have agreed to a reduced housing end-state of 1,059 units. If housing privatization were not to occur, Mountain Home AFB would be required to meet the HRMA end-state of 1,324 units and would have a deficit of 169 MFH units. Mountain Home AFB would continue to maintain and upgrade infrastructure components and at some point address the 359 units deemed inadequate. Also, due to the age of some of the units' utilities systems, upgrades or replacements would also be needed to improve the overall level of service and efficiency. Therefore, these anticipated activities would require undertaking NEPA analyses at that time.

## Summary of Environmental Effects

**Noise.** Demolition of the MFH units in the Falcon Estates and Eagle View neighborhoods would occur adjacent to sensitive noise receptors, including schools, playfields, and childcare centers; however, noise generation would last only for the duration of demolition activities and would diminish as demolition activities move farther away from the receptor. Demolition activities under the Proposed Action would result in short-term, minor, adverse impacts on the noise environment in the vicinity of demolition activities. The Proposed Action would also include continued maintenance and upgrades of MFH units and ancillary facilities, and possible construction of desired features.

The Proposed Action would result in short-term, minor, adverse impacts on the noise environment in the vicinity of construction. Short-term, negligible to minor, adverse impacts on the ambient noise environment are anticipated as a result of the increase in construction vehicle traffic under the Proposed Action. The noise from construction equipment would be localized, short-term, and intermittent during machinery operations. Noise effects could be minimized by restricting construction to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.) and by implementing noise reduction measures such as equipment exhaust mufflers.

Under the alternative for the Three Historic Senior Officers' Quarters, impacts on noise would generally be similar to the impacts discussed under the Proposed Action. However, if one or more of the historic homes continue to be used as installation housing under Options 1 and 3, noise impacts from demolition and construction activities could affect the residents occupying the quarters. It is not anticipated that the short-term increase in ambient noise levels from the Proposed Action would cause significant adverse effects on the Senior Officer's Quarters, regardless of which option is selected.

**Land Use.** The Proposed Action would likely require changes to some current and future land use designations, since the Proposed Action would occur within several generalized land use designations. Land which is currently designated for general uses and where construction of housing units would occur would be redesignated as residential land. Construction of desired community features, such as indoor and outdoor exercise and recreational facilities, would also require a land use designation change to Commercial, Services, and Administrative or Outdoor Recreation depending on the facility, resulting in long-term, negligible, adverse impacts on land use plans and policies.

The Proposed Action would convey 64 MFH units in the Eagle View neighborhood, which is within the 65 to 69 dBA day-night average A-weighted sound level (DNL) noise zone (northeastern half) and the 70 to 74 dBA DNL noise zone (southwestern half). It is not known if the MFH units within Eagle View had noise level reduction (NLR) measures incorporated into their original design and construction, or any subsequent renovations. If the Eagle View MFH units have NLR measures, the units are compatible with the existing land use, but discouraged within the 65 to 69 dBA DNL noise zone (northeastern half) and strongly discouraged within the 70 to 74 dBA DNL noise zone (southwestern half). If the Eagle View MFH units do not have NLR measures, all of the units are considered incompatible land uses. Construction of new MFH units with NLR measures in the Eagle View area would result in a long-term, moderate, adverse impact on land use compatibility.

Under the alternative for the Three Historic Senior Officers' Quarters, impacts on land use would be similar to those discussed under the Proposed Action. Each of the three Historic Senior Officer's Quarters are located within the 60 to 64 dBA DNL noise zone, which is outside of the noise zones where residential development is discouraged. Thus, continued use of one or more of the quarters for residential use (under Options 1 or 3) or conversion of one or more of the quarters to alternative community facility use (under Option 2), would cause no conflict with existing residential land uses.

**Air Quality.** The Proposed Action would generate both temporary and long-term air pollutant emissions. Construction and demolition operations would result in short-term emissions of criteria pollutants as combustion products from construction equipment, and evaporative emissions from architectural coatings and asphalt paving operations. Long-term, minor, effects would occur from stationary sources such as boilers and heaters. Construction, demolition, and renovation activities associated with the Proposed Action would not have significant effects on air quality at Mountain Home AFB or on regional or local air quality.

Under the alternative action for the Three Historic Senior Officers' Quarters, impacts on air quality would be similar to those discussed under the Proposed Action. However, as demolition activities are decreased due to the preservation of one or more of the homes and their respective settings under Options 1, 2, and 3, the amount of particulate matter emissions and fugitive dust generated during project implementation activities would decrease. These impacts on air quality would not be significant.

**Geological Resources.** Short- and long-term, minor, adverse effects on soils would be expected from implementation of the Proposed Action. The primary short-term effects would occur during demolition activities when vegetation is cleared and the earth is bare and soil erosion and sedimentation rates could increase. Long-term, beneficial effects on soils would be expected upon completion of all projects associated with the Proposed Action as impervious surfaces would decrease and vegetation would be reestablished.

Under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. As demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of soil disturbance would decrease. These impacts on geological resources would be negligible and beneficial.

**Water Resources.** Short- and long-term, negligible to minor, adverse impacts on water resources would be expected during construction and demolition activities. The Proposed Action would result in short- and long-term, negligible to minor, beneficial effects on groundwater and surface water as impervious surfaces would decrease. No short- or long-term, adverse impacts on floodplains are expected from these actions. No direct or indirect impacts on wetlands would occur with implementation of best management practices (BMPs).

For each of the options under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. In so far as demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of vegetation removal and soil compaction would decrease. These impacts on water resources would be negligible and beneficial.

**Biological Resources.** The Proposed Action would be expected to result in short-term, negligible, adverse effects on vegetation due to temporary disturbances during demolition and construction activities. Direct, short-term, minor, adverse effects on wildlife due to disturbances (e.g., noise and motion) from demolition and construction activities and heavy equipment use could cause wildlife to engage in escape or avoidance behaviors. Long-term, negligible, beneficial effects on vegetation would be expected from the Proposed Action due to the reduction in MFH units and revegetation within the MFH area. No impacts on federally listed species would be expected. Short-term, negligible to minor, adverse effects on two sensitive species, the burrowing owl and long-billed curlew, would be expected from the Proposed Action due to the noise disturbances. Demolition and construction associated with the Proposed Action would be conducted in a manner to avoid adverse impacts on migratory birds to the extent practicable and it is not anticipated that the Proposed Action would have any measurable negative impacts on migratory birds (e.g., direct mortality, decrease in population size, decrease in fitness, repetitive nest failure).

For each of the options under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. As demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of vegetation removal and wildlife dispersion would decrease. These impacts on biological resources would be negligible and beneficial.

***Cultural Resources.*** No impacts on known archaeological resources would be expected under the Proposed Action. The Proposed Action would occur either in areas that have been previously surveyed and no archeological sites identified or areas of previous disturbance with low probability for archaeological resources. The Proposed Action would result in long-term, adverse impacts on architectural resources, because the three Senior Officers' Quarters that are eligible for the NRHP would be demolished. However, these impacts would be reduced below the threshold of significance under NEPA because Mountain Home AFB has consulted with the Idaho State Historic Preservation Office (SHPO) and Advisory Council on Historic Preservation (ACHP) pursuant to the ACHP-approved 2004 Program Comment for DoD Capehart-Wherry housing and completed Historic American Buildings Survey (HABS) documentation and other mitigation of the three houses. The Idaho SHPO and ACHP have agreed that Section 106 compliance is complete. Other MFH units are not eligible for the NRHP. There are no known resources of significance to Native American tribes at Mountain Home AFB.

Under the alternative for the Three Historic Senior Officers' Quarters, one or more of the NRHP-eligible houses would be preserved and maintained in their historic natural settings. The historic house(s) to be preserved would not incur long-term, adverse impacts under NEPA and would not be adversely affected under NHPA because they would be conveyed with conditions ensuring their preservation. However, because some of the options under this alternative provide for the possibility that not all of the historic houses would be preserved and that one or more might be demolished, some homes might incur long-term, adverse impacts under NEPA and adverse effects under NHPA. Since Mountain Home AFB completed all consultation and mitigation measures for the demolition of all Three Historic Senior Officers' Quarters under the Proposed Action, no further consultation and mitigation would be needed to address impacts to one or more of these homes that may be demolished under Option 1 or Option 2. The preservation of one or more of the historic quarters and their setting would minimize the loss of all three historic houses.

***Socioeconomics and Environmental Justice.*** No significant or disproportionate impacts would be expected on employment levels, household income, or low-income or minority populations. There would be a minor, short-term increase in employment related to MFH construction, demolition, and renovation activities on the installation. The use of local labor would have short-term, beneficial impacts on the local economy. Negligible impacts on children's health and safety risks would be expected. Overall short-term, minor to moderate, beneficial impacts would be expected under the Proposed Action.

Each of the options under the alternative action for the Three Historic Senior Officers' Quarters would involve the preservation of one or more of the homes and their respective settings. Each of these options would thus slightly decrease the total amount of demolition and new construction proposed at Mountain Home AFB. However, in context with the overall footprint of demolition and construction, these options would have a negligible impact on employment levels and socioeconomics in the region. There would be no impacts on environmental justice.

***Infrastructure.*** Short-term, negligible to minor, adverse effects on the Mountain Home AFB transportation system would be expected from the implementation of the Proposed Action. Construction and demolition activities would result in a temporary, slight increase in the amount of traffic at the installation from equipment being delivered, debris being removed, and contractors arriving to the work sites. Long-term, minor, beneficial impacts on the transportation system would occur, as deteriorated roads would be demolished and new roadways would be constructed.

In addition, short-term, negligible to minor, adverse effects on electrical, natural gas, water supply, and communications systems would be expected from the implementation of the Proposed Action. Short-term, negligible to minor, adverse effects on the sanitary sewer and wastewater systems would be expected from implementation of the Proposed Action. Temporary, minor, service interruptions might be experienced when utility lines are disconnected from the 359 MFH units proposed for demolition and connected to the proposed community-desired features. Short-term, minor, adverse effects on solid waste management would be expected from implementation of the Proposed Action. The 359 excess MFH units would first be offered for donation through OWS's Housing Relocation Program, which would reduce short-term, adverse, effects associated with solid waste management by substantially reducing the amount of demolition debris generated.

Long-term, minor, beneficial effects on the electrical, natural gas, and water supply would be expected from the Proposed Action due to an overall reduced demand on utilities at Mountain Home AFB. Following the proposed demolition of 359 MFH units, the overall demand on utilities would be reduced by a minor amount due to the loss of these buildings. Beneficial impacts would also be expected on sanitary sewer and wastewater systems, storm water systems, communications systems, and solid waste management due to the loss of the MFH units.

Under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. As demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of waste generated from demolition activities would decrease. No impacts on transportation or utilities would be expected to occur. The overall impacts on infrastructure would be negligible and beneficial.

***Hazardous Materials and Wastes.*** Short-term, minor, adverse impacts on hazardous materials would be expected as construction, demolition, and renovation activities would require the use of certain hazardous materials such as paints, welding gases, solvents, preservatives, and sealants. Short-term, minor, adverse impacts on hazardous wastes would be expected as a result of a minor increase in the quantity of hazardous wastes generated from proposed construction, demolition, and renovation activities. Some of the MFH units could have mercury-containing thermostats, ionization smoke detectors that contain Americium-241, or heat pumps that contain ozone-depleting substances; and some of the MFH units scheduled for demolition likely contain asbestos-containing materials (ACM), lead-based paint (LBP), or light ballasts containing polychlorinated biphenyls (PCBs). Long-term, beneficial impacts would occur from the potential removal of hazardous materials, ACM, LBP, or PCBs.

Since 2004, several studies have been conducted at Mountain Home AFB pertaining to the presence of chlordane and other pesticides in several of the housing areas. Chlordane could be present at various concentration levels within the proposed project area, particularly under and alongside the concrete slabs where MFH units were constructed. The health and safety of children potentially exposed to contaminated soils would be addressed in a Risk Screening/Assessment Plan and Soil Management Plan required in the July 2009 Consent Order entered into between Mountain Home AFB and the Idaho Department of Environmental Quality (IDEQ). Additionally, prior to any future construction and demolition activities, areas where pesticides were applied would be identified and mitigated in accordance with the Consent Order. Short-term, minor, adverse impacts would be expected from implementation of the proposed action but would not be significant. The Consent Order also addressed the presence of ACM in MFH units. Mountain Home AFB is currently developing a Risk Screening/Assessment Plan for all MFH areas where demolition, renovation, construction, and trenching have already occurred, that could have resulted in ACM becoming regulated ACM via crumbling, pulverizing, or reduction to a powder. If the Risk Screening/Assessment reveals an unacceptable risk, consistent with guidance set forth in the Consent Order requiring compliance with 40 CFR Part 61, subpart M, Mountain Home AFB would submit a Contaminant Management Plan to the IDEQ within 90 days of completing the activities

required by the IDEQ-approved Risk Screening/Assessment Plan. All ACM discovered would be removed by certified individuals prior to demolition and renovation activities, in accordance with all Federal, state, and local regulations.

Under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would be preserved. This is anticipated to result in negligible impacts on hazardous materials and waste.

**Safety.** Short-term, negligible to minor, direct adverse and long-term, beneficial effects on health and safety would be expected from the Proposed Action. The short-term risk associated with construction contractors would slightly increase at Mountain Home AFB during the normal workday as construction activity levels would increase. In addition, short-term, negligible to minor, adverse impacts would be expected as some of the MFH homes and associated infrastructure slated for conveyance could require removal of ACM and LBP. However, once these materials are removed, long-term, beneficial impacts would be expected from the reduced exposure potential on military personnel and families.

Each of the options under the alternative for the Three Historic Senior Officers' Quarters involves the preservation of one or more of the quarters and its associated setting. This is anticipated to result in no impacts on safety. The remaining quarters would be maintained in accordance with all applicable USAF, Federal, state, and local standards and regulations.

## **Cumulative Impacts**

Cumulative impacts on environmental resources result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts would result from individually minor but collectively significant actions taking place over a period of time by various agencies (Federal, state, and local) or individuals. Informed decision making is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

Past and ongoing projects at Mountain Home AFB or in its vicinity that have been identified as contributing to cumulative effects on environmental resources include the following:

- Demolition of 64 housing units in the former Dunes neighborhood
- Construction of new Logistics Readiness Center and demolition of buildings being replaced
- Construction of new Civil Engineering Squadron Facility and demolition of buildings being replaced
- Construction of new Expeditionary Deployment Center and demolition of building being replaced
- Construction of new Child Development Center
- Potential basing of F-35 Joint Strike Fighter.

Anticipated adverse cumulative effects would be related to environmental impacts from demolition and construction activities (e.g., increased demand of infrastructure and utilities, ground disturbances and soil erosion, and sedimentation). Anticipated beneficial cumulative effects on socioeconomics in the surrounding area would be expected from economic expenditures associated with the installation development projects, MFH privatization, and mission relocation actions. No significant cumulative impacts on the environment would be anticipated from the Proposed Action in conjunction with other activities.

**DRAFT**  
**ENVIRONMENTAL ASSESSMENT**  
**ADDRESSING THE PRIVATIZATION OF MILITARY FAMILY HOUSING**  
**AT MOUNTAIN HOME AIR FORCE BASE, IDAHO**

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# 1. Purpose of and Need for the Action

This Environmental Assessment (EA) addresses the Air Combat Command's (ACC) proposal to privatize military family housing (MFH) at Mountain Home Air Force Base (AFB), Idaho. This section presents background information, the purpose of and need for privatized MFH, the location and mission of Mountain Home AFB, and an introduction to the organization of this document.

## 1.1 Background

The U.S. Air Force (USAF) operates and maintains approximately 104,000 MFH units at its installations throughout the United States. More than 38 percent of all units do not meet current modern standards and require either major improvement or replacement. At most installations, the demand for adequate on-installation housing exceeds supply. The lack of adequate MFH forces many military members and their families to live in on-installation housing that is in need of repair, renovation, or replacement; or requires them to live off-installation where the cost and quality of housing can vary considerably. Often, the cost to military members and their families to live off-installation is 15 to 20 percent greater than the cost to live on-installation. The USAF estimates that as much as \$7.6 billion would be needed to bring its on-installation housing up to current standards (HQ USAF 2007).

In recognition of these problems, Congress enacted Section 2801 of the National Defense Authorization Act for Fiscal Year (FY) 1996 (Public Law [P.L.] 104-106, codified at Title 10 of the United States Code [U.S.C.] Sections 2871–2885). Also known as the Military Housing Privatization Initiative (MHPI), this provision of law creates alternative authorities for improvement and construction of MFH (see **Appendix A**). The MHPI was designed and developed to attract private sector financing, expertise, and innovation to provide necessary housing faster and more efficiently than traditional military construction (MILCON) processes would allow. By leveraging scarce public funding, the USAF can obtain private sector funds for construction, maintenance, management, renovation, replacement, rehabilitation, and development of USAF MFH and ancillary supporting facilities. The Department of Defense (DOD) has asked the USAF to upgrade all inadequate housing. Inadequate housing is that which does not meet USAF housing standards as specified in Air Force Policy Directive (AFPD) 32-6002, *Family Housing Planning, Programming, Design, and Construction* (January 15, 2008) and the Housing Community Profile (HCP) as validated by a current Housing Requirements and Marketing Analysis (HRMA). In accordance with AFPD 32-60, *Housing* (November 10, 2009), inadequate housing is “any housing unit requiring whole-house improvement or replacement as identified by the services condition assessments, typically exceeding a per-unit cost of \$50,000 adjusted by the area cost factor. Services condition assessments utilize private sector housing industry construction codes and sizing standards as a basis for assessing inventory adequacy.”

## 1.2 Purpose of and Need for the Proposed Action

The USAF Housing Privatization Program incorporates the MHPI legislation enacted by Congress in 1996. Consistent with the USAF Housing Privatization Program, USAF Headquarters ACC proposes to convey MFH units, grant leases of land, and transfer responsibility for providing housing and ancillary supporting facilities at Mountain Home AFB to a private developer (the Project Owner [PO]). The Proposed Action is part of the Northern Group MHPI, which includes Mountain Home AFB, Idaho; Cavalier Air Force Station (AFS), Grand Forks AFB, and Minot AFB, North Dakota; Ellsworth AFB, South Dakota; and Cannon AFB, New Mexico.

The purpose of the Proposed Action is to vest responsibility for MFH at Mountain Home in a private developer. The need for the Proposed Action is to provide affordable, quality housing and ancillary

facilities to military members and their families through replacement of inadequate units and continued management of existing family housing units so that they continue to meet current USAF standards throughout the 50-year lease period.

The goal of the Northern MHPI is to provide uniformed services members and their families access to safe, secure, quality, affordable, well-maintained housing in a military community where they choose to live. MFH privatization would help accelerate housing improvements, alleviate housing shortages, and reduce waiting times for adequate housing, ultimately improving the morale of USAF personnel and their families. The majority of the MFH units on Mountain Home AFB were constructed in the past 14 years and are in excellent condition. However, a substantial portion of the MFH inventory exhibits a principal concern facing MFH throughout the USAF: many MFH units are in poor condition. At Mountain Home AFB, nearly one third of the MFH units show signs of age and continuous use to such an extent that demolition is warranted. Many units are not energy-efficient and many also require extensive maintenance. Housing interiors are inadequate by modern standards in that bedroom closets, kitchen storage, and kitchen counter space are insufficient; and plumbing, electrical systems, and heating, ventilation, and air conditioning systems are inefficient.

### **1.3 Location and Mission**

Mountain Home AFB is in southwestern Idaho in Elmore County approximately 50 miles southeast of Boise and 8 miles southwest of Mountain Home (see **Figure 1-1**). Mountain Home AFB covers 6,844 acres and is home to the ACC's 366th Fighter Wing (366 FW), which is composed of about 4,800 military and civilian personnel (366 FW 2010).

Mountain Home AFB was established in 1943 to provide the U.S. Army Air Corps with a facility for bomber aircraft training during World War II. Between 1943 and 1992, Mountain Home AFB changed missions and commands several times, including two deactivations, from 1945 to 1948 and 1950 to 1951. Mountain Home AFB was reactivated as a Strategic Air Command (SAC) installation in 1949. The Tactical Air Command assumed control of the installation and Saylor Creek Range in 1966. In 1992, ACC assumed control of Mountain Home AFB (MHAFB 2004).

Although the 366 FW itself was not activated until after World War II, it shares the World War II heritage of the 366th Operations Group, whose precursor organization, the 366th Fighter Group, stood up about the same time the installation was being built. In early 1991, the USAF announced that the 366 FW would become the USAF's premier "air intervention" composite wing. Over the next decade, the Wing operated with fighters, bombers, and tankers. After the terrorist attacks of September 11, 2001, the consolidation of the USAF's KC-135 and B-1 force led to the reallocation of the Wing's tankers to McConnell AFB, Kansas, and bombers to Ellsworth AFB, South Dakota. The Wing was also home to F-16CJ Fighting Falcon aircraft from 1991 to March 2007. The F-16CJs left the installation under Base Realignment and Closure (BRAC) related actions. Today the 366 FW is home to the F-15C Eagle, F-15E Strike Eagle, and F-15SG fighter aircraft (MHAFB 2007a).

### **1.4 Summary of Key Environmental Compliance Requirements**

#### **1.4.1 National Environmental Policy Act**

The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. Section 4321–4347) is a Federal statute requiring the identification and analysis of potential environmental impacts associated with proposed Federal actions before those actions are taken. The intent of NEPA is to help decisionmakers make well-informed decisions based on an understanding of the potential environmental consequences and take actions to protect, restore, or enhance the environment. NEPA established the Council on

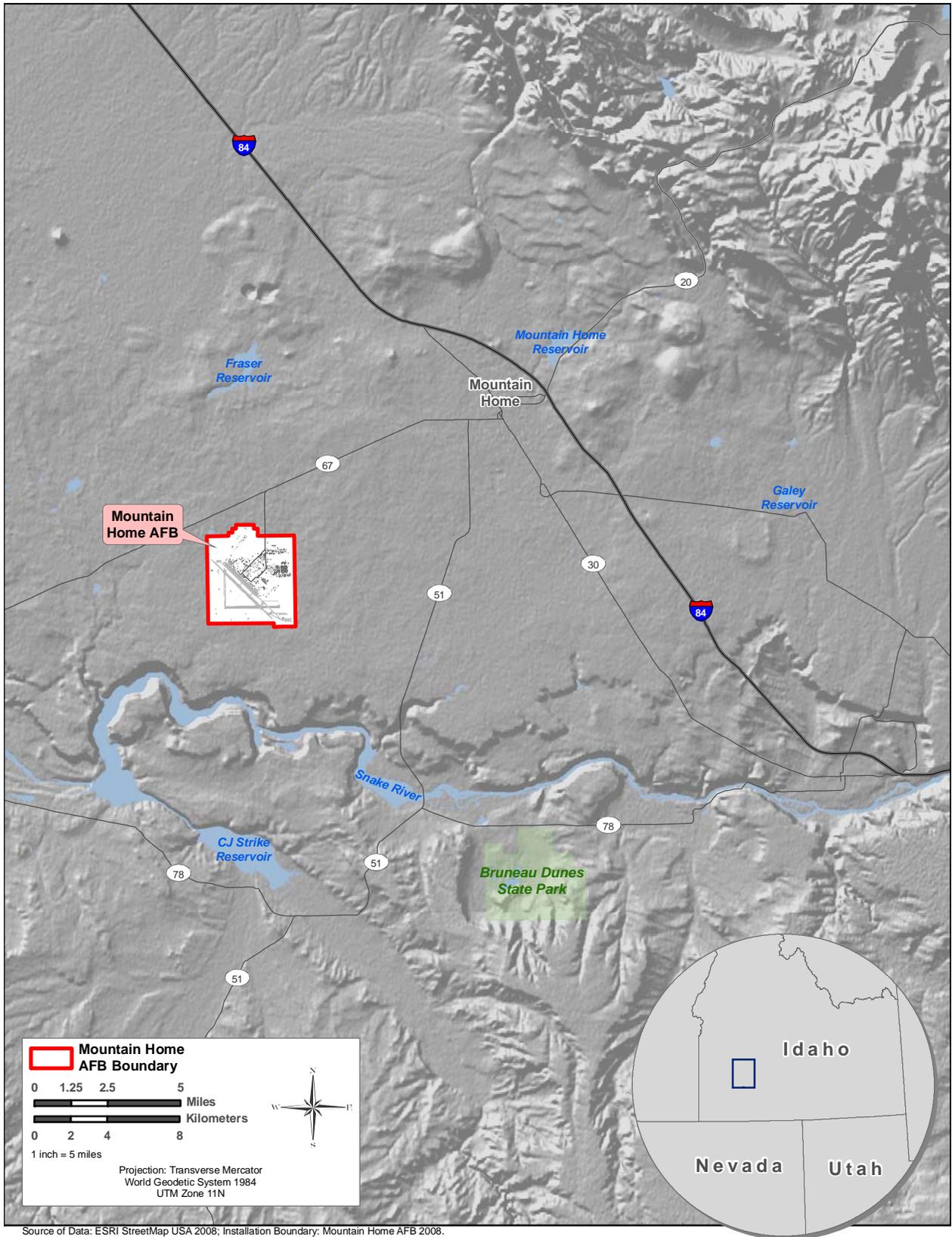


Figure 1-1. Mountain Home AFB and Surrounding Area

Environmental Quality (CEQ) that was charged with the development of implementing regulations and ensuring Federal agency compliance with NEPA. The CEQ regulations mandate that all Federal agencies use a prescribed structured approach to environmental impact analysis. This approach also requires Federal agencies to use an interdisciplinary and systematic approach in their decisionmaking process.

This process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action.

The process for implementing NEPA is codified in Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*. The CEQ was established under NEPA to implement and oversee Federal policy in this process. The CEQ regulations specify that an EA be prepared to briefly provide evidence and analysis for determining whether to prepare a Finding of No Significant Impact (FONSI) (see **Section 1.4.2**), or whether the preparation of an Environmental Impact Statement (EIS) is necessary. The EA can aid in an agency's compliance with NEPA when an EIS is unnecessary and facilitate preparation of an EIS when one is required.

AFPD 32-70, *Environmental Quality*, states that the USAF will comply with applicable Federal, state, and local environmental laws and regulations, including NEPA. The USAF's implementing regulation for NEPA is *Environmental Impact Analysis Process (EIAP)*, 32 CFR Part 989, as amended.

#### **1.4.2 Integration of Other Environmental Statutes and Regulations**

To comply with NEPA, the planning and decisionmaking process for actions proposed by Federal agencies involves a study of other relevant environmental statutes and regulations. The NEPA process, however, does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or EIS, which enables the decisionmaker to have a comprehensive view of key environmental issues and requirements associated with the Proposed Action. According to CEQ regulations, the requirements of NEPA must be integrated “with other planning and environmental review procedures required by law or by agency so that all such procedures run concurrently rather than consecutively.”

The EA will examine potential effects of the Proposed Action and alternatives on 11 resource areas: noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomic resources and environmental justice, infrastructure, hazardous materials and wastes, and safety. These resources could potentially be affected by the Proposed Action and include applicable elements of the human environment that are prompted for review by Executive Order (EO), regulation, or policy.

EO 13514, *Federal Leadership In Environmental, Energy, And Economic Performance* (October 5, 2009), directs Federal agencies to improve water use efficiency and management; implement high performance sustainable Federal building design, construction, operation, and management; and advance regional and local integrated planning by identifying and analyzing impacts from energy usage and alternative energy sources. EO 13514 also directs Federal agencies to prepare and implement a Strategic Sustainability Performance Plan to manage its greenhouse gas (GHG) emissions, water use, pollution prevention, regional development and transportation planning, and sustainable building design; and promote sustainability in its acquisition of goods and services. Section 2(g) requires new construction, major renovation, or repair and alteration of buildings to comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*. The CEQ regulations at 40 CFR 1502.16(e) direct agencies to consider the energy requirements and conservation potential of various alternatives and

mitigation measures. EO 13175, *Consultation and Coordination with Indian Tribal Governments* (6 November 2000), directs Federal agencies to coordinate and consult with Native American tribal governments whose interests might be directly and substantially affected by activities on federally administered lands.

AFI 32-7063, *Air Installation Compatible Use Zone Program* (September 13, 2005) sets forth land use guidelines for recommended compatible land use classifications or coding for those areas impacted by aircraft noise and potential aircraft safety. Air Force Handbook (AFH) 32-7084, *AICUZ Program Manager's Guide*, (March 1, 1999) identifies that, although local conditions might require land in a particular area to be used for residential use, it is discouraged inside the 65 A-weighted decibel (dBA) Day-Night Average A-Weighted Sound Level (DNL) noise contour and strongly discouraged inside the 70 dBA DNL noise contour. The absence of viable alternative development options should be determined and an evaluation indicating that a demonstrated community need for residential use would not be met if development were prohibited in these zones should be conducted prior to approvals. Where it is determined that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) for these noise zones should be incorporated into building codes and considered in individual approvals. NLR criteria will not eliminate outdoor noise problems. However, building location and site planning, and design and use of berms and barriers can help mitigate outdoor exposure, particularly from near ground-level sources. Measures that reduce outdoor noise should be used whenever practical in preference to measures which only protect interior spaces.

AFI 32-7020, *Environmental Restoration Program* (February 7, 2001), describes procedures and requirements for executing the DOD's Environmental Restoration Program (ERP). According to the AFI, the goal of the Air Force ERP is to "reduce risks to human health and the environment due to contamination from past Air Force activities in a cost effective manner and in a manner that fosters community support." The ERP is a subcomponent of the Defense Environmental Restoration Program (DERP) that became law under the Superfund Amendments and Reauthorization Act. Mountain Home AFB began ERP investigations in July 1983 with an installation records search, and in August 1990 was placed on the U.S. Environmental Protection Agency's (USEPA) National Priorities List (NPL) as a Superfund site (USEPA ID# ID3572124557). 32 ERP sites have been identified at Mountain Home AFB and all have either been closed, have had land use controls applied, or are in various stages of remedial operation with long-term monitoring (see **Section 3.10.2**). In July 2009, the Idaho Department of Environmental Quality (IDEQ) entered into a Consent Order with Mountain Home AFB under the authority of the Idaho Hazardous Waste Management Act.

**Appendix B** contains examples of relevant laws, regulations, and other requirements that are often considered as part of the analysis. Where useful to better understanding, key provisions of the statutes and EOs described in **Appendix B** will be discussed in more detail in the text of the EA.

### **1.4.3 Interagency and Intergovernmental Coordination for Environmental Planning, Native American Tribal Consultation, and Public Involvement**

*Interagency and Intergovernmental Coordination for Environmental Planning (IICEP)*. NEPA requirements help ensure that environmental information is made available to the public during the decisionmaking process and prior to actions being taken. The premise of NEPA is that the quality of Federal decisions will be enhanced if proponents provide information to the public and involve the public in the planning process. The Intergovernmental Coordination Act and EO 12372, *Intergovernmental Review of Federal Programs*, require Federal agencies to cooperate with and consider state and local views in implementing a Federal proposal. Air Force Instruction (AFI) 32-7060, *Interagency and*

*Intergovernmental Coordination for Environmental Planning*, requires the USAF to implement the IICEP process, which is used for the purpose of agency coordination and implements scoping requirements.

Through the IICEP process, Mountain Home AFB notifies relevant Federal, state, and local agencies of the Proposed Action and alternatives and provides them sufficient time to make known their environmental concerns specific to the action. The IICEP process also provides Mountain Home AFB with the opportunity to cooperate with and consider state and local views in implementing the Federal proposal. IICEP materials related to this EA are included in **Appendix C**, and will be expanded throughout the EIAP process.

***Native American Tribal Consultation.*** EO 13175, *Consultation and Coordination with Indian Tribal Governments* (6 November 2000) directs Federal agencies to coordinate and consult with Native American tribal governments whose interests might be directly and substantially affected by activities on federally administered lands. To comply with legal mandates, federally recognized tribes that are affiliated historically within the Mountain Home AFB geographic region are invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. Because many tribes were displaced from their original homelands during the historical period, tribes with cultural roots in an area may not currently reside in the region where the undertaking is to occur. Effective consultation requires identification of tribes based on ethnographic and historical data and not simply a tribe's current proximity to a project area. The tribal consultation process is distinct from NEPA consultation or the IICEP processes and requires separate notification of all relevant tribes by Mountain Home AFB. The timelines for tribal consultation are also distinct from those of intergovernmental consultations. The Mountain Home AFB Government representative point-of-contact for Native American tribes is the Installation Commander. The Mountain Home AFB Government point-of-contact for consultation with the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) is the Cultural Resource Manager.

A letter requesting consultation will be sent to each affected tribe describing the Proposed Action on Mountain Home AFB and asking for them to identify any potential concerns they may have. The goal of the tribal consultation process is not to simply consult on a particular undertaking but rather to build constructive relationships with the appropriate Native American tribes. Consultation should lead to constructive dialogs in which Native American tribes are active participants in the planning process.

***Public Involvement.*** A Notice of Availability (NOA) was published in the *Mountain Home News*, the *Twin Falls Times News*, and *The Idaho Statesman*. The Draft EA will be available to the public for a 30-day review period. The NOA will be issued to solicit comments on the Proposed Action and involve the local community in the decisionmaking process. Public and agency comments on the Draft EA will be considered prior to a decision being made as to whether or not to sign a FONSI.

#### **1.4.4 Operation Walking Shield**

Operation Walking Shield (OWS) is a unique civilian and military collaborative program that seeks integration of combined civilian and military activities through the DOD's Innovative Readiness Training (IRT) program. The IRT program is a partnership between the requesting community organizations and the military. Each civil-military project must have mission readiness as the project focus. Mountain Home AFB has been authorized by the Department of Defense Appropriations Act of 2010, Section 8032, to convey at no cost to the USAF, relocatable housing units to OWS on behalf of Indian Tribes. OWS has provided more than 1,000 excess housing units to more than 6,000 American Indians on numerous reservations in Montana, North Dakota, South Dakota, and Minnesota (OWS 2010). The USAF seeks to collaborate with the OWS Program to the maximum extent practicable by donating existing MFH units.

The OWS Program helps support cost-efficient, quality, and safe housing options while greatly reducing the demolition and waste management burden for the U.S. military.

## **1.5 Organization of this Document**

This EA is organized into six sections, plus appendices. **Section 1** provides the purpose of and need for the Proposed Action. **Section 2** contains a description of the Proposed Action, alternatives to the Proposed Action, and the No Action Alternative. **Section 3** contains a general description of the physical resources, baseline conditions that could potentially be affected by the Proposed Action, the alternatives, and the No Action Alternative; and presents an analysis of the potential environmental consequences of implementing the Proposed Action, the alternatives, and the No Action Alternative. **Section 4** includes an analysis of the potential cumulative impacts at Mountain Home AFB. **Section 5** lists the preparers of the document. **Section 6** lists the references used in the preparation of the document. **Appendix A** contains the text of the MHPI as codified in 10 U.S.C. 2871–2885. **Appendix B** contains applicable laws, regulations, policies, and planning criteria potentially relevant to the NEPA analysis. **Appendix C** includes all IICEP materials. **Appendix D** contains a list of all the desired features for privatization of MFH at Mountain Home AFB. **Appendix E** provides representative photographs of MFH areas at Mountain Home AFB. **Appendix F** includes air emissions calculations. **Appendix G** contains a record of Mountain Home AFB’s consultation with the Idaho SHPO and the ACHP regarding the Three Historic Senior Officers’ Quarters.

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## **2. Description of the Proposed Action and Alternatives**

This section presents information on the USAF's Housing Privatization Program and the Proposed Action under that initiative. **Section 2.1** describes how the Proposed Action would be implemented at Mountain Home AFB, **Section 2.2** identifies alternatives to the Proposed Action, and **Section 2.3** describes the No Action Alternative. Implementation of the Proposed Action, as described in **Section 2.1**, is Mountain Home AFB's Preferred Alternative.

### **2.1 Detailed Description of the Proposed Action**

Consistent with the USAF Housing Privatization Program, Headquarters ACC proposes to convey 1,155 MFH units, lease four parcels totaling approximately 502 acres, and transfer responsibility for providing housing and ancillary supporting facilities at Mountain Home AFB to the PO. Under the Proposed Action, 10 MFH neighborhoods at Mountain Home AFB would be conveyed as Parcels A through C. Also included in the conveyance is the housing office (Parcel D) located southwest of the Falcon Estates neighborhood. Three subparcels within Parcel C are excluded from conveyance. These are the fire house (0.778 acres), the water tank (0.65 acres), and the communications building (northern part of Building 4401, 0.114 acres).

These neighborhoods (and the number of existing MFH units in each) are Woodland Groves (118 units), Falcon Estates (the former Gunfighter Manor) (108 units), Eagle View (64 units), Trinity Heights (179 units), Coyote Terrace (126 units), Elk Heights (formerly Desert Vista) (199 units), Gunfighter Circle (9 units), Gunfighter Manor (182 units), Desert Skies Estates (106 units), and Sagebrush View (64 units). The 64 housing units in the Dunes neighborhood are scheduled for demolition by Mountain Home AFB and will not be conveyed to the PO. The land area will be combined with the Sagebrush View neighborhood bringing the total number of housing units under consideration to 1,155 units in 10 MFH neighborhoods. **Figure 2-1** shows the boundaries of the existing MFH neighborhoods (HQ USAF 2010). **Figure 2-2** shows the parcels after privatization. **Appendix E** includes photos of representative MFH areas at Mountain Home AFB.

**Appendix A** contains the MHPI on which the USAF Housing Privatization Program and the Proposed Action are based. Application of the provisions of the USAF Housing Privatization Program would be tailored to Mountain Home AFB's specific circumstances and requirements.

Under the Proposed Action, Mountain Home AFB would execute agreements with the PO to convey real property, lease land, and have the PO assume responsibility to operate a rental housing development for the benefit of USAF and other personnel. Under agreements with Air Force Center for Engineering and the Environment (AFCEE) to operate a rental housing development, the PO would be responsible to plan, design, develop, renovate, demolish, construct, own, operate, maintain, and manage all necessary assets for MFH and designated ancillary supporting facilities. In exchange for providing housing, the PO would be entitled to rental income based on each occupant's Basic Allowance for Housing (BAH).

Of the total 1,155 MFH units to be conveyed, Mountain Home AFB has determined through a Condition Assessment Matrix (CAM) study that there are 793 adequate MFH units. Of the remaining MFH units, 359 are considered inadequate and are identified for demolition and 3 units in the Gunfighter Circle neighborhood would be renovated (HQ USAF 2010). **Table 2-1** presents the general breakdown of the desired end-state of the housing areas at Mountain Home AFB within 6 years of the lease to the PO under the Proposed Action.

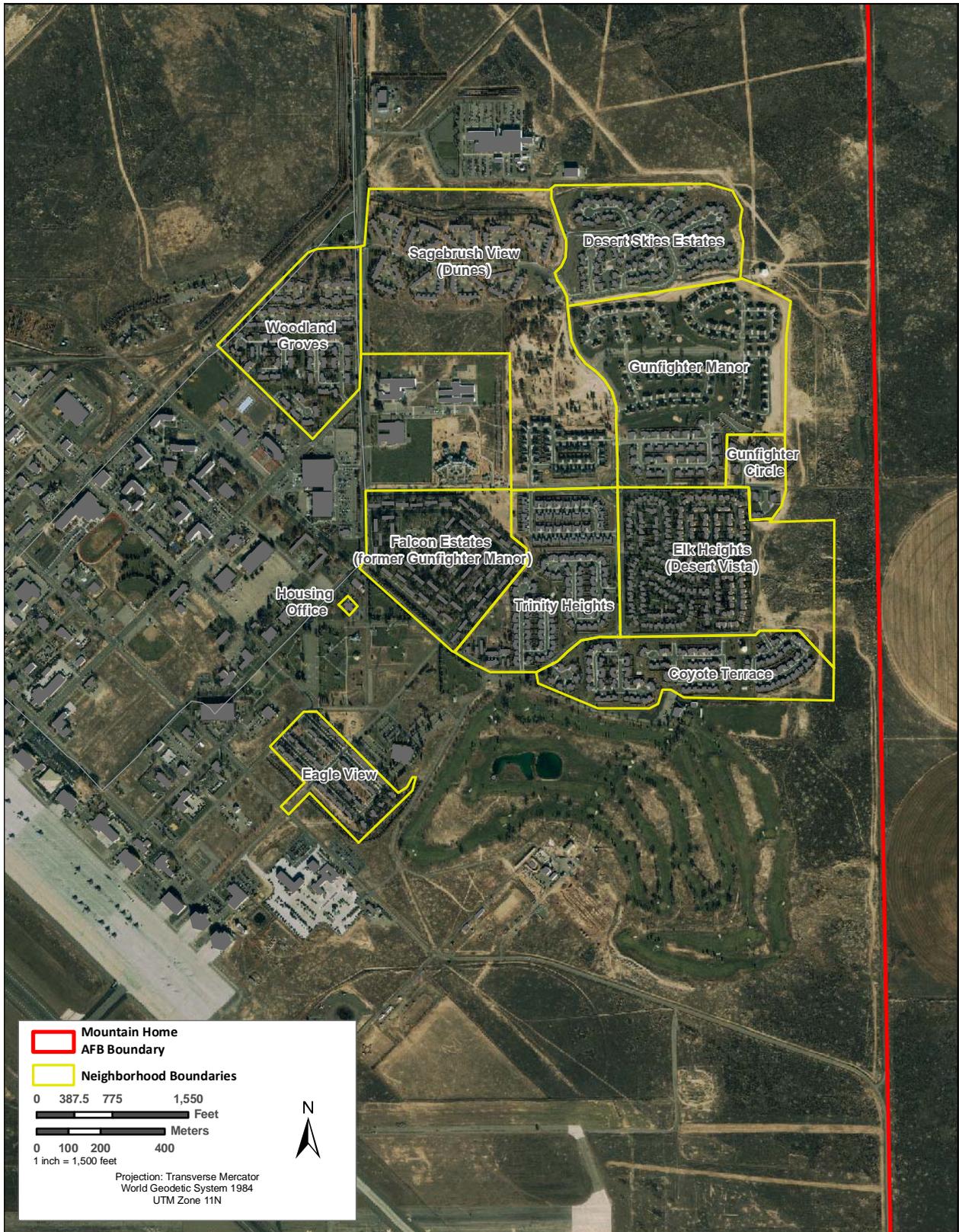


Figure 2-1. MFH Area and Neighborhoods



Figure 2-2. Proposed Housing Privatization Parcels

**Table 2-1. General Actions and End-State under the MFH Privatization Program at Mountain Home AFB**

General Action for MFH Units	Number of Units
Convey	1,155
Demolition	359
New Construction	263
Renovation	3
As Is (adequate, no action needed)	793
<b>End-State</b>	<b>1,059</b>

199 modular housing units in the Elk Heights neighborhood and 104 duplex and one single family housing unit in the Falcon Estates neighborhood have been identified specifically for donation to American Indian parties through the OWS program. Under the OWS Program, interested Native American parties would be responsible for removing the homes while the PO or the Government would be responsible for demolishing the foundations to prepare the site for new construction. Three of the MFH units in the Falcon Estates neighborhood, known as the General’s house, the Commander’s house, and the Colonel’s house, are eligible for the National Register of Historic Places (NRHP) and have been deemed significant on a state and national level by the Idaho SHPO. These three housing units are referred to as the Three Historic Senior Officers’ Quarters. Under the Proposed Action, these homes would be demolished. All mitigation and consultation for compliance with the National Historic Preservation Act (NHPA) have been completed. An alternative to the Proposed Action for the Three Historic Senior Officers’ Quarters is presented in **Section 2.2**.

Results of the latest approved HRMA indicate Mountain Home AFB should achieve an end-state of 1,324 MFH units (MHAFB 2005a). Per Headquarters (HQ) USAF direction, AFCEE has agreed to reduce the housing end-state to 1,059 units. The following specific transactions would occur between Mountain Home AFB and the PO to achieve the target 1,059 MFH units as part of the Proposed Action:

- Mountain Home AFB would convey 1,155 MFH units to the PO.
- Mountain Home AFB would grant 50-year leases for four parcels of land:
  - Parcel A (40.76 acres) consisting of the Woodland Groves neighborhood
  - Parcel B (25.25 acres) consisting of the Eagle View neighborhood
  - Parcel C (435.13 acres) consisting of Falcon Estates (the former Gunfighter Manor), Trinity Heights, Coyote Terrace, Elk Heights (formerly Desert Vista), Gunfighter Circle, Gunfighter Manor, Desert Skies Estates, and Sagebrush View (including the former Dunes neighborhood)
  - Parcel D (1.04 acres) consisting of the Housing Office.
- The PO would continue use of 793 units in their present condition. During the first 6 years, it is assumed that 359 inadequate MFH units in Parcels B and C will be demolished and, subsequently, the PO would construct 263 new MFH units and renovate 3 MFH units in the Gunfighter Circle neighborhood. The USAF Housing Privatization Program has identified several desired features for new construction and renovation of MFH, its privatized communities, facilities maintenance, and property management for Mountain Home AFB to include construction of a community center/clubhouse. For the purposes of this EA, it is assumed that

construction of a community center/clubhouse in the Falcon Estates neighborhood would occur as part of the Proposed Action.

- Tot lots, playgrounds, a half-basketball court, bus stops, neighborhood sign marquees, common mailbox clusters, and the housing maintenance facility would be conveyed to the PO.

**Table 2-2** indicates the actions that would be taken with respect to the current MFH inventory under the Proposed Action. These actions would be required to achieve the desired end-state MFH inventory at Mountain Home AFB. The PO would be responsible for completing these actions within the first 6 years (to be known as the transition period) of the 50-year privatization program. For the purpose of analysis in this EA, it is assumed that demolition and construction activities would occur evenly over the 6 years of the transition period. Projects associated with the Proposed Action could include new desired community features within the 6-year transition period, including indoor and outdoor exercise and recreation facilities (see **Appendix D**).

### 2.1.1 Project Objectives

The USAF Housing Privatization Program has identified several desired features for new construction and renovation of MFH, its privatized communities, facilities maintenance, and property management for the Northern Group installations (i.e., Mountain Home AFB, Idaho; Cavalier AFS, North Dakota; Grand Forks AFB, North Dakota; Minot AFB, North Dakota; Ellsworth AFB, South Dakota; and Cannon AFB, New Mexico). These desired features are intended to result in substantial improvements in the overall quality of housing for qualified personnel. The required and desired features for MFH for new housing and renovations are provided in **Appendix D**.

### 2.1.2 Operational Provisions

The following paragraphs identify relevant matters pertaining to the proposed privatization of MFH.

**Transition Plan.** Implementation of the Proposed Action would include reliance on a transition plan prepared by the PO and approved by Mountain Home AFB. The plan would include project development, phasing out of existing units, the means by which the PO would maintain availability of MFH units for qualifying personnel, and the methodology for providing utilities and services during and after the transition period. The transition period would begin upon completion of contractual matters initiating the Proposed Action and would last for up to 6 years. During the transition period, demolition and new housing construction would be balanced so that at all times sufficient numbers of units for all eligible pay grades would be maintained.

The desired end-state of 1,059 MFH units would be achieved by the end of the 6-year transition period. After the transition period is over, the PO would be responsible for continued maintenance, management, and upkeep of the leased areas, including all MFH units. During the course of the remaining 50-year lease period, the PO would be required to renovate or replace existing MFH units as they age and deteriorate, in accordance with the provisions of the approved Capital Repair and Replacement Plan and the Reinvestment Plan for the MFH units. At mid-project (around year 25), the PO would comply with a modernization and upgrade requirement for reconditioning, renovation, or replacement of all the MFH units, as specified by Mountain Home AFB.

**Table 2-2. Actions Proposed for Existing MFH Areas**

<b>Parcel</b>	<b>Housing Area</b>	<b>Total Number of Existing Units</b>	<b>Total Number of Adequate Units</b>	<b>Total Number of Units to be Conveyed</b>	<b>Proposed Action</b>
A	Woodland Groves	118	118	118	Convey 118 units “as is.” Units would be maintained by PO.
B	Eagle View	64	12	64	Convey 64 units, keep 12 units “as is,” and demolish 52 units. Units would be maintained by PO.
C	Falcon Estates (former Gunfighter Manor)	108	0	108	Offer 105 units as excess through OWS program or demolish 108 units, including the Three Historic Senior Officers’ Quarters. Land would be conveyed and renamed Falcon Estates.
C	Trinity Heights	179	179	179	Convey “as is.” Units would be maintained by PO.
C	Coyote Terrace	126	126	126	Convey “as is.” Units would be maintained by PO.
C	Elk Heights (Desert Vista)	199	0	199	Offer 199 units as excess through OWS program or demolish and construct new units. Land would be conveyed and housing area renamed Elk Heights. Units would be maintained by PO.
C	Gunfighter Circle	9	6	9	Convey 6 units “as is.” Renovate 3 units. Units would be maintained by PO.
C	Gunfighter Manor	182	182	182	Convey “as is.” Units would be maintained by PO.
C	Desert Skies Estates	106	106	106	Convey “as is.” Units would be maintained by PO.
C	Sagebrush View (including former Dunes)	64	64	64	Existing units in the former Dunes neighborhood would be demolished prior to the land being conveyed as part of Sagebrush View. Construct additional new units. Units would be maintained by PO.
D	Housing Office	--	--	--	Existing housing office and parking lot would be conveyed “as is.”
<b>Totals</b>		<b>1,155</b>	<b>793</b>	<b>1,155</b>	Demolish 359 units and construct an additional 263 new units to equal 1,059 end-state units.

**Environmental Restrictions on Development of Land.** Mountain Home AFB entered into a Consent Order with the IDEQ in July 2009. The Consent Order dictates actions to address pesticide and asbestos contamination in soil in and around some of the housing neighborhoods (see **Section 3.10**). The PO would be prohibited by the terms of the Consent Order from undertaking any demolition, construction, or renovation of MFH units in neighborhoods that are under investigation or remediation for contamination. The lease document would include prescriptive language notifying the PO of the restrictions on the use of certain land parcels and requiring the PO to obtain permission of the Mountain Home AFB Civil Engineer Environmental Office (366 CES/CEAN) prior to commencing any activities on the conveyed parcels. For example, the PO would be restricted from removing foundations or disturbing the soil in the Elk Heights neighborhood. Mountain Home AFB would have one year after demolition of the modular units (or removal under OWS) to demolish the foundations, dispose of any contaminated soil, backfill major excavations, and level and grade the site in preparation for new construction.

**Lease of Land.** The USAF would grant the PO a lease for approximately 502 acres, as described in **Section 2.1**. This acreage would be divided into four separate parcels, each with its own survey and legal description. However, development density on the leased parcels would not exceed six multiple units per acre or four single-family units per acre. An optional fifth parcel of vacant land to the north of the Desert Skies Estates neighborhood would be conveyed contingent upon Mountain Home AFB receiving the beddown mission for the F-35 aircraft. **Table 2-3** presents the approximate breakdown of each of the three proposed parcels according to area and neighborhood.

**Table 2-3. Proposed Land Parcels under the MFH Privatization Program at Mountain Home AFB**

Parcel Area	Acres
Parcel A – Woodland Groves	40.76
Parcel B – Eagle View	25.25
Parcel C – Falcon Estates (the former Gunfighter Manor), Trinity Heights, Coyote Terrace, Elk Heights (Desert Vista), Gunfighter Circle, Gunfighter Manor, Desert Skies Estates, and Sagebrush View (including former Dunes neighborhood)	435.13
Parcel D – Housing Office	1.04
<b>Total</b>	<b>502.18</b>

Leasing of the housing area parcels would be subject to several conditions imposed by the USAF. The lease would be subject to all existing easements, or those subsequently granted, and established access routes for roadways and utilities located, or to be located, on the premises. The lease would do the following:

- Prohibit the PO from storing hazardous wastes (above those quantities generated in routine operations that are immediately disposed of) or taking any actions that would cause irreparable injury to the land. The PO would be required to comply with all Federal, state, interstate, or local applicable laws, regulations, conditions, or instructions affecting its activities. The USAF would include clauses in the lease permitting the USAF to conduct periodic inspection of the property to ensure its safe condition and its proper use in accordance with the terms of the lease. Recycling materials such as paper, cardboard, glass, and plastic would be collected and recycled at an off-installation facility per Elmore County and Mountain Home Landfill regulations.
- Prohibit operation by the PO of satellite hazardous waste accumulation sites on Mountain Home AFB. The PO would be responsible for appropriate storage and disposal of hazardous waste and

universal waste (e.g., fluorescent bulbs, batteries, thermostats). The PO would be responsible for any environmental fines or penalties arising from accidental, negligent, or intentional acts on the property. The PO would be responsible for the costs of disposing of solid waste generated as a result of the MFH construction/demolition activities and subsequent housing use. Solid waste generated would be disposed of off-installation at the PO's expense.

- Prohibit the use of asbestos, ACM, or lead-based paint (LBP) in the construction of new housing units.
- Prohibit discharge of waste or effluent from the premises in such a manner that the discharge would contaminate streams or other bodies of water or otherwise become a public nuisance.
- Prohibit removal or disturbance of, or causing or permitting such, any historical, archaeological, architectural, or cultural artifacts, relics, remains, or objects of antiquity. In the event such items should be discovered, the PO would be required to notify the installation commander or his designated representative and immediately protect the site and the material from further disturbance.
- Require maintenance of all soil, water, vegetation, and designated natural resources areas using appropriate measures to prevent or control soil erosion, spread of noxious weeds, and spread of infectious vegetation diseases within the installation. Soil erosion measures would be addressed in permits (e.g., Clean Water Act [CWA] Section 404 permit) and in storm water pollution prevention plans (SWPPPs). Other appropriate measures would be addressed in accordance with documents such as the Integrated Natural Resources Management Plan and Base Pest Control Plan. The PO would be required to comply with all applicable permits and regulations..
- Prohibit the cutting of timber; mining operations; and the removal of sand, gravel, or like substances from the ground.
- Require the PO to apply for and comply with any required regulatory permits. These permits would belong to the PO and not Mountain Home AFB or the Air Force.

Federal laws, regulations, and EOs, such as the NEPA, NHPA, CWA, Endangered Species Act (ESA), Migratory Bird Treaty Act, and Archaeological Resources Protection Act, would continue to be applicable and enforced by the USAF on the leased property. The PO would be required to consult with Mountain Home AFB prior to any future actions that could potentially trigger these authorities. Potentially applicable laws, regulations, and EOs are summarized in **Appendix B**.

**Conveyances.** A total of 1,155 MFH units and approximately 502 acres of land would be initially conveyed to the PO; 793 units are adequate, 359 units would be demolished, 3 units in the Gunfighter Circle neighborhood would be renovated, and 263 units would be constructed over 6 years for an end-state total of 1,059 units. The USAF would convey this property with encumbrances, notices, and requirements obligating the PO to certain actions. To support the data collection process relevant to the Proposed Action, the USAF will complete an Environmental Baseline Survey to determine the location and extent of possible contamination from underground storage tanks (USTs) or other sources. All MFH units with historic heating oil USTs in place would be identified prior to commencement of demolition and construction activities. The PO would be responsible for the removal and disposition of the tanks in a closely coordinated effort with the 366 CES Environmental Office. All heating oil USTs identified would be removed and properly disposed of in accordance with best management practices (BMPs) for heating oil tanks, Mountain Home AFB management plans, and the Idaho Administrative Procedures Act regulations. Sampling would be conducted at these UST sites to investigate the presence of contamination. If results of the sampling were to indicate the presence of contamination above action levels, the PO would be responsible for completing corrective actions prior to commencement of construction and demolition activities.

The USAF would identify any easements and rights-of-way that might affect the PO's use of conveyed property.

**Barrier-free Design.** New MFH and ancillary supporting facilities must adhere to the *Uniform Federal Accessibility Standards* and the *Americans with Disabilities Act Accessibility Guidelines* promulgated by the Access Board (formerly known as the Architectural and Transportation Barriers Compliance Board) pursuant to the Architectural Barriers Act of 1968, Rehabilitation Act of 1973, and Americans with Disabilities Act of 1990. These standards require that at least 5 percent of new MFH units be designed and built to be accessible, or easily modifiable for access, by persons with physical disabilities.

**Construction and Demolition Standards.** Demolition and construction standards reflect consideration of Unified Facilities Criteria (UFC) and State of Idaho building codes, standards, and environmental regulations. If MFH units are constructed in the future, construction would be based on sustainable design and development concepts and would seek to incorporate consideration of matters such as sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Design, materials, equipment, and construction methods would reduce energy and water consumption to current Energy Star<sup>1</sup> criteria. Design features would include water efficient landscaping; optimizing glass locations and areas; optimizing insulation in exterior walls, ceilings, and between adjoining units; weatherstripping throughout; minimizing duct leakage; and appropriate overhangs and patio rooflines to address summer shade and winter sun. Attention to construction details, exterior fenestration materials, and passive solar energy systems would be employed whenever possible. The PO would ensure that materials, equipment, and finishes would be durable, low-maintenance, and functional. These measures would improve environmental and economic performance of facilities through the use of established and advanced industry principles, practices, materials, and standards. In accordance with EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, the PO would consider and use recycled products and environmentally preferable purchasing criteria developed by the USEPA whenever possible.

A Demolition Plan would be established and implemented as part of the overall Construction Management Plan. The Demolition Plan would provide a phased approach to demolition of existing units, appurtenances, and infrastructure. Underground utility mains scheduled for demolition could be capped at the main and abandoned in place; however, the PO would remove all utility lines connecting to the main utility line (laterals). Location of any utility mains abandoned in place would be provided to the installation. The contractor would be responsible for handling any ACM and LBP in accordance with applicable laws, including removal, disposal, and abatement. An asbestos disposal plan would identify the proposed disposal site for any ACM. After demolition is complete (including facilities, utilities, and roads and fences, as appropriate), the PO would grade the land for proper drainage and seed all areas where new construction is not planned. The PO would handle, maintain, and transport all debris to a government-approved landfill site in accordance with applicable Federal, state and local laws. Selling or recycling demolition debris would be pursued to the maximum extent possible. The PO would attempt to recycle construction and demolition debris through the Mountain Home AFB Recycle Center and, if any materials cannot be accommodated, the PO would take them off the installation to sell or recycle. Measures would be taken to preserve as many existing trees that are determined to be in "good condition" by the installation.

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<sup>1</sup> The U.S. Environmental Protection Agency and U.S. Department of Energy promote the use of energy efficient equipment by awarding the Energy Star label to products that save energy. The agencies set energy-efficiency criteria for specific consumer and commercial products. Energy Star products include appliances (e.g., refrigerators, dishwashers, and room air conditioners) and residential heating ventilation and air conditioning equipment (e.g., programmable thermostats, boilers, furnaces, heat pumps, and central air conditioners).

**Operation and Maintenance.** The PO would operate and maintain for 50 years all existing and new MFH units and ancillary supporting facilities, including associated parking lots, sidewalks, associated infrastructure, and landscaping (including trees), in accordance with the quality standards established in privatization program agreements. At Mountain Home AFB's option, the installation may extend the period of operation and maintenance and the leases of land supporting MFH for an additional 25 years.

**Rental Rates and Payments.** The rental rate charged by the PO would not exceed a military occupant's BAH. Mountain Home AFB would continue to categorize MFH by grade group. Rental rates and payments will be adjusted for utility allowances upon installation of meters and establishment of utility baseline (see *Utilities*). Unit rents would be fixed by type of unit and paid up front. BAH would be paid in arrears.

**Utilities.** The PO would be responsible for maintaining the remaining or any new electrical, natural gas, water, and sewer utilities from each MFH unit to the point of demarcation (POD) as specified in the lease agreement. The USAF would retain ownership of the utility systems outside of the housing areas, from the POD onto the rest of the installation, including overhead and underground distribution lines and primary and secondary lines. Telephone, network, and cable television distribution systems would not be conveyed to the PO.

The PO would pay all utility costs until utility meters are installed on each housing unit. Until meters are installed on each unit, the military member would surrender his or her entire BAH for rent and utilities. No later than the end of the Transition Period (approximately 6 years), the PO must have individual gas and electric meters installed on the end-state units. The PO would then establish a fixed rent for those units at an amount not to exceed the BAH rate minus an amount sufficient to cover 110 percent of estimated average reasonable utility charges at the dependent rate of the military grade that the unit is designated for, in accordance with the Project Development Demographics. The PO would pay for all water, sewer, and refuse collection services, including curbside recycling pickup, throughout the duration of the privatization agreement.

**Occupancy Guarantee.** Mountain Home AFB would not guarantee the level of occupancy of MFH by military members. The Mountain Home AFB Housing Office would provide "Referral Tenants." All military personnel assigned to the local area would be required to process through the Mountain Home AFB Housing Office upon arrival prior to signing a lease for housing. Freedom of housing choice would be preserved. The PO would compile and maintain a waiting list. After the transition period, if vacancy rates exceed 5 percent, the PO may immediately rent to other active-duty members of the uniformed services and their families. If vacancy rates exceed 5 percent for more than 30 consecutive days, the PO may rent to Federal civil service, retired military members, and retired Federal civil service and their families. If vacancy rates exceed 5 percent for more than 60 consecutive days, the PO may rent to DOD contractor permanent employees (U.S. citizens) and their families. If vacancy rates exceed 5 percent for more than 90 consecutive days, the PO may rent to the general public with a written notice to the Government. Should this type of situation arise, the PO would be allowed to fill only the number of rental units necessary to bring the vacancy rate to 5 percent. Offering of vacant units to other eligible tenants would be based on a priority list. Other eligible tenants would include (listed in descending order of priority):

- Other active-duty military members and families (including unaccompanied military members)
- Federal civil service employees
- Retired military members and families
- Guard and Reserve military members and families
- Retired Federal civil service employees
- DOD contractor or permanent employees (U.S. citizens)

- Members of the general public (with prior written notice to the Government).

**Jurisdiction.** The legal jurisdiction of USAF property may be either proprietary, exclusive Federal, or concurrent jurisdiction. All parcels to be leased at Mountain Home AFB are exclusive Federal jurisdiction. The term “exclusive legislative jurisdiction” is applied when the Federal government possesses, by whatever method acquired, all the authority of the state, and in which the state concerned has not reserved to itself the right to exercise any of the authority concurrently with the United States except the right to serve civil or criminal process in the area relative to activities that occurred outside the area. Privatization would not change existing legislative jurisdiction. The government would, however, reserve the right to change the jurisdiction of the leased parcels at any time. Such change would not be the basis for a claim by the PO for property taxes or other costs.

**Municipal Services.** Mountain Home AFB would provide fire, law enforcement services, and other emergency services to the MFH area. The levels of service would include emergency response and force protection. The PO would reflect these costs in its operating budget and reimburse for a fixed monthly fee for fire and police services as calculated annually based on a 5-year running average of emergency call history.

## **2.2 Alternative for the Three Historic Senior Officers’ Quarters**

Under the Proposed Action the Three Historic Senior Officers’ Quarters would be conveyed to the PO and demolished with the other Capehart-Wherry homes in the Falcon Estates neighborhood. An alternative to the Proposed Action is considered in this EA that would preserve one or more of the Three Historic Senior Officers’ Quarters. Those homes not chosen for preservation under this alternative would be demolished. All other elements of the Proposed Action for the 793 adequate and 356 inadequate MFH units would remain the same.

### **2.2.1 Option 1 – Convey with Conditions and Retain in Historic Setting as Installation Housing**

Under this option, the Three Historic Senior Officers’ Quarters would be conveyed to the PO and one or more of the homes would be retained in their current setting for continued use as installation housing. The mature trees and landscaping would be maintained to enhance the historic surroundings. The homes would be conveyed with conditions that they be rehabilitated and maintained in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (DOI 1995) and pertinent National Park Service Preservation Briefs and guidance. The PO would be required to submit renovation plans to the Mountain Home AFB cultural resources officer. The plans would be approved by the installation in consultation with the SHPO. New construction in the Falcon Estates neighborhood would be of the Craftsman ranch house design, which would be consistent with the Capehart-Wherry single-story architecture. This would retain the feeling and association of the houses’ original setting within the former Gunfighter Manor neighborhood. The exterior appearance of the homes would be maintained consistent with the recognized architectural design; however, upgrades or maintenance to the homes would be allowed upon consultation with the SHPO.

### **2.2.2 Option 2 – Convey with Conditions and Retain in Historic Setting as Community Space**

Option 2 would involve conveying the Three Historic Senior Officers’ Quarters to the PO and converting one or more of the homes to alternative uses, such as community space for meetings or social events. As in Option 1, the Three Historic Senior Officers’ Quarters would be conveyed with conditions that one or

more of the homes be rehabilitated and maintained in accordance with DOI standards. The building exteriors, the mature trees, and the landscaping would be retained in the current historic setting as described above. The building interiors would be renovated to provide for offices or open meeting rooms, while protecting and maintaining historic materials and features that are present in the original design. The PO would be required to submit renovation plans to the Mountain Home AFB cultural resources officer. The plans would be approved by the installation in consultation with the SHPO. The use of one or more of the homes as community space would complement the desired development feature of a community center with enhanced park and picnic areas in the Falcon Estates housing area.

### **2.2.3 Option 3 – Do Not Convey**

Under Option 3, Mountain Home AFB would not convey the Three Historic Senior Officers' Quarters to the PO. The metes and bounds survey would inscribe an area in the center of the Falcon Estates neighborhood to include the three homes, associated landscaping, and mature tree canopy that would remain under the control of the installation. The disposition of the homes would occur outside of the MHPI decision process.

## **2.3 The No Action Alternative**

CEQ regulations require inclusion of the No Action Alternative. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and viable alternatives can be evaluated. Under the No Action Alternative, Mountain Home AFB would not implement the Proposed Action. Mountain Home AFB would continue to provide for the housing needs of military personnel and family members.

Mountain Home AFB has 793 MFH units that are deemed adequate for conveyance “as is.” Most of these units have been constructed in the past 6 years and would continue to provide adequate housing for many years into the future with only minor maintenance and repairs. The remainder of the MFH units (359 units) would also continue to be used under the No Action Alternative. These units are substantially older (40 to 60 years old) and would require more intensive maintenance or renovations to bring them up to current USAF housing standards. Under the No Action Alternative, it is anticipated that these older MFH units would continue to be maintained and renovated, as needed. Based on historical trends, it is assumed that the amount of Congressional funding for MFH would not change and that the housing maintenance backlog would continue to increase. In their existing condition, these MFH units are inadequate facilities. The maintenance and renovation of these older units would be an unnecessary and costly burden to the USAF.

Results of the revised HRMA indicate that Mountain Home AFB should achieve an end-state of 1,324 MFH units (MHAFFB 2005a). Mountain Home AFB and HQ AFCEE have agreed to a reduced housing end-state of 1,059 units. If housing privatization were not to occur, Mountain Home AFB would be required to meet the HRMA end-state of 1,324 units and would have a deficit of 169 MFH units. Mountain Home AFB would continue to maintain and upgrade infrastructure components and at some point address the 359 units deemed inadequate. Also, due to the age of some of the units' utilities systems, upgrades or replacements would also be needed to improve the overall level of service and efficiency. Therefore, these anticipated activities would require undertaking NEPA analyses at that time.

## **2.4 Alternatives for Family Housing Considered but Eliminated from Detailed Analysis**

### **2.4.1.1 The Partial Privatization Alternative**

Under this alternative, Mountain Home AFB would privatize only a portion of the installation's MFH inventory. Family housing in good condition (not needing demolition) would remain subject to USAF management for maintenance and operational control.

Privatization of only a portion of Mountain Home AFB's MFH inventory would have several substantial drawbacks. First, the condition of the MFH units retained by the USAF would change over time, resulting in a need for their renovation or replacement. Failure to include the entire inventory of housing in the privatization transaction would only delay action to provide adequate housing for airmen and their dependents. Second, having two management entities (the USAF and the PO) would not be as cost-effective as one. From a private developer's perspective, maximum potential cash flow is important to support development and operation of the ancillary supporting facilities desired by the installation, activities that traditionally do not provide independent sources of revenue to sustain them. Together, these factors render consideration of partial privatization at Mountain Home AFB not feasible and, therefore, such an alternative will not be further evaluated in detail in the EA.

### **2.4.1.2 The Private Sector Reliance Alternative**

Under this alternative, Mountain Home AFB would rely solely on the private sector to meet the housing needs of personnel assigned to the installation. The installation would terminate MFH programs, dispose of existing MFH units, and convert the land now supporting housing areas to other uses.

The alternative is premised, in part, on the view that competitive marketplace forces would lead to the creation of sufficient affordable, quality commercial housing. Data vary, but, in general, experience has shown that military members and their families living off-installation must cover between 15 and 20 percent of their costs out-of-pocket. Moreover, living on-installation has several intangible benefits to military members and their families. These include camaraderie and esprit de corps among the military personnel, a sense of "family" among dependents (especially during military deployments), proximity to the workplace (thereby avoiding lengthy commutes), and each military member's peace of mind in knowing that his or her dependents are residing in a safe community while they are deployed or serving on temporary duty at a distant location.

As a practical matter, termination of Mountain Home AFB MFH would prove difficult. If MFH were to be terminated over a period of years, without maintenance funding, the existing housing would become unsuitable because of age or the necessity of repairs. Residents could then find themselves living in blighted and partially abandoned neighborhoods. If MFH were to be terminated at once, it is unlikely that the private sector could provide the requisite amount of affordable, quality housing units, and schools, shops, roads, and other support amenities, on short notice.

Termination of MFH programs would involve abandonment of the considerable investments in those facilities. The various consequences of reliance on the private sector and the management difficulties of effecting termination of USAF MFH would prove challenging. In light of the aggregate value of MFH units suitable for continued use with only minor renovations, termination of a family housing construction and maintenance program would gravely contravene the fiscal responsibilities that the U.S. Congress expects of the USAF. For these reasons, this alternative is not reasonable and will not be further evaluated in detail in the EA.

### 2.4.1.3 The Leasing Alternative

Statutory authorities exist for Mountain Home AFB to ensure availability of adequate, affordable housing through use of long-term leases of housing for military family use. Key aspects of the two laws providing these authorities are summarized below.

- *Long-term leasing of military family housing to be constructed.* Family housing obtained through use of this authority, which appears at 10 U.S.C. 2835, is most often referred to as “Section 801 housing.” Under this authority, the USAF may, through competitive contract procedures, have a developer build or renovate (to residential use) family housing units near an installation. Housing units under this authority must meet DOD specifications. The USAF may then lease the units for use as MFH for a period of not more than 20 years. At the end of the lease term, the USAF has the option to purchase the leased MFH units.
- *Military housing rental guarantee program.* Family housing obtained through use of this authority, which appears at 10 U.S.C. 2836, is most often referred to as “Section 802 housing.” Under this authority, the USAF may award a competitive contract to a private developer or a state or local housing authority to construct or rehabilitate housing on or near an installation having a shortage of housing for personnel with or without accompanying dependents. The USAF contractually guarantees the occupancy levels of the housing units, at rental rates comparable to those for similar units in the same general market. Housing units under this authority must comply with DOD specifications or, at the discretion of the Service secretary, local building codes. A rental guarantee agreement may not exceed 25 years in duration; it may be renewed only for housing on government-owned land. The agreement may provide that utilities, trash collection, and entomological services be furnished by the USAF at no cost to the occupant to the same extent such services are provided to occupants of on-installation MFH.

USAF-wide, there has been only limited experience with either Section 801 or Section 802. An important drawback associated with these housing programs is related to what is known as budget “scoring,” the method of accounting for Federal government obligations as required by the Budget Enforcement Act of 1990. Scoring ensures that all government obligations are accounted for when long-term liability is incurred (during the first year of a project). Scoring guidelines issued by the Federal Office of Management and Budget require that a project be fully funded with sufficient budget authority in its first year to cover the government’s long-term commitment. In other words, all potential costs associated with long-term leasing or rental guarantee programs must be recognized in the first year, and they must be considered part of the USAF’s total obligation authority (the total monies appropriated by Congress for use by the USAF in a given year). For some privatization projects, such as military-leased housing, the USAF’s obligations for scoring purposes amount to the net present value of the total rent under the lease. These amounts can be nearly as great as the sums required under traditional military construction financing for USAF-initiated construction of similar facilities.

The Section 801 housing program and the Section 802 rental guarantee program only partially address the purpose of and need for the Proposed Action. Because of the scoring guidelines, the USAF would obtain very little or no leverage benefit.

The enactment of new authorities in the MHPI suggests Congress’s recognition that the drawbacks of Section 801 and Section 802 outweigh the potential benefits to the USAF. Although use of the authorities in either Section 801 or Section 802 or both would be possible, their use would not be reasonable when compared with the greater flexibility and economic advantages of the new authorities offered by the MHPI to the USAF and its members’ families. Accordingly, this alternative will not be further evaluated in detail in the EA.

### 3. Affected Environment and Environmental Consequences

All potentially relevant resource areas were initially considered for analysis in this EA. In compliance with NEPA, CEQ, and EIAP 32 CFR Part 989 guidelines, the following discussion of the affected environment and environmental consequences focuses only on those resource areas considered potentially subject to impacts and with potentially significant environmental issues. This section includes noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomic resources and environmental justice, infrastructure, hazardous materials and wastes, and safety. Some environmental resources that are often analyzed in an EA have been omitted from this analysis. The basis for such exclusions is as follows:

**Coastal Zone Management.** Mountain Home AFB is not within a coastal zone and, therefore, implementation of the Proposed Action would not alter coastal zone resources. Accordingly, the USAF has omitted detailed examination of coastal zone management.

**Visual/Aesthetic Resources.** The Proposed Action does not involve any activities that would significantly alter the aesthetic qualities of the area or landscape. The Proposed Action would be consistent with the current characteristic features of the area and landscape. Accordingly, the USAF has omitted detailed examination of visual/aesthetic resources in this EA.

**Airspace Management.** None of the activities associated with the Proposed Action are within designated airspace. The Proposed Action does not involve any activities that would impact designated airspace or military aircraft operations conducted within designated airspace. Accordingly, the USAF has omitted detailed examination of airspace management in this EA.

This section presents an analysis of the potential direct and indirect impacts that each alternative would have on the affected environment. Each alternative was evaluated for its potential to affect physical, biological, and socioeconomic resources in accordance with CEQ guidelines at 40 CFR 1508.8.

The following discussion elaborates on the nature of the characteristics that might relate to various impacts:

**Short-term or long-term.** These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term impacts are those that would occur only with respect to a particular activity or for a finite period or only during the time required for construction or installation activities. Long-term impacts are those that are more likely to be persistent and chronic.

**Direct or indirect.** A direct impact is caused by and occurs contemporaneously at or near the location of the action. An indirect impact is caused by a proposed action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action. For example, a direct effect of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of the same erosion might lead to lack of spawning and result in lowered reproduction rates of indigenous fish downstream.

**Negligible, minor, moderate, or major.** These relative terms are used to characterize the magnitude or intensity of an impact. Negligible impacts are generally those that might be perceptible but are at the lower level of detection. A minor impact is slight, but detectable. A moderate impact is readily apparent. A major impact is one that is severely adverse or exceptionally beneficial.

**Adverse or beneficial.** An adverse impact is one having unfavorable or undesirable outcomes on the man-made or natural environment. A beneficial impact is one having positive outcomes on the man-made

or natural environment. A single act might result in adverse impacts on one environmental resource and beneficial impacts on another resource.

**Context.** The context of an impact can be localized or more widespread (e.g., regional).

**Intensity.** The intensity of an impact is determined through consideration of several factors, including whether an alternative might have an adverse impact on the unique characteristics of an area (e.g., historical resources, ecologically critical areas), public health or safety, or endangered or threatened species or designated critical habitat. Impacts are also considered in terms of their potential for violation of Federal, state, or local environmental laws; their controversial nature; the degree of uncertainty or unknown impacts, or unique or unknown risks; if there are precedent-setting impacts; and their cumulative impacts (see **Section 4**).

The impact analyses consider all alternatives discussed in **Section 2** that have been identified as reasonable for meeting the purpose of and need for action. These alternatives include the following:

- The Proposed Action (described in **Section 2.1**)
- The Alternative for the Three Historic Senior Officers' Quarters, which includes three options (described in **Section 2.2**)
- The No Action Alternative (described in **Section 2.3**).

**Sections 3.1** through **3.11** discuss potential environmental and socioeconomic impacts on the affected environment.

## **3.1 Noise**

### **3.1.1 Definition of the Resource**

Sound is defined as a particular auditory effect produced by a given source, for example the sound of rain on a rooftop. Noise and sound share the same physical aspects, but noise is considered a disturbance while sound is defined as an auditory effect. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. It can be readily identifiable or generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. How an individual responds to the sound source will determine if the sound is viewed as music to one's ears or as annoying noise. Affected receptors are specific (e.g., schools, churches, or hospitals) or broad (e.g., nature preserves or designated districts) areas in which occasional or persistent sensitivity to noise above ambient levels exists.

**Noise Metrics and Regulations.** Although human response to noise varies, measurements can be calculated with instruments that record instantaneous sound levels in decibels. dBA is used to characterize sound levels that can be sensed by the human ear. "A-weighted" denotes the adjustment of the frequency range to what the average human ear can sense when experiencing an audible event. In clinical hearing assessments, it has been shown that the threshold of audibility falls within a range of 10 to 25 dBA for normal hearing. The threshold of pain occurs at the upper boundary of audibility, which is normally in the region of 135 dBA (USEPA 1981a). **Table 3-1** compares common sounds and shows how they rank in terms of the effects of hearing. As shown, a whisper is normally 30 dBA and considered to be very quiet while an air conditioning unit 20 feet away is considered an intrusive noise at 60 dBA. Noise levels can become annoying at 80 dBA and very annoying at 90 dBA. To the human ear, each 10 dBA increase seems twice as loud (USEPA 1981b).

**Table 3-1. Sound Levels and Human Response**

Noise Level (dBA)	Common Sounds	Effect
10	Just audible	Negligible
30	Soft whisper (15 feet)	Very quiet
50	Light auto traffic (100 feet)	Quiet
60	Air conditioning unit (20 feet)	Intrusive
70	Noisy restaurant or freeway traffic	Telephone use difficult
80	Alarm clock (2 feet)	Annoying
90	Heavy truck (50 feet) or city traffic	Very annoying; Hearing damage (8 hours)
100	Garbage truck	Very annoying
110	Pile drivers	Maximum vocal effort
120	Jet takeoff (200 feet) or auto horn (3 feet)	Maximum vocal effort
140	Carrier deck jet operation	Painfully loud

Source: USEPA 1981b

Sound levels, resulting from multiple single events, are used to characterize community noise effects from aircraft or vehicle activity and are measured in DNL. The DNL noise metric incorporates a “penalty” for evening and nighttime noise events to account for increased annoyance. DNL is the energy-averaged sound level measured over a 24-hour period, with a 10-dBA penalty assigned to noise events occurring between 10:00 p.m. and 7:00 a.m. DNL values are obtained by averaging single event values for a given 24-hour period. DNL is the preferred sound level metric used to characterize noise impacts of the Federal Aviation Administration (FAA), U.S. Department of Housing and Urban Development (HUD), USEPA, and DOD for modeling airport environments.

DNL is the metric recognized by the U.S. government for measuring noise and its impacts on humans. According to the USAF, the FAA, and the HUD criteria, residential units and other noise-sensitive land uses are “clearly unacceptable” in areas where the noise exposure exceeds 75 dBA DNL, “normally unacceptable” in regions exposed to noise between 65 dBA and 75 dBA DNL, and “normally acceptable” in areas exposed to noise of 65 dBA DNL or under. The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of DNL (FICON 1992). For outdoor activities, the USEPA recommends 55 dBA DNL as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise (USEPA 1974).

Under the Noise Control Act of 1972, the Occupational Safety and Health Administration (OSHA) established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed is 115 dBA and exposure to this level must not exceed 15 minutes within an 8-hour period. The standards limit instantaneous exposure, such as impact noise, to 140 dBA. If noise levels exceed these standards, employers are required to provide hearing protection equipment that will reduce sound levels to acceptable limits (29 CFR Part 1910.95).

**Construction Sound Levels.** Building demolition and construction work can cause an increase in sound that is well above the ambient level. A variety of sounds are emitted from loaders, trucks, saws, and other

work equipment. **Table 3-2** lists noise levels associated with common types of construction equipment. Construction equipment usually exceeds the ambient sound levels by 20 to 25 dBA in an urban environment and up to 30 to 35 dBA in a quiet suburban area.

**Table 3-2. Predicted Noise Levels for Construction Equipment**

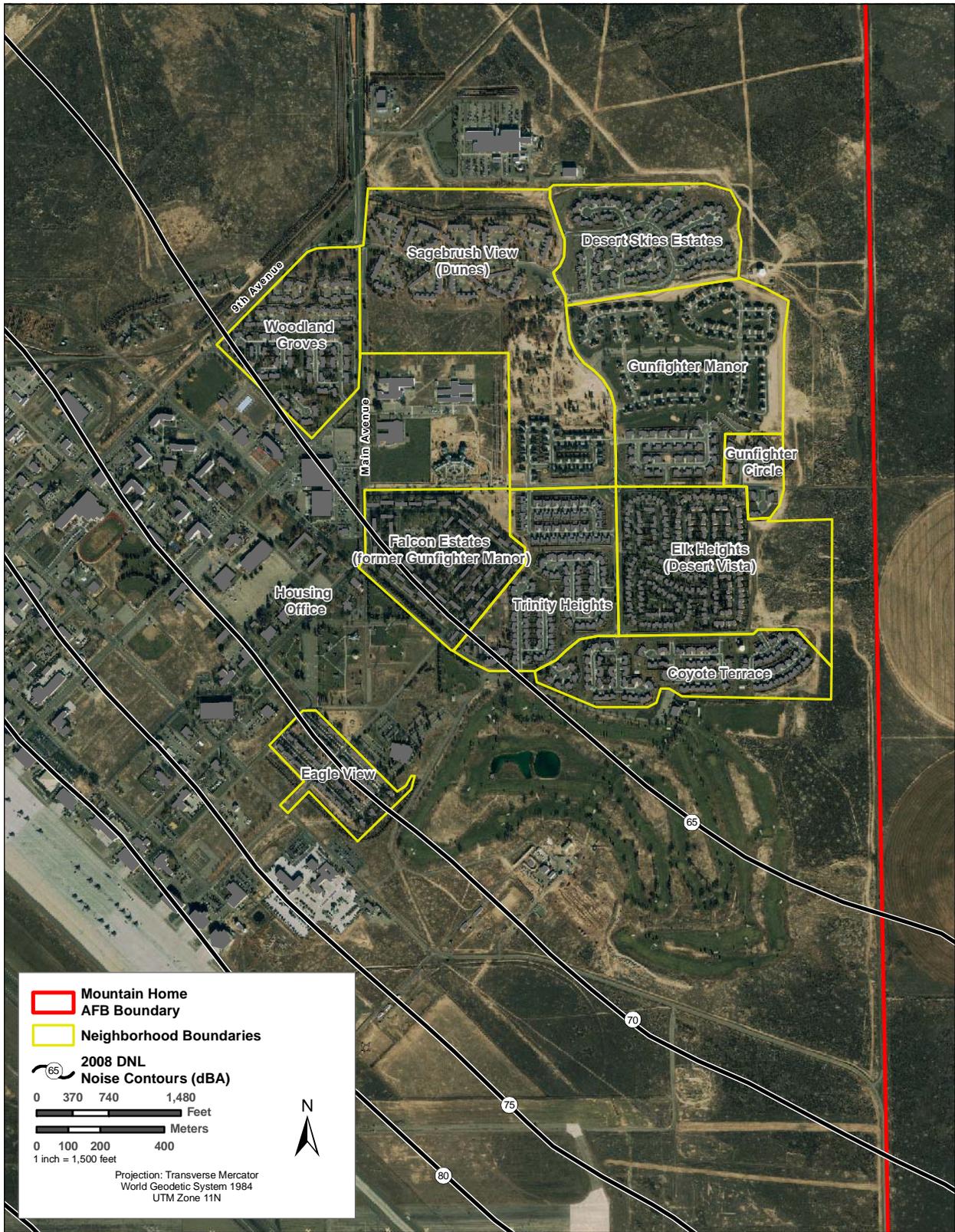
Construction Category and Equipment	Predicted Noise Level at 50 feet (dBA)
<b>Clearing and Grading</b>	
Bulldozer	80
Grader	80–93
Truck	83–94
Roller	73–75
<b>Excavation</b>	
Backhoe	72–93
Jackhammer	81–98
<b>Building Construction</b>	
Concrete mixer	74–88
Welding generator	71–82
Pile driver	91–105
Crane	75–87
Paver	86–88

Source: USEPA 1971

### 3.1.2 Existing Conditions

The ambient noise environment around Mountain Home AFB is affected mainly by weapons fire, military aircraft operations, and automobile traffic. The firing area of the Mountain Home Small Arms Range is approximately 1 mile north of the installation boundary; therefore, small arms noise from this range does not typically affect the MFH area. An on-installation small arms range closer to the MFH areas on Liberator Street generates noise that could be detectable to MFH residents. The Mountain Home Training Range Complex encompasses many properties throughout Owyhee County (with one site in Twin Falls County); the Saylor Creek Range portion of the complex is the closest to Mountain Home AFB at approximately 20 miles to the southeast (MHAFB 2004). Therefore, noise from weapons fire within the complex does not affect the Mountain Home MFH area.

Mountain Home AFB is home to ACC’s 366 FW. The 366 FW includes more than 42 F-15C Eagle and F-15E Strike Eagle aircraft and 14 Republic of Singapore Air Force (RSAF) F-15SG aircraft. The noise contours from aircraft operations extend roughly to the northwest, west, and southeast along the runway. As shown on **Figures 3-1** and **3-2**, more than half of the Eagle View neighborhood (Buildings 1–16, 40, and 42) are located in the 70 to 74 dBA DNL noise zone and the remaining buildings are within the 65 to 69 dBA DNL noise zone. The housing office and small portions of the Woodland Groves, Falcon Estates, and Trinity Heights neighborhoods are also inside the 65 dBA DNL noise contour. As discussed in **Section 3.1.1** per USAF, FAA, and HUD criteria, residential areas are “normally unacceptable” in regions exposed to noise between 65 dBA and 75 dBA DNL. The noise contours do not encompass the other MFH areas on the installation.



Source of Aerial Photography, Installation Boundary: Mountain Home AFB 2008; Housing Lease, Neighborhoods: e\*M, Inc 2010.

**Figure 3-1. Noise Contours Relative to MFH Neighborhoods**

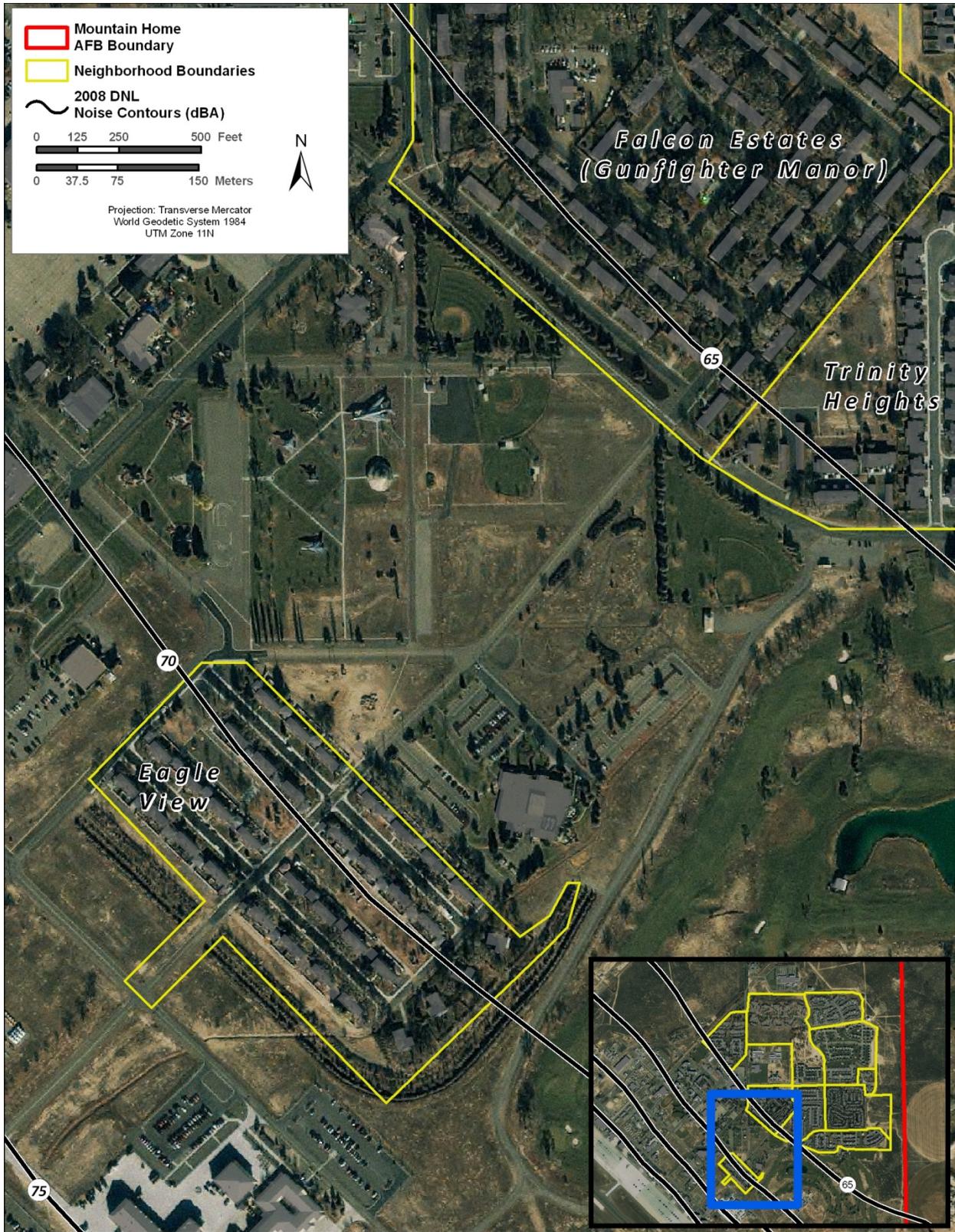


Figure 3-2. Location of 65 and 70 dBA Noise Contours in MFH Neighborhoods

Vehicle use associated with military operations at Mountain Home AFB consists of passenger vehicles, delivery and fuel trucks, and military vehicles. Passenger vehicles compose most of the vehicles present at Mountain Home AFB, including at the MFH areas, and the surrounding community roadways. Perimeter Road and West 6th Street provide access to the installation from Route 67 (Grandview Road). Primary roads within the MFH area include Main Avenue, 9th Avenue, Chestnut Street, and North Mellen Drive.

Considering the military aircraft operations and vehicle traffic at and adjacent to Mountain Home AFB, the ambient sound environment around Mountain Home AFB is likely to resemble an urban atmosphere.

### **3.1.3 Environmental Consequences**

#### **3.1.3.1 Evaluation Criteria**

Noise impact analyses typically evaluate potential changes to the existing noise environment that would result from implementation of a proposed action. Potential changes in the acoustical environment can be beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels or reduce the ambient sound level), negligible (i.e., if the total number of sensitive receptors to unacceptable noise levels is essentially unchanged), or adverse (i.e., if they result in increased sound exposure to unacceptable noise levels or ultimately increase the ambient sound level). Projected noise effects were evaluated qualitatively for the Proposed Action and No Action Alternative.

#### **3.1.3.2 Proposed Action**

**Construction and Demolition Noise.** The sources of noise under the Proposed Action that could impact populations include demolition and construction activities. These sources are addressed as follows.

The components of the Proposed Action consist of demolition and construction activities associated with demolition of 359 MFH units, construction of 263 new MFH units, maintenance and upgrades of the MFH units and ancillary facilities, and construction of desired features (e.g., community center/clubhouse) as discussed in **Section 2.1**. Noise from demolition and construction activities varies depending on the type of equipment being used, the area that the action would occur in, and the distance from the noise source. To predict how construction activities would impact adjacent populations, noise from the probable demolition and construction activities was estimated. For example, as shown in **Table 3-1**, demolition and construction usually involves several pieces of equipment (e.g., trucks and bulldozers) that can be used simultaneously. Under the Proposed Action, the cumulative noise from the equipment, during the busiest day, was estimated to determine the total impact of noise from demolition and construction activities at a given distance. Examples of expected cumulative demolition and construction noise during daytime hours at specified distances are shown in **Table 3-3**. These sound levels were predicted at 50, 100, 150, 200, 400, 800, and 1,200 feet from the source of the noise.

The noise from demolition and construction equipment would be localized, short-term, and intermittent during machinery operations. Heavy equipment would be used periodically during demolition and construction; therefore, noise levels from the equipment would fluctuate throughout the day. The proposed demolition and construction would be expected to result in noise levels comparable to those indicated in **Table 3-3**.

**Table 3-3. Predicted Noise Levels from Demolition and Construction Activities**

Distance from Noise Source	Predicted Noise Level
50 feet	92 dBA
100 feet	86 dBA
150 feet	83 dBA
200 feet	80 dBA
400 feet	74 dBA
800 feet	68 dBA
1,200 feet	64 dBA

Under the Proposed Action, 52 units in Eagle View, 108 units in Falcon Estates, and 199 units in Elk Heights would be demolished. Demolition of MFH units in the Falcon Estates and Eagle View neighborhoods would occur adjacent to sensitive noise receptors. The closest MFH units in the Eagle View neighborhood are approximately 400 feet southwest of Heritage Park, a recreational land use. Persons accessing Heritage Park could experience noise levels of approximately 74 dBA from demolition activities. The Falcon Estates neighborhood is adjacent to several sensitive noise receptors, including a school directly to the north, two baseball fields directly to the south, and two childcare centers approximately 1,000 feet to the southwest. Persons within these noise-sensitive areas could experience noise levels of up to approximately 74 dBA from demolition activities. Noise-sensitive land uses at greater distances from demolition, for example the campground to the west, soccer field to the southwest, and tennis courts to the south of the Woodland Groves neighborhood, would experience much lower noise levels.

Consequently, demolition activities under the Proposed Action would result in short-term, minor, adverse impacts on the noise environment in the vicinity of demolition activities. However, noise generation would last only for the duration of demolition activities and would diminish as demolition activities move farther away from the receptor. Noise effects could be minimized by restricting demolition to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.) and by implementing noise reduction measures such as equipment exhaust mufflers. It is anticipated that the short-term increase in ambient noise levels from the Proposed Action would, therefore, not significantly affect the surrounding populations.

As shown in **Table 2-2**, 199 units from the Elk Heights neighborhood and 105 units from the Falcon Estates neighborhood would be offered as excess through the OWS Program instead of being demolished. Short-term, minor, adverse impacts on the noise environment would be expected from removal of the units, transport of the units (e.g., on a flatbed truck), and associated demolition activities (e.g., the demolition of the foundation after the structure is removed). Noise impacts would be similar to those discussed for the construction and demolition activities included under the Proposed Action.

Short-term, negligible to minor, adverse impacts on the noise environment are anticipated as a result of the increase in construction vehicular traffic under the Proposed Action. Construction traffic would use existing roadways as discussed in **Section 3.1.2** to access the MFH area. Consequently, the additional traffic resulting from construction vehicles would likely cause negligible to minor increases in noise levels for noise-sensitive populations on these roadways.

As shown in **Figures 3-1** and **3-2**, more than half of the Eagle View neighborhood closest to the flightline is within in the 70 to 74 dBA DNL noise zone while the remaining buildings are within the 65 to 69 dBA

DNL noise zone. The housing office and small portions of the Woodland Groves, Falcon Estates, and Trinity Heights neighborhoods are also inside the 65 dBA DNL noise contour. USAF recommendations (AFH 32-7084) state that residential uses are discouraged within the 65 to 69 dBA DNL noise zone and strongly discouraged within the 70 to 74 dBA DNL noise zone.

Although the locations of the new MFH units have not been specifically sited at this time, it is possible that new housing construction would occur within the 65 to 74 dBA DNL noise zone. Mountain Home AFB and the PO would agree to measures to achieve indoor NLR, such as use of triple-pane windows and additional insulation, which would be incorporated into project design and construction of all MFH units constructed within these noise zones. Other NLR measures could include building location and site planning, and design and use of berms, barriers, and vegetative buffers which could help mitigate outdoor noise exposure. Any future renovations to MFH units that cost more than 50 percent of an MFH unit's replacement value would require the installation of additional NLR measures. Siting new MFH units within the 65 to 74 dBA DNL noise zones could result in land use incompatibility due to noise exposure levels generated by existing military aircraft at Mountain Home AFB. Long-term, moderate, adverse effects from noise would be expected from constructing MFH units in these noise zones. However, these long-term, moderate adverse noise effects would be mitigated through incorporation of NLR measures resulting in insignificant adverse impacts. See **Section 3.2.3** for more information on how noise affects land use compatibility.

***Maintenance and Desired Features.*** The Proposed Action would also include continued maintenance and upgrades of MFH units and ancillary facilities, and construction of desired features (e.g., community center/clubhouse). The location of these maintenance activities, upgrades of ancillary facilities, and construction of desired features is not known; however, if these activities required the use of heavy equipment and occurred near sensitive receptors (e.g., occupied residences, schools, and athletic fields), short-term, minor, adverse impacts on the noise environment could result. However, the maintenance and construction activities would only be temporary and would occur during normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.).

### **3.1.3.3 Alternative for the Three Historic Senior Officers' Quarters**

Under the alternative for the Three Historic Senior Officers' Quarters, impacts on noise would generally be similar to the impacts discussed under the Proposed Action. However, if one or more of the historic homes continue to be used as installation housing, noise impacts from demolition and construction activities could affect the residents occupying the quarters.

Noise associated with construction and demolition activities would last only for the duration of the activity and would diminish as activities move farther away from the receptor. These noise effects would be minimized by restricting demolition to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.) and by using noise reduction measures such as equipment exhaust mufflers. Noise would be further attenuated by natural features surrounding the Officer's Quarters such as mature trees and landscaping. It is not anticipated that the short-term increase in ambient noise levels in the Senior Officer's Quarters area due to the Proposed Action would cause significant adverse impacts, regardless of which option is selected.

### **3.1.3.4 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be implemented and conditions described in **Section 3.1.2** would remain the same. The proposed demolition and construction activities would not occur, although the older MFH units would continue to be maintained and renovated, as needed. It would not be expected that noise generated from these activities would be significant, and therefore, the ambient noise environment would not change from existing conditions.

## 3.2 Land Use

### 3.2.1 Definition of the Resource

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws. However, there is no nationally recognized convention or uniform terminology for describing land use categories. As a result, the meanings of various land use descriptions, “labels,” and definitions vary among jurisdictions. Natural conditions of property can be described or categorized as unimproved, undeveloped, conservation or preservation area, and natural or scenic area. There are a wide variety of land use categories resulting from human activity. Descriptive terms often used include residential, commercial, industrial, agricultural, institutional, and recreational. USAF installation land use planning commonly uses 12 general land use classifications: Airfield, Aircraft Operations and Maintenance, Industrial, Administrative, Community (Commercial), Community (Service), Medical, Housing (Accompanied), Housing (Unaccompanied), Outdoor Recreation, Open Space, and Water (USAF 1998).

Two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. Compatibility among land uses fosters the societal interest of obtaining the highest and best uses of real property. Tools supporting land use planning within the civilian sector include written master plans/management plans, policies, and zoning regulations. According to Air Force Pamphlet (AFPAM) 32-1010, *Land Use Planning*, land use planning is the arrangement of compatible activities in the most functionally effective and efficient manner. The USAF comprehensive planning process also uses functional analysis, which determines the degree of connectivity among installation land uses and between installation and off-installation land uses, to determine future installation development and facilities planning (USAF 1998).

In appropriate cases, the location and extent of a proposed action needs to be evaluated for its potential effects on a project site and adjacent land uses. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations. Other relevant factors include matters such as existing land use at the project site, the types of land uses on adjacent properties and their proximity to a proposed action, the duration of a proposed activity, and its “permanence.”

### 3.2.2 Existing Conditions

***Surrounding Off-Installation Land Use.*** Mountain Home AFB consists of 6,844 acres in southwestern Idaho in Elmore County, approximately 50 miles southeast of Boise and 8 miles southwest of the City of Mountain Home (see **Figure 1-1**). Access to Mountain Home AFB is provided by Perimeter Road and West 6th Street (Airbase Road), which connect the installation to State Highway 67 (Grandview Road). The area surrounding the installation is rural, consisting primarily of agricultural land owned by private landowners, the State of Idaho, and the Bureau of Land Management (MHAFB 2009a).

Elmore County has designated Mountain Home AFB and the surrounding area as Air Base Hazard Zone (ABHZ), and the area along the West 6th Street (Airbase Road) entrance to the installation as Air Base Commercial Zone (ACZ) (Elmore County 2004, Elmore County 2009a). The purposes of these generalized land use classifications are to protect Mountain Home AFB from incompatible land use encroachment, while also allowing the best possible use that does not conflict with installation operations of private land within each zone. The ACZ also allows the county to reserve a specific area for commercial land uses near the installation. The ABHZ and ACZ are also Elmore County zoning districts. There are significant land use restrictions within the ABHZ and ACZ, including low residential densities (1 dwelling per 320 acres) in the ABHZ, prohibition of residential uses in the ACZ, and height restrictions

and other use limitations as identified for the Airport Hazard Zone (Elmore County 2009b). The generalized land use designation abutting the ABHZ is General Agriculture/Grazing/Forest; this area is within the Agricultural zoning district (Elmore County 2004, Elmore County 2009a).

**Installation Land Use.** Mountain Home AFB employs 5,081 active military and civilian personnel, and houses more than 5,321 dependants (EIA 2008). The 366 FW is the host wing at Mountain Home AFB providing support to associate units, including the Air Force Audit Agency; Area Defense Counsel; Office of Special Investigations, Detachment 221; and 726th Air Control Squadron (MHAFB undated).

The *Mountain Home AFB General Plan* identifies the 12 USAF general land use categories, but has mapped these land use into five consolidated categories, as shown in **Figure 2-1**. The five land use categories are Aircraft Operations and Maintenance; Commercial, Services, and Administrative; Industrial; Outdoor Recreation; and Residential (MHAFB 2009a). The predominant land use in the Main Area of Mountain Home AFB is Residential, which is consolidated in one area east of Gunfighter Avenue with the exception of two housing neighborhoods (Woodland Groves and Eagle View). Commercial, Services, and Administrative areas, including child education (kindergarten through 4<sup>th</sup> grade) and indoor recreation facilities, are centrally located in the main housing area. These centrally located Community Service land uses are also accessible to Housing (Unaccompanied) land uses, northwest of the Housing Office. Outdoor Recreation land uses are primarily to the south of the Residential land use area. Industrial land use areas are well separated from adjacent Administrative land uses but are adjacent to some Residential land use areas across Gunfighter Avenue. Aircraft Operations and Maintenance activities are separated from the MFH neighborhoods by the Industrial land use and Commercial, Services and Administrative land use areas.

**Figure 3-3** shows the location of the Proposed Action and the existing land use designations at Mountain Home AFB, which have been combined into general categories. The Proposed Action would occur within several of the generalized land use designations, including Residential; Commercial, Services, and Administration; and Industrial.

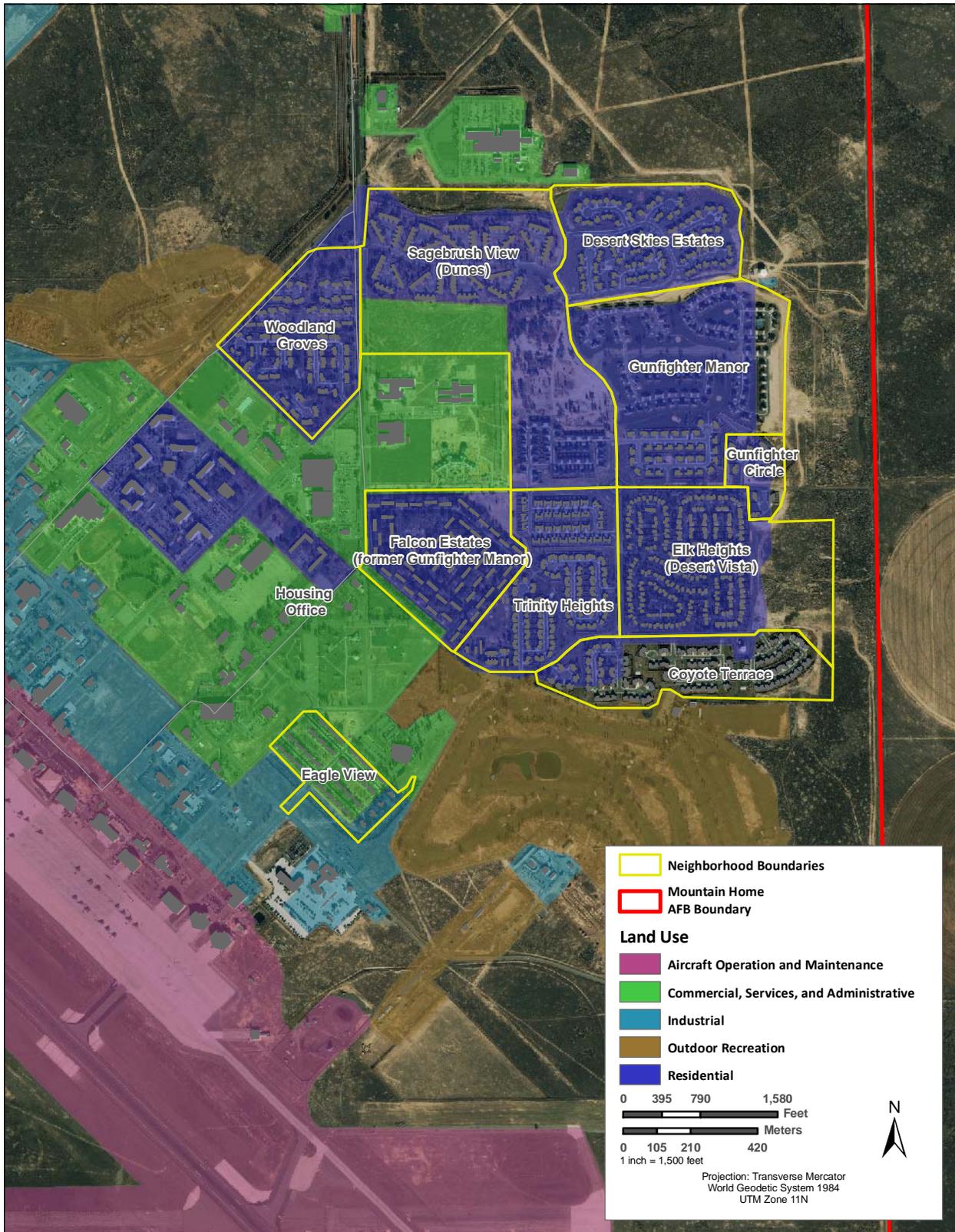
Portions of the Proposed Action would occur inside the 65 dBA and 74 dBA DNL noise zone from aircraft operations at Mountain Home AFB (see **Figure 3-1**). The southwestern half of the Eagle View neighborhood is within the 70 to 74 dBA DNL noise zone, and the remaining portion of Eagle View; small portions of the Woodland Groves, Falcon Estates, and Trinity Heights neighborhoods; and the Housing Office are within the 65 to 69 dBA DNL noise zone.

### 3.2.3 Environmental Consequences

#### 3.2.3.1 Evaluation Criteria

The significance of potential land use effects is based on the level of land use sensitivity in areas affected by a proposed action and compatibility of proposed actions with existing conditions. A proposed action could have a significant effect with respect to land use if any the following were to occur:

- Be inconsistent or in noncompliance with existing land use plans or policies
- Preclude the viability of existing land use
- Preclude continued use or occupation of an area
- Be incompatible with adjacent land use to the extent that public health or safety is threatened
- Conflict with planning criteria established to ensure the safety and protection of human life and property.



**Figure 3-3. Existing Land Use Designations in the Vicinity of MFH Neighborhoods**

### **3.2.3.2 Proposed Action**

The Proposed Action would be consistent with the goals identified in the *Mountain Home AFB General Plan*. The Proposed Action would be consistent with the 366 FW's goals for Mountain Home AFB, including protecting personnel and resources, and providing for the physiological and psychological needs of military families. The Proposed Action would occur within several generalized land use designations, including Residential; Commercial, Services, and Administrative; and Industrial. Most of the Proposed Action would occur within the Residential generalized land use designation, which is consistent with the MFH use of the Proposed Action. However, some projects of the Proposed Action would likely require changes to land use designations. If new MFH units proposed for the Sagebrush View neighborhood are constructed in areas not currently designated residential (along the southern edge of the former Dunes neighborhood), the Proposed Action could result in a land use designation change from Commercial, Services, and Administrative to Residential. Construction of desired community features, such as indoor and outdoor exercise and recreational facilities would also require a land use designation change to Commercial, Services, and Administrative or Outdoor Recreation depending on the facility. However, these potential land use designation changes would be compatible with the Residential land use. The Eagle View neighborhood is currently within the designated Industrial and Commercial, Services, and Administrative land use areas; therefore, the existing residential land use for the Eagle View neighborhood does not conform to the area's designated land use. Long-term, adverse impacts on land use plans and policies would be expected to continue based on the land use incompatibilities. If the Eagle View neighborhood continues to be used for residential housing with possible new housing construction, a land use designation change to Residential would be required.

The Proposed Action would not violate local zoning ordinances because municipal and county zoning regulations do not apply to Federal property. Therefore, the Proposed Action would not result in any impacts on municipal and county land use plans or policies.

The Proposed Action would be compatible with all surrounding land uses and would not preclude the viability or continued use and occupation of existing land uses at Mountain Home AFB. Most of the area proposed to be privatized is currently designated as Residential and is being used for MFH; therefore, the Proposed Action would continue the existing land use. The continued maintenance of the conveyed MFH units and ancillary facilities in these neighborhoods would make the units more livable, thereby reinforcing the viability and continued use of the units for MFH. The construction of 263 MFH units in the Sagebrush View and Elk Heights neighborhoods would introduce new MFH units in close proximity to other residential areas. Enhancement of the neighborhoods and construction of new MFH units would support the continued use of the adjacent Residential; Community, Services, and Administrative; and Outdoor Recreation generalized land uses, which are functionally important to the MFH land use (USAF 1998). Demolition, construction, and maintenance activities could also result in noise that could be heard by nearby occupied MFH units, schools, a hospital, and outdoor recreational facilities. However, the noise and disturbance produced would be short-term and would not be of a level that would make it incompatible with these surrounding uses. Therefore, the Proposed Action would result in short-term, minor, adverse effects and long-term, moderate, beneficial effects on the viability of existing land use and continued occupation at Mountain Home AFB. AFH 32-7084 states that residential uses are discouraged inside the 65 dBA DNL noise contour and strongly discouraged inside the 70 dBA DNL noise contour (USAF 1999).

AFH 32-7084 also states that alternative options should be considered prior to developing in these areas, including an evaluation that determines if a demonstrated community need for residential use would not be met if development were prohibited in these zones. After a community determines that residential uses must be allowed, residential household units are generally acceptable within the 65 to 69 dBA and 70 to

74 dBA DNL noise zones with the incorporation of NLR measures into the design and construction of the units (USAF 1999).

The Proposed Action would convey 64 MFH units in the Eagle View neighborhood, which is within the 65 to 69 dBA DNL noise zone (northeastern half) and the 70 to 74 dBA DNL noise zone (southwestern half). It is not known if the MFH units within Eagle View had NLR measures incorporated into their original design and construction, or any subsequent renovations. If the Eagle View MFH units have NLR measures, the units are compatible, but discouraged within the 65 to 69 dBA DNL noise zone (northeastern half) and strongly discouraged within the 70 to 74 dBA DNL noise zone (southwestern half). If the Eagle View MFH units do not have NLR measures, all of the units are considered incompatible land uses. Of the 64 units in the Eagle View neighborhood proposed to be conveyed, 12 units would be kept “as is” and maintained and 52 units would be demolished. It is not known at this time whether new units would be constructed within the neighborhood. The specific locations of the units proposed to be conveyed as is and demolished are not known. Regardless of the location of the 12 units to be conveyed as is, the Proposed Action would not change the compatibility of these units. If there are no NLR measures, the 12 MFH units that would remain after the proposed demolition would continue to be incompatible and could be a long-term, minor, adverse impact on land use compatibility; however, these impacts would not be significant. If these remaining MFH units include NLR measures, the units would be considered compatible and there would likely be no adverse impacts. Any new units located within the neighborhood would include outdoor to indoor NLR measures to achieve NLR for the appropriate DNL noise zone. Typical outdoor to indoor NLR measures include use of triple-pane windows and additional insulation and other design elements. In addition, building location and site planning, and design and use of berms, barriers, and vegetative buffers, could help mitigate outdoor noise exposure. However, it should be noted that measures to achieve an overall NLR do not necessarily solve all noise issues and additional evaluation would be warranted (USAF 1999). Construction of new MFH units with NLR measures in the Eagle View area would result in a long-term, moderate, adverse impact on land use compatibility; however, these impacts would not be significant.

The southwestern portions of the Woodland Groves, Trinity Heights, and Falcon Estates neighborhoods and the housing office are within the 65 to 69 dBA DNL noise zone. The MFH units within Woodland Groves and Trinity Heights would be conveyed as is and maintained; therefore, the Proposed Action would not change the compatibility of the units in these neighborhoods. If there are no NLR measures, the MFH units within the 65 to 69 dBA DNL noise zone in Woodland Groves and Trinity Heights would continue to be incompatible and could be a long-term, minor, adverse impact on land use compatibility. If these MFH units include NLR measures, the units would be considered compatible and there would likely be no adverse impacts. All MFH units within Falcon Estates would be demolished; it is not known at this time whether new units would be constructed in this area. If new construction were to occur within the 65 to 69 dBA DNL noise zone, appropriate NLR measures would be required. The housing office is compatible at its current location within the 65 to 69 dBA DNL noise zone.

Most cultural and recreational uses and facilities are generally compatible within the 65 to 69 dBA and the 70 to 74 dBA DNL noise zones with some restrictions and incorporation of NLR measures (USAF 1999). Therefore, siting and construction of the community desired features (e.g., indoor and outdoor exercise and recreational facilities) would likely be compatible within any area proposed to be privatized under the Proposed Action if the facilities incorporated the proper NLR measures into design and construction.

The Proposed Action could result in long-term, minor to moderate, adverse impacts on land use compatibility with respect to public health and safety planning criteria related to noise exposure.

### 3.2.3.3 Alternative for the Three Historic Senior Officers' Quarters

Under the alternative for the Three Historic Senior Officers' Quarters, impacts on land use would be similar to those discussed under the Proposed Action. Each of the three Historic Senior Officer's Quarters are located within the 60 to 64 dBA DNL noise zone, which is outside of the noise zones where residential development is discouraged. Thus, continued use of one or more of the quarters for residential use (under Options 1 or 3) or conversion of one or more of the quarters to alternative community facility use (under Option 2), would cause no conflict with existing residential land uses. No significant impacts on land use would occur.

### 3.2.3.4 No Action Alternative

The No Action Alternative would result in a continuation of the existing land use conditions described in **Section 3.2.2**. Under the No Action Alternative, no new MFH units would be constructed, but the existing 1,155 MFH units would continue to be used. However, 359 of these units are considered inadequate, and would require intensive maintenance or renovations to bring them up to current USAF housing standards. Until the inadequate MFH units are upgraded, their condition would progressively worsen until the units would be uninhabitable, thereby preventing the continued use and occupation of the existing residential land use. The No Action Alternative would result in long-term, minor, adverse impacts on land use.

## 3.3 Air Quality

### 3.3.1 Definition of the Resource

In accordance with Federal Clean Air Act (CAA) requirements, the air quality in a given region or area is measured by the concentration of various pollutants in the atmosphere. The measurements of these "criteria pollutants" in ambient air are expressed in units of parts per million (ppm), milligrams per cubic meter ( $\text{mg}/\text{m}^3$ ), or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The air quality in a region is a result not only of the types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological "air basin," and the prevailing meteorological conditions.

The CAA directed the USEPA to develop, implement, and enforce strong environmental regulations that would ensure clean and healthy ambient air quality. To protect public health and welfare, USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to impact human health and the environment. USEPA established both primary and secondary NAAQS under the provisions of the CAA. NAAQS are currently established for six criteria air pollutants: ozone ( $\text{O}_3$ ), carbon monoxide (CO), nitrogen dioxide ( $\text{NO}_2$ ), sulfur dioxide ( $\text{SO}_2$ ), respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [ $\text{PM}_{10}$ ] and particulate matter equal to or less than 2.5 microns in diameter [ $\text{PM}_{2.5}$ ]), and lead (Pb). The primary NAAQS represent maximum levels of background air pollution that are considered safe, with an adequate margin of safety to protect public health. Secondary NAAQS represent the maximum pollutant concentration necessary to protect vegetation, crops, and other public resources along with maintaining visibility standards. Idaho has adopted the NAAQS without changes, termed the Idaho Ambient Air Quality Standards (IAAQS). **Table 3-4** presents the primary and secondary USEPA NAAQS and IAAQS.

**Table 3-4. National and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Standard Value		Federal Standard Type
		Federal	State	
CO	8-hour <sup>a</sup>	9 ppm (10 mg/m <sup>3</sup> )	Same	Primary
	1-hour <sup>a</sup>	35 ppm (40 mg/m <sup>3</sup> )	Same	Primary
NO <sub>2</sub>	Annual Arithmetic Mean	0.053 ppm (100 µg/m <sup>3</sup> )	Same	Primary and Secondary
	1-hour	0.100 ppm <sup>b</sup>	--	Primary
O <sub>3</sub>	8-hour <sup>c</sup>	0.075 ppm (147 µg/m <sup>3</sup> )	Same	Primary and Secondary
	1-hour <sup>d</sup>	0.12 ppm <sup>d</sup>	Same	Primary and Secondary
Pb	Quarterly average	1.5 µg/m <sup>3</sup>	Same	Primary and Secondary
	Rolling 3-Month Avg.	0.15 µg/m <sup>3</sup>	--	Primary and Secondary
PM <sub>10</sub>	24-hour <sup>e</sup>	150 µg/m <sup>3</sup>	Same	Primary and Secondary
PM <sub>2.5</sub>	Annual Arithmetic Mean <sup>f</sup>	15 µg/m <sup>3</sup>	Same	Primary and Secondary
	24-hour <sup>g</sup>	35 µg/m <sup>3</sup>	Same	Primary and Secondary
SO <sub>2</sub>	Annual Arithmetic Mean	0.030 ppm	Same	Primary
	24-hour <sup>a</sup>	0.14 ppm	Same	Primary
	3-hour <sup>a</sup>	0.5 ppm (1,300 µg/m <sup>3</sup> )	Same	Secondary

Sources: USEPA 2010a, IDEQ 1994

Notes: Parenthetical values are approximate equivalent concentrations.

- a. Not to be exceeded more than once per year.
- b. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective 22 January 2010).
- c. To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This standard is effective on May 27, 2008, and replaces the 1997 8-hour ozone standard of 0.08 ppm. However, the 1997 standard and its implementing rules remain in effect while USEPA undergoes rulemaking to transition to the 2008 standard.
- d. As of 15 June 2005, USEPA revoked the Federal 1-hour ozone standard in all areas except the 14 8-hour ozone nonattainment Early Action Compact Areas.
- e. Not to be exceeded more than once per year on average over 3 years.
- f. To attain this standard, the 3-year average of the weighted annual mean PM<sub>2.5</sub> concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m<sup>3</sup>.
- g. To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m<sup>3</sup>. This standard is effective 17 December 2006.

Key: ppm = parts per million; mg/m<sup>3</sup> = milligrams per cubic meter; µg/m<sup>3</sup> = micrograms per cubic meter

Although O<sub>3</sub> is considered a criteria air pollutant and is measurable in the atmosphere, it is not often considered a regulated air pollutant when calculating emissions because O<sub>3</sub> is typically not emitted directly from most emissions sources. Ozone is formed in the atmosphere by photochemical reactions involving sunlight and previously emitted pollutants or “O<sub>3</sub> precursors.” These O<sub>3</sub> precursors consist primarily of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) that are directly emitted from

a wide range of emissions sources. For this reason, regulatory agencies attempt to limit atmospheric O<sub>3</sub> concentrations by controlling VOC pollutants (also identified as reactive organic gases) and NO<sub>2</sub>. As authorized by the CAA, USEPA has delegated responsibility for ensuring compliance with NAAQS to the states and local agencies. As such, each state must develop air pollutant control programs and promulgate regulations and rules that focus on meeting NAAQS and maintaining healthy ambient air quality levels. These programs are detailed in State Implementation Plans (SIPs) that must be developed by each state or local regulatory agency and approved by USEPA. A SIP is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS. Any changes to the compliance schedule or plan (e.g., new regulations, emissions budgets, controls) must be incorporated into the SIP and approved by USEPA.

In 1997, USEPA initiated work on new General Conformity rules and guidance to reflect the new 8-hour O<sub>3</sub>, PM<sub>2.5</sub>, and regional haze standards that were promulgated in that year. The 1-hour O<sub>3</sub> standard will no longer apply to an area 1 year after the effective date of the designation of that area for the 8-hour O<sub>3</sub> NAAQS. The effective designation date for most areas was 15 June 2004. USEPA designated PM<sub>2.5</sub> nonattainment areas in December 2004, and finalized the PM<sub>2.5</sub> implementation rule in January 2005. A portion of one county in the State of Idaho, Franklin County, was identified as being nonattainment for the 24-hour PM<sub>2.5</sub> standard.

On 22 September 2009, the USEPA issued a final rule for mandatory GHG reporting from large GHG emissions sources in the United States. The purpose of the rule is to collect comprehensive and accurate data on carbon dioxide (CO<sub>2</sub>) and other GHG emissions that can be used to inform future policy decisions. In general, the threshold for reporting is 25,000 metric tons or more of CO<sub>2</sub> equivalent per year. The first emissions report is due in 2011 for 2010 emissions. Although control of GHGs is not currently regulated under the CAA, the USEPA has clearly indicated that GHG emissions and climate change are issues that need to be considered in future planning. GHGs are produced by the burning of fossil fuels and through industrial and biological processes.

Title V of the CAA Amendments of 1990 requires states and local agencies to permit major stationary sources. A major stationary source is a facility (i.e., plant, installation, or activity) that has the potential to emit more than 100 tons per year (tpy) of any one criteria air pollutant, 10 tpy of a hazardous air pollutant (HAP), or 25 tpy of any combination of HAPs.

Federal Prevention of Significant Deterioration (PSD) regulations also define air pollutant emissions from proposed major stationary sources or modifications to be “significant” if (1) a proposed project is within 10 kilometers of any Class I area, and (2) regulated pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 µg/m<sup>3</sup> or more [40 CFR 52.21(b)(23)(iii)]. PSD regulations also define ambient air increments, limiting the allowable increases to any area’s baseline air contaminant concentrations, based on the area’s designation as Class I, II, or III [40 CFR 52.21(c)]. Because Mountain Home AFB is not within 10 kilometers of a Class I area and the majority of emissions from the Proposed Action are not stationary source emissions, PSD regulations do not apply and are not discussed further in this EA.

### **3.3.2 Existing Conditions**

Mountain Home AFB is in Elmore County, which is within the Idaho Air Quality Control Region (AQCR) 63 – Idaho Intrastate Region. AQCR 63 consists of the counties of Adams, Blaine, Boise, Bonner, Boundary, Camas, Cassia, Clearwater, Custer, Elmore, Gem, Gooding, Idaho, Jerome, Lemhi, Lewis, Lincoln, Minidoka, Owyhee, Payette, Twin Falls, Valley, and Washington. As defined in 40 CFR 81.313, Elmore County is designated as attainment/unclassifiable for all criteria pollutants (USEPA 2010b).

The most recent emissions inventories for Elmore County and AQCR 63 are shown in **Table 3-5**. Elmore County is considered the local area of influence, and AQCR 63 is considered the regional area of influence for the air quality analysis.

**Table 3-5. Local and Regional Air Emissions Inventory for the Proposed Action (2002)**

	<b>NO<sub>x</sub> (tpy)</b>	<b>VOC (tpy)</b>	<b>CO (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>
Elmore County, ID	3,359	4,166	18,011	155	7,619	1,177
AQCR 63	39,692	88,677	293,883	4,022	147,766	27,706

Source: USEPA 2002

The U.S. Department of Energy, Energy Information Administration, estimates that gross CO<sub>2</sub> emissions in Idaho were 16.2 million metric tons in 2007 (DOE 2010).

IDEQ regulates air quality for the State of Idaho. Mountain Home AFB is classified as a major source of emissions and has an Air Quality Tier I Operating Permit issued by IDEQ under permit No. TI-2007.0041. This permit is effective from 22 July 2008 and expires on 22 July 2013 (IDEQ 2008). The IDEQ requires Mountain Home AFB to calculate annual criteria pollutant emissions from stationary sources and provide this information to the IDEQ and pay annual fees based on the level of emissions. There are various sources on-installation that emit criteria pollutants and HAPs, including generators, boilers, jet engine test cells, paint booths, fuel storage tanks, bead blasting, and other miscellaneous sources.

### **3.3.3 Environmental Consequences**

#### **3.3.3.1 Evaluation Criteria**

The environmental consequences to local and regional air quality conditions near a proposed Federal action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. Specifically, the impact in NAAQS “attainment” areas would be considered significant if the net increases in pollutant emissions from the Federal action would result in any one of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Expose sensitive receptors to substantially increased pollutant concentrations
- Represent an increase of 10 percent or more in an affected AQCR emissions inventory
- Exceed any evaluation criteria established by a SIP or permit limitations.

#### **3.3.3.2 Proposed Action**

The Proposed Action would generate both temporary and long-term air pollutant emissions. The housing construction and demolition, and the building of community-desired features associated with the Proposed Action would generate air pollutant emissions as a result of grading, filling, compacting, trenching, demolition, and construction operations, but these emissions would be temporary and would not be expected to generate any offsite effects. The Proposed Action would not result in a net increase in personnel or commuter vehicles. Therefore, the Proposed Action’s emissions from existing personnel and commuter vehicles would not result in an adverse impact on regional air quality.

Construction operations would result in short-term emissions of criteria pollutants as combustion products from construction equipment, evaporative emissions from architectural coatings, and negligible emissions

from asphalt paving operations. Emissions of all criteria pollutants would result from construction and demolition activities including combustion of fuels from on-road haul trucks transporting materials and construction commuter emissions.

Construction, demolition, and building of community-desired features would generate particulate matter emissions as fugitive dust from ground-disturbing activities. Fugitive dust emissions would be greatest during initial site-preparation activities and would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of construction activity. Appropriate fugitive dust-control measures would be employed during construction and demolition activities to suppress emissions.

All emissions associated with construction and demolition activities would be temporary in nature. There would be negligible new operational emissions associated with the Proposed Action. Therefore, long-term, negligible, adverse effects on air quality would be expected. These operational emissions would be from the combustion of natural gas in boilers or heaters used to heat the new Community Center Complex and the new housing units. It is anticipated the new housing unit heaters would be of similar size and more energy efficient than the existing heaters; therefore, it is assumed there is no net increase in emissions from housing unit heaters. In addition, there will be a net decrease in the number of housing units for this proposed action, which would also add to a net decrease in associated operational emissions from their heaters.

Per the Idaho Air Pollution Control Regulations under Idaho Administrative Code [IDAC 58.01.01.222.02.c through d], the air construction permit threshold for stationary natural gas combustion sources for indirect heating is 50 million British thermal units (Btu) per hour, and 1 million Btu per hour if combusting other fuels. Although the size of the new heaters/boilers is unknown, it is not anticipated they would be large enough to require an air construction permit. The new boilers/heaters might not require a modification of the facility's Tier I air operating permit until the next permit renewal because it is anticipated they would be considered insignificant activities. The emissions from these insignificant activities would not be required for inclusion in the annual emissions inventory for payment of fees.

Although the Proposed Action could occur over the span of a 6-year period, the Proposed Action was analyzed as if it would occur in 1 calendar year. It is not expected that emissions from construction and demolition of the projects associated with the Proposed Action would contribute to or affect local or regional attainment status with the NAAQS or IAAQS. Emissions from the Proposed Action are summarized in **Table 3-6**. Emissions estimation spreadsheets and a summary of the methodology used are included in **Appendix F**.

The Energy Information Administration estimates that in 2007, gross CO<sub>2</sub> emissions in Idaho were 16.2 million metric tons (DOE 2010). Approximately 8,665 metric tons (9,553 tons) of CO<sub>2</sub> were estimated to be emitted by the Proposed Action, which is approximately 0.054 percent of the Idaho statewide CO<sub>2</sub> emissions. Therefore, the Proposed Action would have a negligible contribution towards the Idaho statewide GHG inventory. CO<sub>2</sub> emission estimates are included in **Appendix F**.

Since Mountain Home AFB is in an area classified as an attainment/unclassifiable area for all criteria pollutants, General Conformity Rule requirements are not applicable. In addition, the Proposed Action would generate emissions well below 10 percent of the emissions inventories for Idaho AQCR 63 and Elmore County, and the emissions would be short-term. Therefore, the construction and demolition activities associated with the Proposed Action would not have significant effects on air quality at Mountain Home AFB or on regional or local air quality. **Appendix F** includes the air emissions estimation spreadsheets and methodology.

**Table 3-6. Estimated Air Emissions Resulting from Proposed Action**

Activity	NO <sub>x</sub> tpy	VOC tpy	CO tpy	SO <sub>2</sub> tpy	PM <sub>10</sub> tpy	PM <sub>2.5</sub> tpy	CO <sub>2</sub> tpy
Construction Combustion	28.041	2.335	11.310	0.842	1.751	1.699	3,256.798
Construction Fugitive Dust	--	--	--	--	63.056	4.054	--
Haul Truck On-Road	23.571	17.044	69.263	1.857	28.031	7.289	5,967.473
Construction Commuter	0.275	0.274	2.479	0.003	0.026	0.016	328.705
<b>Total Proposed Action Emissions</b>	<b>51.888</b>	<b>19.652</b>	<b>83.052</b>	<b>2.702</b>	<b>92.865</b>	<b>13.058</b>	<b>9,552.976</b>
Percent of AQCR 63 Inventory, Percent of Idaho CO <sub>2</sub> Inventory	0.131	0.022	0.028	0.067	0.063	0.047	0.054*

Note: \* Percent of State of Idaho CO<sub>2</sub> emissions.

### 3.3.3.3 Alternative for the Three Historic Senior Officers' Quarters

Under the alternative action for the Three Historic Senior Officers' Quarters, impacts on air quality would be similar to those discussed under the Proposed Action. However, as demolition activities are decreased due to the preservation of one or more of the homes and their respective settings under Options 1, 2, and 3, the amount of particulate matter emissions and fugitive dust generated during project implementation activities would decrease. These impacts on air quality would not be significant.

### 3.3.3.4 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented and no effects would be anticipated on air quality. Mountain Home AFB has 793 MFH units that are considered in excellent condition. It is anticipated that these 793 MFH units would continue to provide adequate housing for many years into the future with only minor maintenance and repairs. The 3 additional MFH units would not be renovated and would continue to be used. The 359 MFH units scheduled for demolition would not be demolished and would also continue to be used. The 359 MFH units would require more intensive maintenance and renovations to bring them up to current USAF housing standards. However, no adverse impacts on air quality are anticipated.

## 3.4 Geological Resources

### 3.4.1 Definition of the Resource

Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of topography and physiography, geology, soils, and, where applicable, geologic hazards and paleontology.

Topography and physiography pertain to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features. Geology is the study of the Earth's composition and provides information on the structure and configuration of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition.

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

Prime farmland is protected under the Farmland Protection Policy Act (FPPA) of 1981. Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The soil qualities, growing season, and moisture supply are needed for a well-managed soil to produce a sustained high yield of crops in an economic manner. The land could be cropland, pasture, rangeland, or other land, but not urban built-up land or water. The intent of the FPPA is to minimize the extent that Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The Act also ensures that Federal programs are administered in a manner that, to the extent practicable, will be compatible with private, state, and local government programs and policies to protect farmland.

The implementing procedures of the FPPA and Natural Resources Conservation Service (NRCS) require Federal agencies to evaluate the adverse effects (direct and indirect) of their activities on prime and unique farmland, as well as farmland of statewide and local importance, and to consider alternative actions that could avoid adverse effects. Determination of whether an area is considered prime or unique farmland and potential impacts associated with a proposed action is based on preparation of the farmland conversion impact rating form AD-1006 for areas where prime farmland soils occur and by applying criteria established at Section 658.5 of the FPPA (7 CFR Part 658). The NRCS is responsible for overseeing compliance with the FPPA and has developed the rules and regulations for implementation of the Act (see 7 CFR Part 658, 5 July 1984).

### **3.4.2 Existing Conditions**

**Geology.** Mountain Home AFB is in the Columbia Plateau, in the western Snake River Plain. The Snake River Plain is a northwest-trending basin surrounded by high-angle faults, which are believed to be the result of tectonic rifting that ended 3 million years ago (MHAFFB 2007b, MHAFFB 2007c).

Volcanic activity is evidenced at Mountain Home AFB by basaltic and rhyolitic rock formations and by remnant volcanic features, such as cones, vents, and shield volcanoes. These volcanic deposits form the bedrock underlying the region. The thick basaltic lava flows and interbedded sedimentary units around Mountain Home AFB are known as the Snake River Basalt Group. Overlying the volcanic deposits are thick layers of lake bed deposits and recent alluvium and colluviums, including silt, sand, clay, ash, and gravel. These sediments were deposited by the now extinct Lake Idaho (MHAFFB 2007b, MHAFFB 2007c).

**Topography.** Topography on the installation is characterized by flat to gently rolling hills and plateaus, and elevations that average from 2,900 to 3,100 feet above mean sea level (MHAFFB 2007b).

**Soils.** Soils at Mountain Home AFB are loamy, which are typical of semi-arid regions. Within the site of the Proposed Action, soils include the Bahem silt loam, the Minidoka-Minveno silt loam, Minveno silt loam, and the Minveno-Minidoka stony silt loam. These soils are poorly drained with slopes ranging from 0 to 8 percent, and have a moderate erosion potential through precipitation and riverine and eolian processes (MHAFFB 2007b).

Soils mapped at the Proposed Action area and soil limitations are shown in **Table 3-7**. Soil limitations to construction were determined based on data available in the NRCS web soil survey (NRCS 2010). Soil limitations were rated for building construction and dwellings. The Bahem silt loam is not limited, and the Minidoka-Minveno silt loam is rated as somewhat limited for building construction due to the depth to a thin cemented pan. Both the Minveno silt loam and Minveno-Minidoka stony silt loam were rated as very limited due to depth to bedrock and depth to a thin cemented pan (NRCS 2010).

**Table 3-7. Properties of Soils Mapped at Proposed Action Area**

Mapping Unit	Texture	Area	Farmland Classification	Construction Limitations
Bahem	silt loam (0 to 4 percent slopes)	Falcon Estates, Trinity Heights, Elk Heights, Gunfighter Manor, Woodland Groves, Sagebrush View, Eagle View, housing office	Prime farmland soil if irrigated	Not limited for building construction
Minidoka-Minveno	silt loam (0 to 4 percent slopes)	Sagebrush View, Desert Skies Estates, Gunfighter Manor, Gunfighter Circle, Elk Heights, Coyote Terrace, Woodland Groves	Not prime farmland soil	Somewhat limited due to depth to thin cemented pan
Minveno	silt loam (0 to 4 percent slopes)	Desert Skies Estates, Sagebrush View	Not prime farmland soil	Very limited for building construction due to depth to hard bedrock and depth to a thin cemented pan
Minveno-Minidoka	stony silt loam (0 to 8 percent slopes)	Coyote Terrace, Elk Heights	Not prime farmland soil	Very limited for building construction due to depth to bedrock and depth to a thin cemented pan

Source: NRCS 2010

**Prime Farmland.** The Bahem silt loam is considered a prime farmland soil if irrigated. However, this land is not available for agriculture because it is currently developed or considered to be urban or built-up land, which by definition cannot be prime farmland. According to the U.S. Department of Agriculture, urban or built-up land consists of land cover or land uses including but not limited to residential, public administrative sites, and small parks (less than 10 acres) within urban and built-up areas (NRCS 1999). Therefore, the areas where prime farmland soils are mapped at the site of the Proposed Action would not be considered prime farmland.

### 3.4.3 Environmental Consequences

#### 3.4.3.1 Evaluation Criteria

Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential effects of a proposed action on geological resources. Generally, adverse effects can be avoided or minimized if proper construction techniques, erosion-control measures, and structural engineering design are incorporated into project development.

Effects on geology and soil would be significant if they would alter the lithology, stratigraphy, and geological structures that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability; or change the soil composition, structure, or function (including prime farmland and other unique soils) within the environment.

### 3.4.3.2 Proposed Action

No significant effects on geology or soils would be expected from implementing the Proposed Action.

**Topography.** Long-term, negligible, adverse effects would be expected on the natural topography as a result of projects associated with the Proposed Action. Demolition, construction of new housing units, building of community-desired features, and repairs to subsurface utilities would occur within current housing and utility footprints, respectively. Modification of existing microtopography would occur as a result of grading, excavation, and filling to accommodate demolition and construction activities. Impacts would be expected to be negligible because the natural microtopography has been previously disturbed by past development activities.

**Geology.** Long-term, negligible effects on geological resources would be expected to result from implementing the Proposed Action. Demolition activities, construction of new housing units, renovations to current units, and repairs to subsurface utilities would occur within current housing and utility footprints, respectively. The surficial geology at the site of the Proposed Action has been altered previously through grading and recontouring activities, and therefore impacts on geology would be anticipated to be negligible.

**Soils.** Short- and long-term, minor, adverse effects on soils would be expected from implementation of the Proposed Action. The primary short-term effects would occur during demolition and construction activities when vegetation is cleared and the earth is bare. However, soils have previously been disturbed during initial construction of housing units, so effects would be expected to be minor. BMPs would be implemented during construction and demolition activities, and approved erosion-and-sediment-control plans (ESCPs) and SWPPPs would be followed to reduce effects of increased impervious surfaces. Erosion- and sediment-control techniques could include soil erosion-control mats, silt fences, straw bales, diversion ditches, riprap channels, water bars, water spreaders, and sediment basins, and would be used as appropriate. Section 438 of the Energy Independence and Security Act (EISA) would be adhered to so that pre- and post-development hydrology would be equal.

Demolition activities would result in decreases in impervious surfaces. Overall, the total number of housing units would be reduced from the current 1,155 units to 1,059 units, with a total projected reduction in impervious surfaces of 34.15 acres upon completion of demolition activities. Although implementing all the construction projects associated with the Proposed Action would increase impervious surfaces once demolition activities have been completed, it is not likely that the construction square footage would be greater than the demolition square footage. Therefore, it is anticipated that impervious surfaces would decrease. A decrease in impervious surfaces would result in long-term, beneficial impacts on soils if vegetation is reestablished. Additional vegetation would be beneficial to soils as vegetation reduces soil erosion and subsequent sedimentation. A long-term decrease in impervious surfaces associated with removal of structures would be expected to reduce volume and velocity of storm water runoff and associated potential erosion and offsite transport of sediments. Refer to **Section 3.5** for a discussion on water resources.

Due to building construction limitations of soils mapped at the proposed site (i.e., depth to bedrock or thin cemented pan), site-specific soil surveys should be conducted prior to any construction activities to determine the breadth and severity of any engineering limitations and requirements, and to determine appropriate BMPs or mitigation techniques.

BMPs would be implemented during and after construction activities, and approved ESCPs and SWPPPs would be followed to reduce effects of increased impervious surfaces. Section 438 of the EISA would be adhered to so that pre- and post-development hydrology would be equal.

ESCPs would be developed and implemented both during and following site development to contain soil and storm water runoff onsite, and would reduce the potential for adverse effects associated with erosion and sedimentation and transport of sediments in runoff. Storm water runoff would be in compliance with Section 438 of the EISA and the CWA Final Rule regarding non-numeric effluent limitations (described in **Section 3.5**). Short-term, adverse effects would be minimized with implementation of BMPs including wetting of soils. Wetting of soils would occur on a daily basis as needed to prevent erosion and generation of dust (see discussion on Air Quality, **Section 3.3**).

Construction or demolition activities that disturb 20 or more acres as of 1 August 2011 would need to comply with the maximum daily turbidity limitation of 280 nephelometric turbidity units (ntu) as outlined in the CWA Final Rule. Construction or demolition activities that disturb 10 or more acres of land as of 2 February 2014 would need to monitor discharges to ensure compliance with effluent limitations as specified by the permitting authority. Turbidity limitations and monitoring requirements could be avoided if construction or demolition activities are phased to reduce acreages disturbed simultaneously to less than 20 and 10 acres, respectively.

#### **3.4.3.3 Alternative for the Three Historic Senior Officers' Quarters**

Under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. As demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of soil disturbance would decrease. These impacts on geological resources would be negligible and beneficial, but would not be significant.

#### **3.4.3.4 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be implemented. However, it is anticipated that extensive maintenance and renovations would be necessary to bring inadequate housing units up to USAF housing standards. Therefore, effects on geology and soils would be anticipated to be similar to, but less than, effects described for the Proposed Action.

### **3.5 Water Resources**

#### **3.5.1 Definition of the Resource**

Water resources are natural and man-made sources of water that are available for use by and for the benefit of humans and the environment. Water resources relevant to Mountain Home AFB's location in Idaho include groundwater, surface water, floodplains, and wetlands. Evaluation of water resources examines the quantity and quality of the resource and its demand for various purposes. Hydrology concerns the distribution of water to water resources through the processes of evapotranspiration, atmospheric transport, precipitation, surface runoff and flow, and subsurface flow. Hydrology results primarily from temperature and total precipitation that determine evapotranspiration rates, topography which determines rate and direction of surface flow, and soil and geologic properties that determine rate of subsurface flow and recharge to the groundwater reservoir.

**Groundwater.** Groundwater is water that exists in the saturated zone beneath the earth's surface, and includes underground streams and aquifers. It is an essential resource that functions to recharge surface water and can be used for drinking, irrigation, and industrial processes. Groundwater typically can be

described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations.

Groundwater quality and quantity are regulated under several different programs. The Federal Underground Injection Control regulations, authorized under the Safe Drinking Water Act (SDWA), require a permit for the discharge or disposal of fluids into a well. The Federal Sole Source Aquifer regulations, also authorized under the SDWA, protects aquifers that are critical to water supply.

**Surface Water.** Surface water resources generally consist of wetlands, lakes, rivers, and streams. Surface water is important for its contribution to the economic, ecological, recreational, and human health of a community or locale. Waters of the United States are defined within the CWA, as amended, and jurisdiction is addressed by the USEPA and the U.S. Army Corp of Engineers (USACE). In 2006, the Supreme Court addressed the jurisdictional scope of Section 404 of the CWA, specifically the term “waters of the United States,” in *Rapanos v. U.S.* and in *Carabell v. U.S.* (referred to as *Rapanos*). As a result, the agencies now assert jurisdiction over the following categories of water bodies: Traditional Navigable Waters (TNWs), all wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are relatively permanent (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally), and wetlands that directly abut such tributaries. In addition, the agencies assert jurisdiction over every water body that is not a Relatively Permanent Water if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW. The classes of water bodies that are subject to CWA jurisdiction only if such a significant nexus is demonstrated are as follows: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an unsubstantial effect on the chemical, physical, or biological integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.

Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredge or fill into waters of the United States including wetlands. Encroachment into waters of the United States and wetlands requires a permit from the state and the Federal government. Wetland hydrology is discussed within this section. A water body can be deemed impaired if water quality analyses conclude that exceedances of water quality standards, established by the CWA, occur. The CWA requires that states establish a Section 303(d) list to identify impaired waters and establish Total Maximum Daily Loads (TMDLs) for the source(s) causing the impairment. A TMDL is the maximum amount of a substance that can be assimilated by a water body without causing impairment. The CWA also mandated the National Pollutant Discharge Elimination System (NPDES) program, which regulates the discharge of point (end of pipe) and nonpoint (storm water) sources of water pollution and requires a permit under Section 402 for any discharge of pollutants into waters of the United States.

Storm water is an important component of surface water systems because of its potential to introduce sediments and other contaminants that could degrade surface waters. Proper management of storm water flows, which can be intensified by high proportions of impervious surfaces associated with buildings, roads, and parking lots, is important to the management of surface water quality and natural flow characteristics. Prolonged increases in storm water volume and velocity associated with development and increased impervious surfaces has potential to impact adjacent streams as a result of stream bank erosion and channel widening or down cutting associated with the adjustment of the stream to the change in flow characteristics. Storm water management systems are typically designed to contain runoff onsite during

construction, and to maintain predevelopment storm water flow characteristics following development through either the application of infiltration or retention practices. Failure to size storm water systems appropriately to hold or delay conveyance of the largest predicted precipitation event often leads to downstream flooding and the environmental and economic damages associated with flooding.

The USEPA issued a Final Rule for the CWA concerning technology-based Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development point source category. All NPDES storm water permits issued by the USEPA or states must incorporate requirements established in the Final Rule. This rule is effective 1 February 2010, and will be phased in over 4 years. All new construction sites are required to meet the non-numeric effluent limitations and design, install, and maintain effective erosion and sedimentation controls, including the following:

- Control storm water volume and velocity to minimize erosion
- Control storm water discharges including both peak flow rates and total storm water volume
- Provide and maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal, and maximize storm water infiltration where feasible (e.g., silt fences)
- Minimize erosion at outlets and downstream channel and stream bank erosion
- Minimize soil compaction and preserve topsoil where feasible.

In addition, construction site owners and operators that disturb 1 or more acres of land are required to use BMPs to ensure that soil disturbed during construction activities does not pollute nearby water bodies. Effective 1 August 2011, construction activities disturbing a total of 20 or more acres at one time, including noncontiguous land disturbances that take place at the same time and are part of a larger common plan of development, must comply with the numeric effluent limitation for turbidity in addition to the non-numeric effluent limitations. The maximum daily turbidity limitation will be 280 ntu. On 2 February 2014, construction site owners and operators that disturb 10 or more acres of land are required to monitor discharges to ensure compliance with effluent limitations as specified by the permitting authority. The USEPA limitations are based on its assessment of what specific technologies can reliably achieve. Permittees can select management practices or technologies that are best suited for site-specific conditions.

Construction activities such as clearing, grading, trenching, and excavating disturb soils and sediment. If not managed properly, disturbed soils and sediments can easily be washed into nearby water bodies during storm events, where water quality is reduced. Section 438 of the EISA (42 U.S.C. Section 17094) establishes into law new storm water design requirements for Federal construction projects that disturb a footprint of greater than 5,000 square feet of land. EISA Section 438 requirements are independent of storm water requirements under the CWA. The project footprint consists of all horizontal hard surface and disturbed areas associated with project development. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology shall be modeled or calculated using recognized tools and must include site-specific factors such as soil type, ground cover, and ground slope. Site design shall incorporate storm water retention and reuse technologies such as bioretention areas, permeable pavements, cisterns/recycling, and green roofs to the maximum extent technically feasible. Post-construction analyses shall be conducted to evaluate the effectiveness of the as-built storm water reduction features (DOD 2010a). These regulations have been incorporated into applicable DOD United Facilities Criteria in April 2010, which stated that low-impact development (LID) features would need to be incorporated into new construction activities to comply with the restrictions on storm water management promulgated by EISA Section 438. LID is a storm water management strategy

designed to maintain site hydrology and mitigate the adverse impacts of storm water runoff and nonpoint source pollution. LIDs can manage the increase in runoff between pre- and post-development conditions on the project site through interception, infiltration, storage, or evapotranspiration processes before the runoff is conveyed to receiving waters. Examples of the methods include bioretention, permeable pavements, cisterns/recycling, and green roofs (DOD 2010b). Additional guidance is provided in the USEPA's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (USEPA 2009a).

**Floodplains.** Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters. The living and nonliving parts of natural floodplains interact with each other to create dynamic systems in which each component helps to maintain the characteristics of the environment that support it. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and diversification of plants and animals. Floodplains provide a broad area to spread out and temporarily store floodwaters. This reduces flood peaks and velocities and the potential for erosion. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body (FEMA 1986).

**Wetlands.** Wetlands perform several hydrologic functions, including water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, storm water attenuation and storage, sediment detention, and erosion protection. Wetlands are protected as a subset of the waters of the United States under Section 404 of the CWA. The term "waters of the United States" has a broad meaning under the CWA and incorporates deepwater aquatic habitats and special aquatic habitats (including wetlands) (see discussion under **Surface Waters**). The USACE defines wetlands as "those areas that are inundated or saturated with ground or surface water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 CFR Part 329).

Jurisdictional waters of the United States are areas that convey water, exhibit an "ordinary high water mark," and do not meet the three parameter criteria for wetlands. An ordinary high water mark is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris (33 CFR 328.3). The USACE recognizes three distinct types of drainage features: ephemeral drainages, intermittent drainages, and perennial drainages. Ephemeral drainages are fed primarily by storm water. They convey flows during and immediately after storm events; however, they might stop flowing or begin to dry if the interval between storms is sufficiently long. Under recent United States Supreme Court rulings, an ephemeral drainage must also show a significant nexus to navigable waters for the drainage to be considered jurisdictional. Intermittent drainages are fed primarily by groundwater and supplemented by storm water and flow for extended periods, but cease to flow occasionally or seasonally as a result of groundwater drawdown, seepage, or evapotranspiration. Perennial streams flow continuously except during periods of extended drought.

Per Section 401 of the CWA, any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which could result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the state in which the discharge originates or will originate.

### 3.5.2 Existing Conditions

**Groundwater.** Mountain Home AFB has eight production wells that draw water from the Bruneau Formation, which also provides water to the City of Mountain Home and surrounding areas. The Bruneau Formation is the primary subsurface, unconfined aquifer approximately 400 feet below ground surface and is composed of coarse sands. Recharge occurs through subsurface flow, although the water usage exceeds the recharge rates. Despite the water table at Mountain Home AFB dropping on average of 2.07 feet per year, the Idaho Department of Water Resources has indicated the Bruneau Formation aquifer will be able to provide water for the next 100 years. Two of the eight wells do not provide potable water because of elevated nitrate levels (MHAFB 2005b). The combined capacity of the six remaining wells is 8.53 million gallons per day (mgd) (MHAFB 2004).

Well yields from the Bruneau Formation range from 10 to 3,500 gallons per minute, with water use at 800,000 gallons per day during the fall through spring and 6 million gallons in the summer. Summer water usage is 80 to 90 percent for irrigation purposes (MHAFB 2005b). Installation groundwater is subject to long-term monitoring, and the status of the groundwater at Mountain Home AFB will be reevaluated every 5 years (ATSDR 2008).

The Bruneau Aquifer is not designated as a sole-source aquifer (USEPA 2010c). However, the Bruneau Aquifer borders the Eastern Snake River Plain Aquifer, which is a USEPA sole-source aquifer, and is hydrologically downgradient. Groundwater flows west from Snake River Plain Aquifer to the Bruneau Aquifer, and impacts on the Bruneau Aquifer should not affect the Snake River Plain Aquifer because of the regional groundwater flow direction.

**Surface Water.** Mountain Home AFB is within the C.J. Strike Dam Recreation Annex Watershed which has a drainage area of approximately 55 square miles (USGS 2010). Annual precipitation in the vicinity of the installation averages 10 inches, and there are no perennial streams crossing the Mountain Home AFB. Surface water flows into two unnamed ephemeral stream channels or into the four man-made drainage ditches and travels in a northeast-to-southwest direction; no significant natural drainages cross the installation (MHAFB 2004). Generally, surface water at the installation flows northeast to southwest into Canyon Creek, which eventually empties into the Snake River (MHAFB 2004).

The only open bodies of water on the installation are several rapid infiltration basins and a treated effluent lagoon situated along the western installation boundary. However, nine small playas adjacent to the installation serve as low-point collection areas for surface water runoff that does not reach Canyon Creek. These playas are small basins that have no outlets and, as a result, any water they collect is lost to infiltration or evaporation (MHAFB 2004). Based on a determination made by the USACE on 27 June 2008, the playas are not jurisdictional (MHAFB 2008b, Ferguson 2008, Martinez 2008). In addition, there is a lagoon on the golf course that stores clean water for irrigation purposes. Generally, surface water on the installation is of good quality; the 2008 Public Health Assessment concluded that no public health hazards are associated with surface water exposures at Mountain Home AFB because limited surface water exists on the installation and the surface water is relatively inaccessible to the general public (ATSDR 2008).

**Floodplains.** There are no designated 100-year floodplains contained within the boundaries of Mountain Home AFB or the immediate surrounding area (FEMA 2010, MHAFB 2004).

**Wetlands.** There are no jurisdictional wetlands or waters of the United States on Mountain Home AFB. The playas, effluent storage lagoon, man-made drainage ditches, and infiltration basins on Mountain Home AFB are not considered jurisdictional wetlands or waters of the United States by the USACE based

on a jurisdictional determination on 27 June 2008 (MHAFB 2007d, Ferguson 2008, Martinez 2008), and none lie within the Proposed Action area.

Section 402(p) of the CWA states that storm water discharges associated with industrial activity to waters of the United States must be authorized by an NPDES permit. Although no jurisdictional waters occur on Mountain Home AFB, they currently operate under Permit number: ID-002764-2 (USEPA 2008).

### 3.5.3 Environmental Consequences

#### 3.5.3.1 Evaluation Criteria

Evaluation criteria for effects on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. A proposed action could have significant effect with respect to water resources if any of the following were to occur:

- Substantially reduce water availability or supply to existing users
- Overdraft groundwater basins
- Exceed safe annual yield of water supply sources
- Substantially affect water quality adversely
- Endanger public health by creating or worsening health hazard conditions
- Threaten or damage unique hydrologic characteristics
- Violate established laws or regulations adopted to protect water resources.

The potential effect of flood hazards on a proposed action is important if such an action occurs in an area with a high probability of flooding.

Determination of the significance of wetland impacts is based on (1) loss of wetland acreage, (2) the function and value of the wetland, (3) the proportion of the wetland that would be affected relative to the occurrence of similar wetlands in the region, (4) the sensitivity of the wetland to proposed activities, and (5) the duration of ecological ramifications. Impacts on wetland resources are considered significant if high-value wetlands would be adversely affected or if wetland acreage is lost.

#### 3.5.3.2 Proposed Action

**Groundwater.** The Proposed Action has the potential for short- and long-term impacts on groundwater. The potential for groundwater contamination would increase as various underground utilities (e.g., electric, water) are either installed or removed from the Proposed Action area. Assuming appropriate BMPs are implemented during construction and demolition activities, short-term, negligible, adverse effects on groundwater would be expected. In the event of a spill or leak of fuel or other construction-related products, there could be adverse effects on groundwater; however, procedures outlined in Mountain Home AFB's Pollution Prevention Plan (MHAFB 2010a) would be followed to quickly contain and clean up a spill (see **Section 3.10** for a discussion of hazardous materials and wastes). Long-term, beneficial impacts on groundwater from the Proposed Action could be realized on groundwater quality and recharge. It is assumed that an overall decrease in impervious surfaces (i.e., 1,155 units reduced to 1,059 units) would slightly decrease runoff to streams and increase recharge of the aquifer system.

**Surface Water.** The Proposed Action would result in short- and long-term, negligible to minor, adverse and beneficial impacts on surface water resources. Long-term, indirect, beneficial effects would result from the overall decrease in impervious surfaces at Mountain Home AFB because the number of MFH units would be reduced (i.e., 1,155 units to 1,059 units). Impervious surfaces are constructed of

impenetrable materials (e.g., stone, asphalt, concrete) that repel water and prevent rainfall or snowmelt from infiltrating soils. Therefore, during rainfall or snowfall events, impervious surfaces increase the volume and accelerate the speed at which water is directed into receiving surface water bodies. The potential for storm water to carry contaminants directly into surface waters is lessened when impervious areas decrease. Less storm water runoff would have long-term, direct, minor, beneficial effects on surface water and consequently, groundwater quality, in MFH areas, especially if vegetation is reestablished.

Short-term, negligible to minor, adverse impacts on water resources would occur from the use of heavy equipment, which could compact soils and could result in a decrease in soil permeability and water infiltration rates and potential subsequent alteration of drainage patterns. Disturbance of soil and removal of vegetation associated with development could result in erosion of disturbed soils and transport of sediment and other pollutants into nearby water bodies during storm water flow events. However, adverse effects would be minimized by implementing erosion and sediment control and storm water management practices to minimize potential adverse effects associated with increased runoff.

It is assumed that the Proposed Action would decrease impervious surfaces resulting in long-term, beneficial impacts on surface water due to reduced run-off, velocity, and sediment transport. However, if impervious surfaces increase as a result of the Proposed Action, then storm water runoff volume and velocity would be expected to increase slightly resulting in potential adverse effects. This runoff could impact surface water quality of the receiving water body. However, adverse effects would be minimized by implementing BMPs and following an approved ESCP. Under the CWA Final Rule, projects that would disturb more than 1 acre of land would be required to use BMPs to ensure that soil disturbed during construction activities does not pollute nearby water bodies.

Short-term, direct, minor adverse effects from construction and demolition activities could result due to increased transport of contaminants via storm water runoff to surface water bodies. Surface water runoff occurring during demolition and construction activities could convey contaminants that could impact surface water quality in drainage channels and could also impact groundwater quality as a result of infiltration of contaminated runoff. The level of impact would be related to the type of contaminant that enters the water system. Increased sediment runoff from construction and demolition activities increases surface water turbidity in receiving waters, which can raise water temperature and impede photosynthetic processes. Sediment runoff into surface water also increases the potential for contaminants (e.g., heavy metals, excess nutrient concentrations) deposition on the substrate of receiving water bodies. In the event of a spill or leak of fuel or other construction-related products, there could be adverse effects on surface water quality. All fuels and other potentially hazardous materials would be contained and stored appropriately. In the event of a spill, procedures outlined in the Installation Pollution Prevention Plan (MHAFB 2010a) would be followed to quickly contain and clean up a spill (see **Section 3.10** for a discussion on hazardous materials and wastes). Please refer to **Section 3.4** for additional discussion of erosion and sediment control, and storm water management regulations.

Overall, construction and demolition activities would have the potential for adverse effects on surface water quality, but the development of a site-specific SWPPP as a component of the NPDES Permit for General Construction Activities would minimize the potential for adverse effects. Appropriate BMPs would be implemented and would follow Federal and state permitting processes. With the proper use of BMPs, any erosion and sedimentation from soil disturbance and removal of vegetation would be minimized and impacts on water resources would be expected to be negligible.

***Floodplains.*** Since no floodplains are in or near the vicinity of the Proposed Action, no direct or indirect impacts would be expected from the Proposed Action.

**Wetlands.** Since no jurisdictional wetlands exist within the Proposed Action area, no direct impacts on waters of the United States would be expected from the Proposed Action. However, other wetland areas (e.g., playas) in the vicinity of the Proposed Action area could experience short-term, indirect, negligible effects due to increased erosion, sedimentation, and pollutants entering these wetlands during construction and demolition activities.

Adherence to an ESCP and site-specific SWPPP should prevent surface water degradation of wetlands. Assuming appropriate BMPs are implemented during demolition activities, negligible adverse effects on receiving wetlands would be expected. In the event of a spill or leak of fuel or other construction-related products, potentially hazardous materials would be contained and stored appropriately.

### **3.5.3.3 Alternative for the Three Historic Senior Officers' Quarters**

For each of the options under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. In so far as demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of vegetation removal and soil compaction would decrease. These impacts on water resources would be negligible and beneficial, but would not be significant.

### **3.5.3.4 No Action Alternative**

Under the No Action Alternative, housing construction and demolition activities would not be implemented. Conditions would remain as described in **Section 3.5**; therefore, no impacts on water resources would be expected.

## **3.6 Biological Resources**

### **3.6.1 Definition of the Resource**

Biological resources include native or naturalized plants and animals and the habitats (e.g., grasslands, forests, and wetlands) in which they exist. Protected and sensitive biological resources include listed (threatened or endangered), proposed, and candidate species under the ESA (16 U.S.C. 1536) as designated by the U.S. Fish and Wildlife Service (USFWS), state-listed threatened or endangered species, and migratory birds. Sensitive habitats include those areas designated by the USFWS as critical habitat protected by the ESA and sensitive ecological areas as designated by state or Federal rulings. Sensitive habitats also include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, crucial summer and winter habitats).

The Federal Noxious Weed Act (P.L. 93-629) mandates control of noxious weeds by limiting possible weed seed transport from infested areas to noninfested sites. EO 13112, *Invasive Species*, requires all Federal agencies to prevent the introduction of invasive species; provide for their control; and minimize their economic, ecological, and human health impacts. Under EO 13112, installations shall not, to the extent practicable, authorize, fund, or carry out management actions that are likely to cause the introduction or spread of invasive species.

Under the ESA, an "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. The USFWS also maintains a list of species considered to be candidates for possible listing under the ESA. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and might warrant protection under the ESA.

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703–712) as amended, and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require Federal agencies to minimize or avoid impacts on migratory birds listed in 50 CFR 10.13. If design and implementation of a Federal action cannot avoid measurable negative impact on migratory birds, EO 13186 directs the responsible agency to develop and implement, within 2 years, a Memorandum of Understanding with the USFWS that shall promote the conservation of migratory bird populations.

### 3.6.2 Existing Conditions

**Vegetation.** General vegetation cover types in the vicinity of the MFH area are shown in **Figure 3-4**. Protected plant species are discussed under *Sensitive and Protected Species*.

Vegetation on Mountain Home AFB was identified and mapped as part of the 1996 Ecosystem Survey. The current condition of the vegetation communities in the undeveloped areas on Mountain Home AFB is fair to poor. Most of the installation is occupied by buildings, residences, training-related facilities, runways, streets, sewage ponds, landfills, and rubble piles. Buildings, roads, runways, and facilities cover between 20 and 25 percent of the land. The most intensively developed areas are in the central and northeastern portions of the installation. Landscaped and disturbed areas account for another 25 percent of the installation. The remaining lands range from open, undeveloped fields to partially disturbed areas separating buildings and facilities. The periphery of the installation contains the least development (MHAFB 2004).

Disturbed, nonnative annual plant communities dominate the landscape at Mountain Home AFB. Wyoming big sagebrush (*Artemisia tridentata wyomingensis*) covers approximately 380 acres (5.6 percent of the installation) on the installation (see **Figure 3-4**). Historically, much of the open space on Mountain Home AFB was covered with Wyoming big sagebrush. Significant declines in the amount and quality of sagebrush habitat have occurred over the past two decades. Wyoming big sagebrush communities lie along the northern and eastern boundaries in eight separate locations (see **Figure 3-4**). Sagebrush cover varies greatly, from very sparse and scattered to more dense coverage. Most stands are highly disturbed with high densities of weeds in the understory. Most open areas on the installation are dominated by a mix of weedy annual grasses and invasive species (e.g., annual kochia [*Kochia scoparia*], Russian thistle [*Salsola kali*], bur buttercup [*Ranunculus testiculatus*], tumble mustard [*Sisymbrium altissimum*], and cheatgrass [*Bromus tectorum*]). Three large fields (3 to 10 acres) of seeded forage kochia (*Kochia prostrata*), a perennial shrub related to the weedy annual kochia, have been planted on the installation. Forage kochia helps displace and control the proliferation of tumbleweeds.

The grasses present on Mountain Home AFB in the turf and landscaped areas, including the MFH area, include Kentucky bluegrass (*Poa pratensis*), creeping red fescue (*Festuca rubra*), and Italian ryegrass (*Lolium multiflorum*). In addition, white dutch clover (*Trifolium repens*) is also used. The majority of lawns and parks are seeded with Kentucky bluegrass. A mix of deciduous and evergreen trees and shrubs has also been planted on the installation. Land cover within the MFH area is completely developed with landscaped vegetation (e.g., turf lawns, ornamental trees, and ornamental shrubs). Vegetation on adjoining lands is composed of annual weeds and Wyoming big sagebrush patches (MHAFB 2004).

Noxious weeds are those species defined by the State of Idaho as having the potential to cause injury to public health, crops, livestock, land, or other property. Landowners are required by Idaho law to control noxious weeds on their lands. Idaho noxious weed species on Mountain Home AFB include rush skeletonweed (*Chondrilla juncea*) with small, incidental infestations of field bindweed (*Convolvulus arvensis*), buffalobur (*Solanum rostratum*), dodder (*Cuscuta* sp.), black henbane (*Hyoscyamus niger*), puncturevine (*Tribulus terrestris*), perennial sowthistle (*Sonchus arvensis*), perennial pepperweed (*Lepidium latifolium*), whitetop (*Cardaria draba*), and Canada thistle (*Cirsium arvense*) (MHAFB 2004).

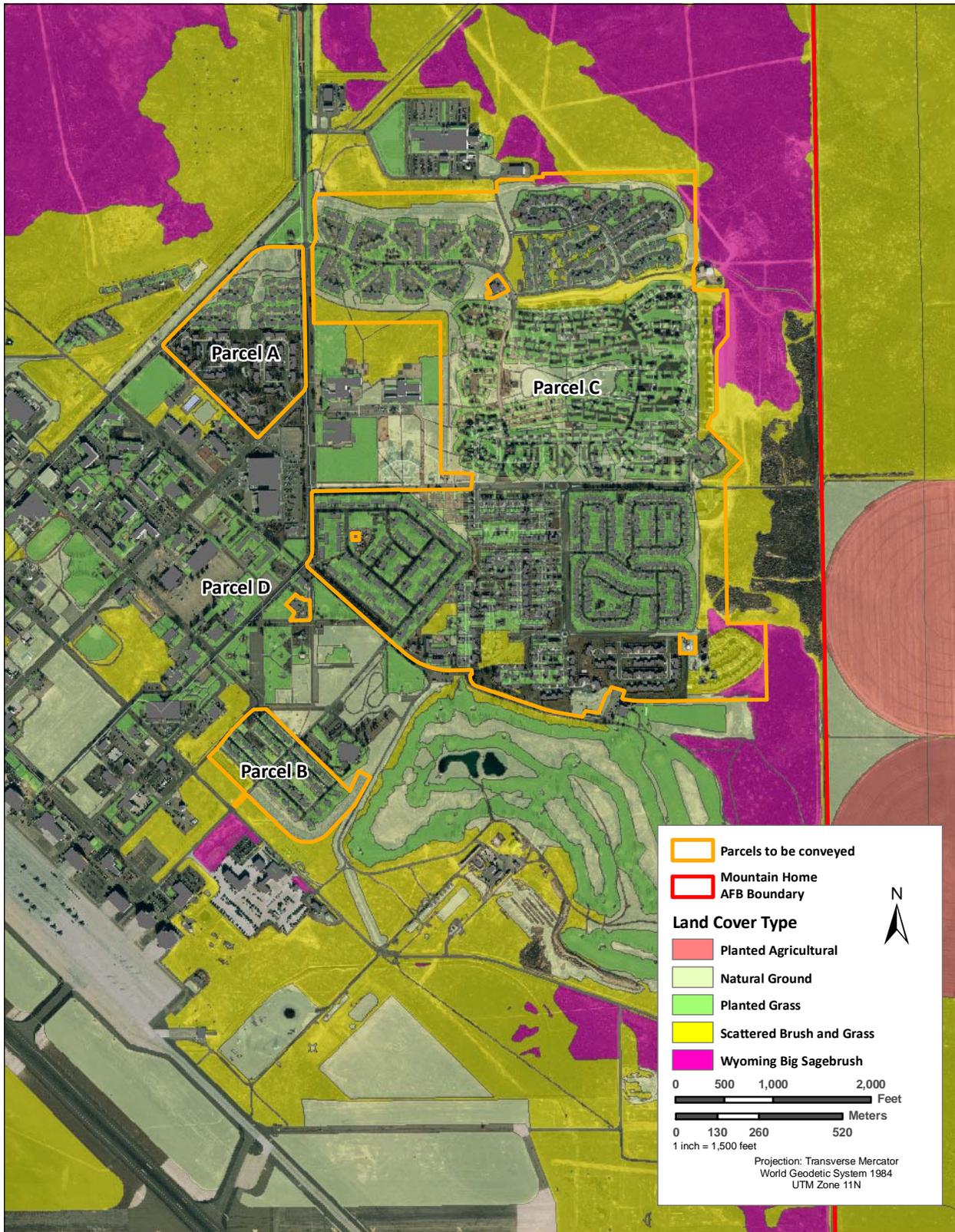


Figure 3-4. Vegetation Cover on Mountain Home AFB in Vicinity of MFH

**Wildlife.** Mountain Home AFB actively manages wildlife in cooperation with Idaho Fish and Game and the Bureau of Land Management. Wildlife habitat is maintained or removed through vegetation manipulation and ground disturbance, and is largely managed through post-fire rehabilitation and grazing practices (MHAFB 2004). Wildlife species found on Mountain Home AFB consist of species that easily habituate to noise and human presence. There are four dominant wildlife habitat types as defined by topography and vegetation: (1) landscaped areas around residential and installation facilities, (2) isolated sagebrush flats, (3) flat areas dominated by exotic annual weed species, and (4) rubble piles dominated by exotic annual weed species. Numerous wildlife surveys have been performed on Mountain Home AFB since the 1996 installation wide Ecosystem Survey. From 2004 to 2006, wildlife surveys were performed to develop baseline information on species distribution, relative numbers, habitat use, and behavior. In 2007 and 2008, owl and bat surveys were conducted. Only small, isolated stands of native habitat were observed. The majority of the installation and the surrounding lands have been converted to nonnative species by fires, agriculture, and development. This limited habitat and small patch size cannot support wide-ranging species. However, many smaller mammals, birds, and reptiles, have adapted to urban areas and human disturbance on the installation (MHAFB 2004). For a discussion on sensitive and protected animal species occurring on Mountain Home AFB, see *Sensitive and Protected Species*.

Numerous mammals are known to occur throughout Mountain Home AFB in all habitats. Common mammals on the installation include mountain cottontails (*Sylvilagus nuttallii*), Great Basin ground squirrels (*Spermophilus mollis*), voles (*Microtus* spp.), deer mice (*Peromyscus maniculatus*), American badgers (*Taxidea taxus*), coyotes (*Canis latrans*), and bats. Great Basin ground squirrels are especially abundant around the golf course and landscaped areas. Voles have been reported as hindering the development of tree shelterbelts. American badgers and coyotes occur on MHAFB and dens occur in all parts of the installation. Bats might roost in buildings and trees and forage around lights (MHAFB 2004).

The Snake River Birds of Prey National Conservation Area (NCA) surrounds Mountain Home AFB. The NCA provides habitat for one of the largest concentration of raptors in North America and contains 484,873 acres of land along the Snake River corridor and adjacent uplands. Many raptors have been observed on the installation, including the prairie falcon (*Falco mexicanus*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), burrowing owl (*Speotyto cunicularia*), and great-horned owl (*Bubo virginianus*). Prairie falcons are known to nest in the Snake River Canyon to the south of Mountain Home AFB, but suitable nesting substrate does not occur on the installation. Great-horned owls readily habituate to urban areas and nest in the trees on the installation. Burrowing owls are found on the installation around the golf course, near rubble piles, and in annual grasslands with suitable abandoned badger holes. Other raptors that might forage on the installation include the northern harrier (*Circus cyaneus*), short-eared owl (*Asio flemmeus*), and golden eagle (*Aquila chrysaetos*). Bald eagles (*Haliaeetus leucocephalus*) could use storage lagoons in the western portion of Mountain Home AFB; however, no observations of bald eagles have been made on the installation (MHAFB 2004).

A variety of songbirds use trees, shrubs, utility lines, ditches, annual grassland areas, and sagebrush flats on the installation, including American robins (*Turdus migratorius*), house finches (*Carpodacus mexicanus*), killdeer (*Charadrius vociferus*), horned larks (*Eremophila alpestris*), western meadowlarks (*Sturnella neglecta*), Brewer's blackbirds (*Agelaius phoeniceus*), common grackles (*Quiscalus quiscula*), brown-headed cowbirds (*Molothrus ater*), sage sparrows (*Amphispiza belli*), savannah sparrows (*Passerculus sandwichensis*), and vesper sparrows (*Pooecetes gramineus*). Increasing habitat for these birds is encouraged through the use of shrubbery around MFH areas and facilities away from the flightline. Tree shelterbelts along the entrance road and near the hospital provide additional habitat for birds. Turkey vultures (*Cathartes aura*) have been seen on the west side of Mountain Home AFB near the landfill. Long-billed curlews (*Numenius americanus*) occur in great numbers near the golf course, rapid infiltration basins, and the annual grasslands near the northern end of the flightline. Waterfowl concentrate along the Snake River and use it year-round. On installation, several waterfowl species use

the storage lagoons in the western portion of the installation; however, Mountain Home AFB has an active program to discourage waterfowl use of these lagoons for Bird/Wildlife Aircraft Strike Hazard (BASH) prevention. A greater number of waterfowl migrate through the area during the spring and fall, but some birds are found year-round (MHAFB 2004).

No formal survey has been completed for reptiles and amphibians on Mountain Home AFB. However, because aquatic and sagebrush habitat is limited, few amphibians and reptiles likely occur on the installation. Pacific tree frogs (*Hyla regilla*) and garter snakes (*Thamnophis* spp.) could potentially inhabit locations near areas or facilities where irrigation and landscaping practices maintain artificially moist conditions. Gopher snakes (*Pituophis catenifer deserticola*) and rattlesnakes (*Crotalus viridus*) are occasionally found on Mountain Home AFB (MHAFB 2004).

**Sensitive and Protected Species.** No federally listed threatened or endangered species have been found on Mountain Home AFB and limited foraging habitat is available for these species on the installation (MHAFB 2004). Eleven species have been documented on Mountain Home AFB that are listed as species of special concern by Idaho Fish and Game: the Western burrowing owl (*Athene cunicularia*), long-billed curlew (*Numenius americanus*), Brewer's sparrow (*Spizella breweri*), California gull (*Larus californicus*), American white Pelican (*Pelecanus erythrorhynchos*), loggerhead shrike (*Lanius ludovicianus*), Yuma myotis (*Myotis yumanensis*), sage sparrow (*Amphispiza belli*), long-eared myotis (*Myotis evotis*), sage thrasher (*Oreoscoptes montanus*), and white-faced ibis (*Plegadis chihi*).

Burrowing owls inhabit dry, open grasslands, sometimes in areas of high human density such as in cities, golf courses, and similar areas. This owl nests and roosts in burrows excavated by mammals, usually badger, ground squirrel, or coyote. Burrowing owls are found on the installation around the golf course, near rubble piles, and in annual grasslands with suitable abandoned badger holes. Burrowing owls are known to occur on Mountain Home AFB immediately adjacent (within 20 feet) to the flightline, in the northern portion near the Environmental Flight building, the southwestern areas adjacent to the Mountain Home AFB exercise area, the retired Explosive Ordnance Disposal proficiency range, the golf course, and in an undeveloped lot in the center of the installation (see **Figure 3-5**). Burrowing owls occur in several areas that are within or adjacent to proposed construction and demolition sites within the project area, including the eastern portion of Elk Heights, and land to the southeast and northeast of Sagebrush View (MHAFB 2009).

Long-billed curlews inhabit prairies, open shrub-steppe, and grassy wet meadows. They are often found near water, especially during migration and in winter when they usually use beaches and mudflats. In Idaho, this species prefers open, recently grazed shrub-steppe containing short vegetation for nesting. They are often found in farm fields and grasslands during migration and winter. On Mountain Home AFB, long-billed curlews occur in great numbers near the golf course (south of MFH area), rapid infiltration basins, and the annual grasslands near the northern end of the flightline (MHAFB 2004).

The loggerhead shrike prefers habitat consisting of grasslands and open agricultural areas and is an infrequent visitor to Mountain Home AFB. Sage sparrows are commonly found in mature sagebrush stands and have been found in similar habitat in spring, summer, and fall. The long-eared myotis is a bat species that has been observed at the installation during the evenings. Sage thrashers prefer tall, dense sagebrush and have been observed on site in spring and summer. The white-faced ibis is a migratory bird that was observed for the first time in 2007 near the golf course ponds (MHAFB 2009b).

Plants of concern on Mountain Home AFB include Wyoming big sagebrush and Davis' peppergrass. Sagebrush areas are shrinking due to careless use of all-terrain vehicles and other vehicles. Per the *Integrated Natural Resources Management Plan* (INRMP), sagebrush protection on Mountain Home AFB is a priority (MHAFB 2004). Davis' peppergrass, a small perennial herbaceous forb, is categorized

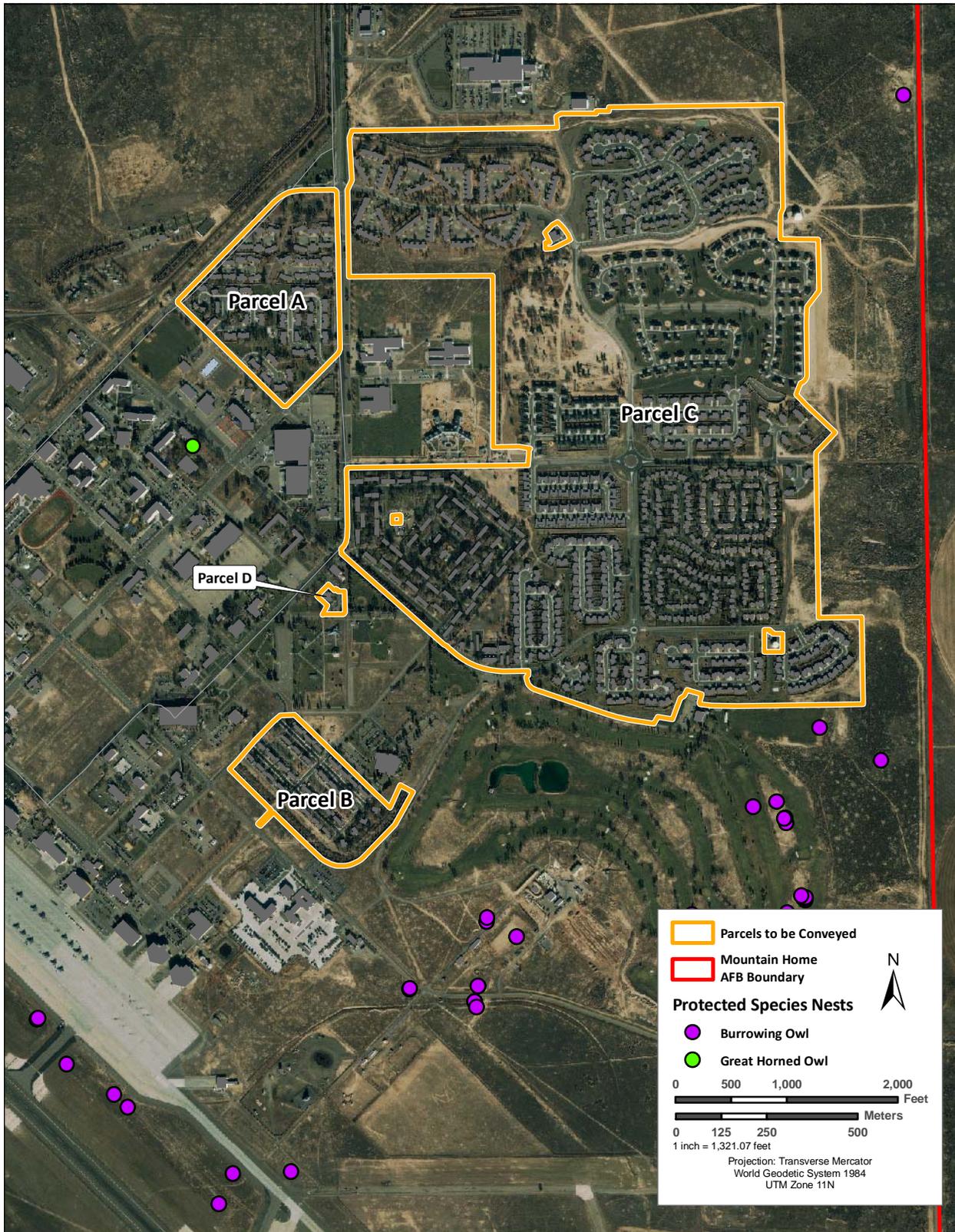


Figure 3-5. Sensitive Species on Mountain Home AFB and in the Vicinity of MFH

as a Bureau of Land Management (BLM) sensitive species, a Priority One rare plant by the Idaho Native Plant Society, and a species of special concern by the USFWS. This plant is a regional endemic, known to be present at 293 sites in 1995 (MHAFB 2004). Populations are scattered throughout an area of southwestern and south-central Idaho, north-central Nevada, and southeastern Oregon. Its habitat occurs in vernal pools or playas, a unique type of ephemeral wetland. Davis' peppergrass was found northeast of the hospital in the 1996 Ecosystem Survey. Nearly half of this playa has been damaged by firebreak construction. In 2003, no Davis' peppergrass plants were found in this playa, although it will continue to be managed for Davis' peppergrass (MHAFB 2004). Migratory birds, as listed in 50 CFR 10.13, are protected under the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703–712), as amended, and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*. The majority of birds that reside or migrate through Mountain Home AFB are migratory species as defined in 50 CFR 10.13. The Snake River, in close proximity to Mountain Home AFB, attracts many migratory species to the area, particularly waterfowl.

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act of 1984. Bald and golden eagles could use the installation for foraging; however, no observations of these species have been reported (MHAFB 2004). Golden eagles use the surrounding Snake River Birds of Prey NCA year-round. Approximately 30 pairs of golden eagles nest in the NCA along cliff faces in the Snake River Canyon or on large transmission towers (BLM 2010). Bald eagles use the Snake River in the NCA as wintering habitat from November to March. They do not nest in the NCA (BLM 2010). Nesting by either eagle species within Mountain Home AFB would not be expected.

### **3.6.3 Environmental Consequences**

#### **3.6.3.1 Evaluation Criteria**

The level of impact on biological resources is based on (1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource, (2) the proportion of the resource that would be affected relative to its occurrence in the region, (3) the sensitivity of the resource to the proposed activities, and (4) the duration of ecological ramifications. An impact on a biological resource would be considered significant if it were to cause a violation of the laws and regulations pertaining to biological resources as discussed in **Section 3.6.1** and **Appendix B**; if species or habitats of high concern are adversely affected over relatively large areas; or if disturbances cause reductions in population size or distribution of a species of special concern. A habitat perspective is used to provide a framework for analysis of general classes of effects (i.e., removal of critical habitat, noise, human disturbance).

Ground disturbance and noise associated with construction and demolition activities might directly or indirectly cause potential effects on biological resources. Direct effects from ground disturbance were evaluated by identifying the types and locations of potential ground-disturbing activities in correlation to important biological resources. Mortality of individuals, habitat removal, and damage or degradation of habitats are impacts that might be associated with ground-disturbing activities. Noise associated with a proposed action might be of sufficient magnitude to result in the direct loss of individuals and reduce reproductive output within certain ecological settings. Ultimately, extreme cases of such stresses could have the potential to lead to population declines or local or regional extinction. To evaluate effects, considerations were given to the number of individuals or critical species involved, amount of habitat affected, relationship of the Area of Potential Effect (APE) to total available habitat within the region, type of stressors involved, and magnitude of the effects.

### 3.6.3.2 Proposed Action

**Vegetation.** The Proposed Action would be expected to result in short-term, negligible, adverse effects on vegetation on Mountain Home AFB. Vegetation within the neighborhoods with proposed construction or demolition is landscaped and not naturally occurring. Vegetation that could be disturbed within the project area includes grass, trees, shrubs, and other landscaping. Short-term, negligible, adverse effects on vegetation would be expected from temporary disturbances during construction and demolition activities (e.g., trampling and removal). This vegetation would be expected to regenerate or be replanted once construction activities have ceased. As there have been no observations made of any unique native vegetative species occurring within the project area, all impacts on vegetation from construction and demolition disturbances are expected to be negligible.

Long-term, negligible, beneficial effects on vegetation would be expected from the Proposed Action due to the reduction in MFH units on Mountain Home AFB. Assuming the sites of the demolished MFH units would be vegetated and returned to open space, long-term, beneficial effects would be expected due to an increase in vegetative cover within the MFH area.

During and immediately following construction and demolition activities that result in ground disturbances, soils would be exposed and vegetation would be sparse in some areas, thus allowing opportunities for noxious weeds to establish in those areas. The spread of noxious weeds is controlled by avoiding activities in or adjacent to heavily infested areas, removing seed sources and propagules from the site prior to conducting activities, or limiting operations to non-seed-producing seasons. Following activities that expose soils, the spread of noxious weeds can be controlled by covering the area with weed seed-free mulch or seeding the area with native species. Covering the soil reduces the germination of weed seeds, maintains soil moisture, and minimizes erosion. Under the Proposed Action, once demolition and construction activities have ceased, the disturbed areas would be seeded or planted in sod and maintained to prevent the establishment of invasive plant species during the lease period. Therefore, noxious weeds would not be expected to become permanently established in disturbed areas and no long-term, adverse impacts from noxious weed establishment within the project area would be expected.

**Wildlife.** The Proposed Action would have short-term, minor, adverse effects on wildlife due to disturbances (e.g., noise and motion) from construction and demolition activities and heavy equipment use. High noise events could cause wildlife to engage in escape or avoidance behaviors, resulting in short-term, minor, adverse effects. The area of disturbance would be within a developed area where disturbances are common (e.g., mowing and landscaping, foot and vehicle traffic, flightline activities). Most wildlife species in the project area would be expected to quickly recover once the construction or demolition disturbances have ceased for the day, or habituate to the disturbances altogether; therefore, no long-term, adverse effects on wildlife would be expected as a result of temporary construction and demolition disturbances. Long-term, negligible, adverse impacts on small or less mobile species that are not able to avoid construction equipment could occur from mortality due to accidental collisions with heavy equipment. However, most wildlife species within the vicinity would be anticipated to avoid slow-moving equipment during the Proposed Action.

Long-term, negligible, beneficial effects on wildlife would be expected from the Proposed Action due to the reduction in MFH units on Mountain Home AFB. Assuming the sites of the demolished MFH units would be vegetated and returned to open space, long-term, beneficial effects would be expected due to an increase in habitat within the MFH area for urban-adapted species.

**Protected and Sensitive Species.** No federally listed threatened or endangered species are known to occur on Mountain Home AFB; therefore, no impacts on federally listed species would be expected from the Proposed Action.

Two species of special concern as listed by Idaho Fish and Game, the burrowing owl and long-billed curlew, occur on the installation. These species are also included on the List of Migratory Birds (50 CFR 10.13). Burrowing owls occur in several areas that are within or adjacent to proposed construction and demolition sites within the project area, including the eastern portion of Elk Heights, and land to the southeast and northeast of Sagebrush View. Burrowing owls are found on the installation around the golf course, near rubble piles, and in annual grasslands with suitable abandoned badger holes. According to Mountain Home's INRMP, flightline activity on the installation does not appear to discourage burrowing owl nesting. Additionally, burrowing owls do not appear to be disturbed by nearby military operations (MHAFB 2004). It is likely that potential burrowing owls on adjacent lands to construction and demolition sites might be initially startled, but would eventually adapt to disturbances associated with the Proposed Action. Therefore, short-term, negligible to minor, adverse effects on burrowing owls would be expected from the Proposed Action. The BMPs described below for migratory birds are recommended for reduction or avoidance of impacts on potential nesting burrowing owls in the vicinity of the project area.

Long-billed curlews inhabit prairies, open shrub-steppe, and grassy wet meadows with short vegetation for nesting. This habitat does not occur within the project area; however, long-billed curlews have been observed in great numbers near the golf course, just south of the MFH area. Short-term, negligible to minor, indirect, adverse effects on long-billed curlews would be expected from temporary noise disturbances if these birds occur near the construction and demolition sites. The BMPs described below for migratory birds are recommended for reduction or avoidance of impacts on potential nesting long-billed curlews in the vicinity of the project area.

The Migratory Bird Treaty Act, as amended, and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require Federal agencies to minimize or avoid impacts on migratory birds listed in 50 CFR 10.13. Construction and demolition associated with the Proposed Action would be conducted in a manner to avoid adverse impacts on migratory birds to the extent practicable and it is not anticipated that the Proposed Action would have any measureable negative impacts on migratory birds (e.g., direct mortality, decrease in population size, decrease in fitness, repetitive nest failure). However, short-term, negligible to minor, adverse effects on migratory birds could be expected from disturbances during construction and demolition activities. These impacts would most likely be in the form of escape or avoidance behaviors, and are anticipated to be temporary.

The most common migratory bird species, as defined in 50 CFR 10.13, found within the project area would likely include American robins, house finches, Brewer's blackbirds, common grackles, and brown-headed cowbirds. The following BMPs are recommended for reduction or avoidance of impacts on migratory birds that could occur within the project area:

- Any groundbreaking construction activities should be performed before migratory birds return to Mountain Home AFB or after all young have fledged to avoid incidental take.
- If construction is scheduled to start during the period in which migratory bird species are present, steps should be taken to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures and use of various excluders (e.g., noise). Birds can be harassed to prevent them from nesting within the project area. Once a nest is established, they should not be harassed until all young have fledged and are capable of leaving the nest site.
- If construction is scheduled to start during the period when migratory birds are present, a site-specific survey for nesting migratory birds should be performed starting at least 2 weeks prior to site clearing.

- If nesting birds are found during the survey, buffer areas should be established around nests. Construction should be deferred in buffer areas until birds have left the nest. Confirmation that all young have fledged should be made by a qualified biologist.

The Bald and Golden Eagle Protection Act could apply to the implementation of the Proposed Action if it is determined that a bald or golden eagle nest could be affected. As no bald or golden eagles have been observed foraging on Mountain Home AFB, the potential for a nest occurring within the vicinity of the project is highly unlikely; therefore, no adverse effects on bald or golden eagles are anticipated from the Proposed Action. If a bald or golden eagle nest is discovered near the project area, the USFWS would be consulted to ensure compliance with the Bald and Golden Eagle Protection Act.

### **3.6.3.3 Alternative for the Three Historic Senior Officers' Quarters**

For each of the options under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would not be demolished. As demolition activities are decreased due to the preservation of one or more of the homes and their respective settings, the amount of vegetation removal and wildlife dispersion would decrease. These impacts on biological resources would be negligible and beneficial, but would not be significant.

### **3.6.3.4 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not occur and conditions would remain as described in **Section 3.7.2**; therefore, no impacts on biological resources would be expected.

## **3.7 Cultural Resources**

### **3.7.1 Definition of the Resource**

Cultural resources is an umbrella term for many heritage-related resources, including prehistoric and historic sites, buildings, structures, districts, or any other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. Depending on the condition and historic use, such resources might provide insight into the cultural practices of previous civilizations or they might retain cultural and religious significance to modern groups.

Several Federal laws and regulations govern protection of cultural resources, including the National Historic Preservation Act (1966), the Archaeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act (NAGPRA) (1990). Buildings, structures, sites, districts, and objects listed in or eligible for the NRHP are referred to as historic properties under the NHPA. Under Section 110 of the NHPA, Federal agencies are required to inventory resources under their purview and nominate them to the NRHP.

Typically, cultural resources are subdivided into archaeological resources (prehistoric or historic sites, where human activity has left physical evidence of that activity but no structures remain standing); architectural resources (buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance); or resources of traditional, religious, or cultural significance to Native American tribes.

*Archaeological resources* comprise areas where human activity has measurably altered the earth, or deposits of physical remains are found (e.g., projectile points and bottles).

*Architectural resources* include standing buildings, bridges, dams, and other structures of historic or aesthetic significance. Generally, architectural resources must be more than 50 years old to be considered eligible for the NRHP. More recent structures, such as Cold War-era resources, might warrant protection if they are of exceptional importance or if they have the potential to gain significance in the future.

Resources of traditional, religious, or cultural significance to Native American tribes can include archaeological resources, structures, neighborhoods, prominent topographic features, habitat, plants, animals, and minerals that Native Americans or other groups consider essential for the preservation of traditional culture.

The EA process and the consultation process prescribed in Section 106 of the NHPA require an assessment of the potential impact of an undertaking on historic properties that are within the proposed project's APE, which is defined as the geographic area(s) "within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." In accordance with the NHPA and 36 CFR Part 800, determinations regarding the potential effects of an undertaking on historic properties are presented to the SHPO. Federally recognized Native American tribes would be consulted with in accordance with NHPA and EO 13175, *Consultation and Coordination With Indian Tribal Governments* (November 9, 2000).

### **3.7.2 Existing Conditions**

The military use of the area began in 1942 when the U.S. Army Air Corps established the Mountain Home Army Air Field for bombardment training. Between 1949 and 1966, with the exception of a couple of years during the Korean War, the installation was under the command of the SAC for bomber and tanker aircraft. The installation gained an alert mission and saw construction of a Bomber Alert Facility in 1957 and 1959, as well as Titan missile facilities (MHAFB 2006).

Archaeological surveys of Mountain Home AFB were conducted in 1990 and 1998. Although several sheepherder camps, a trash scatter, and isolates were found, none were recommended as eligible to be listed in the NRHP. Thus the main portion of Mountain Home AFB has no archaeological sites eligible for listing in the NRHP (MHAFB 2006).

Mountain Home AFB has consulted with Indian tribes affiliated with the area including the Burns Paiute Colony, Shoshone-Bannock Tribes of Fort Hall Reservation in southeastern Idaho, the Paiute Tribe of Fort McDermitt Reservation in Nevada, the Northwestern Band of Shoshone, and the Shoshone-Paiute Tribes of the Duck Valley Reservation. No traditional cultural properties have been identified on Mountain Home AFB (MHAFB 2006).

Two architectural surveys of the main portion of Mountain Home AFB have been conducted, including a survey of World War II temporary structures and a survey of Cold War-era facilities. These surveys identified five World War II-era aircraft hangars and one Cold War-era Bomber Alert Facility (a 150-man SAC "molehole") constructed in 1958 to 1959, and one and one-half Christmas-type aircraft aprons. These facilities have been determined to be eligible for the NRHP. None of the NRHP-eligible buildings or structures is on or near the conveyed land or housing or within the viewshed of the Proposed Action (MHAFB 2006).

Three houses, 4476 and 4478 Tuck Street and 4473 Rabeni Street, in the Falcon Estates neighborhood were designed by architect Richard J. Neutra in 1955 and completed in 1959. Richard Neutra, of Neutra and Alexander, was an internationally recognized architect. The three houses were designed as part of the 270-unit Gunfighter housing project (MHAFB 2006). They are all single-story wood frame and masonry buildings built on concrete slab floors. The three houses possess some of the hallmarks of the

International Style for which Richard Neutra was known. These design details include stark simplicity, vigorous functionalism, and flexible planning all based on modern structural principles and materials. These three homes were determined to be eligible for the NRHP by the USAF with the concurrence of the SHPO in 2004 and are one of two USAF and U.S. Navy Properties of Particular Interest identified in Appendix G of the *Program Comment for Capehart and Wherry Era Housing and Associated Structures and Landscape Features* (PC) endorsed for USAF use in 2004 by the ACHP. The three quarters are of state and national significance.

The neighborhoods associated with the Proposed Action have MFH units constructed between 1949 and 1962, under both the Wherry and Capehart programs. A small number of housing units were constructed in 1971, in 1989, and more recently in 1997. Demolition of the housing units constructed under both the Wherry and Capehart programs from 1949 to 1962 are covered under the 2004 PC; newer units are considered not eligible for the NRHP.

### **3.7.3 Environmental Consequences**

#### **3.7.3.1 Evaluation Criteria**

Under NEPA, impacts to cultural resources may be adverse or beneficial; negligible, minor, moderate, or major; direct or indirect; and short-term or long-term. Under Section 106 of the NHPA, adverse effects on historic properties can include any of the following:

- Physically altering, damaging, or destroying all or part of a resource
- Altering characteristics of the surrounding environment that contribute to the resource's significance
- Introducing visual or audible elements that are out of character with the property or that alter its setting
- Neglecting the resource to the extent that it deteriorates or is destroyed
- The sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance.

For the analysis of effects of the Proposed Action on archaeological resources, the Area of Potential Effect (APE) includes both direct impacts from ground-disturbing activity, and indirect impacts resulting from undertakings outside of site locations. Impacts on cultural resources include potential effects on buildings, sites, structures, districts, and objects eligible for or included in the NRHP; cultural items as defined in the NAGPRA; archaeological resources as defined by the Archaeological Resources Protection Act of 1979; and archaeological artifact collections and associated records as defined by 36 CFR Part 79. Under Section 106 of the NHPA, the Proposed Action might have no effect, no adverse effect, or an adverse effect on historic properties.

#### **3.7.3.2 Proposed Action**

**Archaeological Resources.** No impacts on known archaeological resources would be expected under the Proposed Action. The Proposed Action would occur either in areas that have been previously surveyed and no archaeological resources have been identified or areas of previous disturbance, including housing with low probability for archaeological resources.

In the event of an inadvertent discovery, all work in the immediate vicinity of the discovery would be halted until the materials are identified and documented and appropriate treatment is developed in consultation with the SHPO and other consulting parties. In compliance with NAGPRA and other requirements, tribal representatives would be notified and consulted about the proposed treatment of human remains and funerary and sacred objects should these be discovered during implementation of the Proposed Action. Accordingly, the Proposed Action is expected not to impact archaeological resources.

***Architectural Resources.*** The Proposed Action would result in a long-term, adverse impact on architectural resources under NEPA because it would result in the demolition of the three historic NRHP-eligible Senior Officers' Quarters. Under the NHPA, their demolition would constitute an adverse effect on the three NRHP-eligible quarters. However, this effect is reduced below the threshold of significance under NEPA because of the completion of the consultations and mitigation as described in the following paragraphs and documented in **Appendix G**. The Proposed Action would not be expected to impact other architectural resources including Capehart-Wherry housing units. There are no other properties eligible for inclusion in the NRHP or located near the NRHP-eligible Senior Officers' Quarters.

The Three Historic Senior Officers' Quarters are Properties of Particular Importance under the 2004 Capehart-Wherry housing PC. Mountain Home AFB has consulted with the ACHP and SHPO regarding them since 2004. A list of these consultations is presented in **Appendix G**. Mountain Home AFB consulted with the SHPO and ACHP regarding demolition of the three quarters in 2006-2007 related to a different undertaking. In a letter dated 6 July 2007, the ACHP determined that the USAF adequately satisfied its responsibilities under the PC (Brown 2007). Mountain Home AFB has continued consultations with the SHPO regarding the Proposed Action, most recently in 2010 and 2011. The Three Historic Senior Officers' Quarters have been documented to Historic American Buildings Survey (HABS) Level III standards, and the documentation is available in the collections of the Library of Congress (U.S. Library of Congress 2011). In addition, Mountain Home AFB prepared a public education booklet about the history of the Capehart-Wherry housing program, the work of architect Richard Neutra and the firm of Neutra and Alexander, and the Three Historic Senior Officers' Quarters at Mountain Home AFB. Titled *Mountain Home AFB Modern: The Capehart-Wherry Housing at MHAFF ID*, the booklet won an Orchid Award for Excellence in Historic Preservation from Preservation Idaho in May 2011 and an Award of Merit from the American Association of State and Local History. Mountain Home AFB has consulted with the SHPO regarding the Proposed Action, and the SHPO has stated that consultation and mitigation is complete (Robertson 2011). The completed mitigation documentation will reduce any adverse impacts under NEPA below the threshold of significance.

***Resources of Traditional, Religious, or Cultural Significance to Native American Tribes.*** There are no known resources of traditional, religious, or cultural significance to Native American tribes at Mountain Home AFB. If resources of traditional, religious, or cultural significance to Native American tribes are identified within the APE of the Proposed Action, Mountain Home AFB would consult with the tribes to avoid, minimize, or mitigate any impacts from the Proposed Action on those resources.

### **3.7.3.3 Alternative for the Three Historic Senior Officers' Quarters**

Compliance with the National Historic Preservation Act (NHPA) has been accomplished for demolition of the Three Historic Senior Officers' Quarters under the Proposed Action. However, an alternative to the Proposed Action is considered in this EA that would preserve one or more of the Three Historic Senior Officers' Quarters. Under the alternative, one or more of the NRHP-eligible houses designed by internationally noted architect Richard Neutra would be preserved and maintained in their historic natural settings. The historic house(s) to be preserved would not incur long-term, adverse impacts under NEPA and would not be adversely affected under NHPA because they would be conveyed with conditions ensuring their preservation. However, because some of the options under this alternative provide for the

possibility that not all of the historic houses would be preserved and one or more homes may be demolished, some might incur long-term, adverse impacts under NEPA and adverse effects under NHPA because they would be conveyed without conditions requiring their preservation and could be demolished or relocated. The preservation of one or more of the historic quarters and their setting would minimize the loss of all three historic houses. Mountain Home AFB has completed all consultation and mitigation measures for the demolition of all Three Historic Senior Officers' Quarters under the Proposed Action; consequently it has completed consultation and mitigation for adverse impacts to one or more of the quarters under any option of this alternative.

***Option 1 – Convey with Conditions and Retain in Historic Setting as Installation Housing.*** Under this option, the Three Historic Senior Officers' Quarters would be conveyed to the PO, and one or more of the homes would be retained in their current setting for continued use as installation housing. The mature trees and landscaping would be maintained to enhance the historic surroundings. The homes would be conveyed with conditions that one or more of the homes be rehabilitated and maintained in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (DOI 1995) and pertinent National Park Service Preservation Briefs and guidance. New construction in the Falcon Estates neighborhood would be of the Craftsman ranch house design, which would be consistent with the scale and size of the Capehart-Wherry single-story architecture. This would retain the feeling and association of the houses' original setting within the former Gunfighter Manor neighborhood. The exterior appearance and significant interior features of the homes would be maintained consistent with the recognized architectural design; however, upgrades or maintenance to the homes would be allowed consistent with the *Secretary of the Interior's Standards*. The PO would be required to submit renovation and maintenance plans to the Mountain Home AFB cultural resources officer. The plans would be approved by the installation in consultation with the SHPO. Since Mountain Home AFB completed all consultation and mitigation measures for the demolition of all Three Historic Senior Officers' Quarters under the Proposed Action, no further consultation and mitigation would be needed to address impacts to one or more of these homes that may be demolished under Option 1.

***Option 2 – Convey with Conditions and Retain in Historic Setting as Community Space.*** Option 2 would involve conveying the Three Historic Senior Officers' Quarters to the PO and converting one or more of the homes to alternative uses, such as community space for meetings or social events. As in Option 1, the homes would be conveyed with conditions that they be rehabilitated and maintained in accordance with DOI standards. The building exteriors, the mature trees, and the landscaping would be retained in the current historic setting as described above. The building interiors would be renovated to provide for offices or open meeting rooms, while protecting and maintaining historic materials and features that are present in the original design. The PO would be required to submit renovation plans to the Mountain Home AFB cultural resources officer. The plans would be approved by the installation in consultation with the SHPO. The use of one or more of the homes as community space would complement the desired development feature of a community center with enhanced park and picnic areas in the Falcon Estates housing area. Since Mountain Home AFB completed all consultation and mitigation measures for the demolition of all Three Historic Senior Officers' Quarters under the Proposed Action, no further consultation and mitigation would be needed to address impacts to one or more of these homes that may be demolished under Option 2.

***Option 3 – Do Not Convey.*** Under Option 3, Mountain Home AFB would not convey the Three Historic Senior Officers' Quarters to the PO. The metes and bounds survey would inscribe an area in the center of the Falcon Estates neighborhood to include the three homes, associated landscaping, and mature tree canopy that would remain under the control of the installation. The use and disposition of the homes would occur outside of the MHPI decision process, and the USAF would continue to comply with the NHPA regarding their management.

### 3.7.3.4 No Action Alternative

Under the No Action alternative, all existing housing considered under this EA would be maintained and none would be constructed or demolished. The community center/clubhouse would not be constructed. As a result, under the No Action Alternative, there would be no impacts on known archaeological resources; architectural resources; or resources of traditional, religious, or cultural significance to Native American tribes.

## 3.8 Socioeconomics and Environmental Justice

### 3.8.1 Definition of the Resource

**Socioeconomics.** Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Population levels are subject to fluctuations from regional birth and death rates and immigration and emigration of people. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these two fundamental socioeconomic indicators are typically accompanied by changes in other components, such as housing availability and the provision of public services.

Socioeconomic data at county, state, and national levels permit characterization of baseline conditions in the context of regional, state, and national trends. For the purpose of the Proposed Action, this section focuses primarily on the construction industry and the real estate market. Socioeconomic data analyzed in this section represent the Region of Influence (ROI) relative to its surrounding metropolitan city, county, and state levels to characterize baseline socioeconomic conditions relative to regional and state trends.

Demographics identify the population levels and changes to population levels of a region. Demographics data might also be obtained to identify, as appropriate to evaluation of a proposed action, a region's characteristics in terms of race, ethnicity, poverty status, educational attainment level, and other broad indicators.

The demographics of a geographic region can describe the socioeconomic environment, which represents a composite of several interrelated and nonrelated factors. There are several factors that can be used as indicators of socioeconomic conditions for a geographic area, such as average educational attainment, personal income, percentage of residents living below the poverty level, employment/unemployment rates, employment by business sector, and cost of housing. These characteristics cumulatively measure the community quality of life. Data on employment can identify gross numbers of employees, employment by industry or trade and unemployment trends. Data on personal income in a region can be used to compare the before and after effects of any jobs created or lost as a result of a proposed action. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

**Environmental Justice.** Environmental justice is defined by EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued on February 11, 1994, by President Clinton. EO 12898 pertains to environmental justice issues and relates to various socioeconomic groups and the health effects that could be imposed on them. This EO requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, tribal,

and local programs and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Such information aids in evaluating whether a proposed action would render vulnerable any of the groups targeted for protection in the EO.

**Children's Environmental Health and Safety Risks.** EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each Federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

### 3.8.2 Existing Conditions

Mountain Home AFB is a USAF installation in Elmore County, Idaho, 8 miles southwest of the City of Mountain Home. For the purpose of this EA, four spatial areas are used to define the socioeconomic baseline conditions: (1) the ROI, (2) City of Mountain Home, (3) Elmore County, and (4) the State of Idaho. The ROI is defined by the 2000 U.S. Census tracts 9804 and 9805. The ROI is included to illustrate economic impacts from the Proposed Action that could occur in the immediate area around Mountain Home AFB. Mountain Home is the largest city in Elmore County. The State of Idaho is included as a comparable baseline for socioeconomic and environmental justice analysis.

**Demography.** The population in the ROI (15,096) composes only 1.2 percent of the total population of the State of Idaho. Similarly, the populations of the City of Mountain Home (11,143) and Elmore County (29,130) represent 0.8 percent and 2.2 percent, respectively, of the state population. Demographic figures are also illustrated in **Table 3-8**.

**Regional Employment.** In general, the top two industries by employment for the four spatial areas are (1) educational, health, and social services; and (2) retail trade. Manufacturing is the third largest employment industry except within the ROI, where public administration employs 12 percent of the population. Unemployment in the ROI is a low at 1.9 percent compared to 3.5 percent in Mountain Home, 3.1 percent in Elmore County, and 3.8 percent in the State of Idaho (USCB 2000a, USCB 2000b, USCB 2000c, USCB 2000d).

**Mountain Home AFB Employment.** According to the FY 2008 Economic Impact Analysis, 4,173 active military personnel and 908 civilian employees work at Mountain Home AFB with a total payroll of \$226,582,391. The indirect economic impact of the installation is the creation of an additional 1,601 jobs and \$52,600,069 in salaries from construction contracts and procurement of services. **Figure 3-6** illustrates construction and procurement expenditures for FY 2008. The total economic impact of Mountain Home AFB on the surrounding community is estimated to be \$1,006,562,371 for all payroll, construction, and procurement expenditures (EIA 2008).

**Housing Characteristics.** The ROI contains approximately 4,086 units (as reported during the 2000 U.S. Census). In the City of Mountain Home, Elmore County, and Idaho, the percentage of renter-occupied units ranges from 25 to 37 percent. Vacancies range throughout all four spatial levels from 8.5 percent in the ROI to 13.6 percent in Elmore County. Complete data are listed in **Table 3-9**.

**Table 3-8. Employment by Industry 2000**

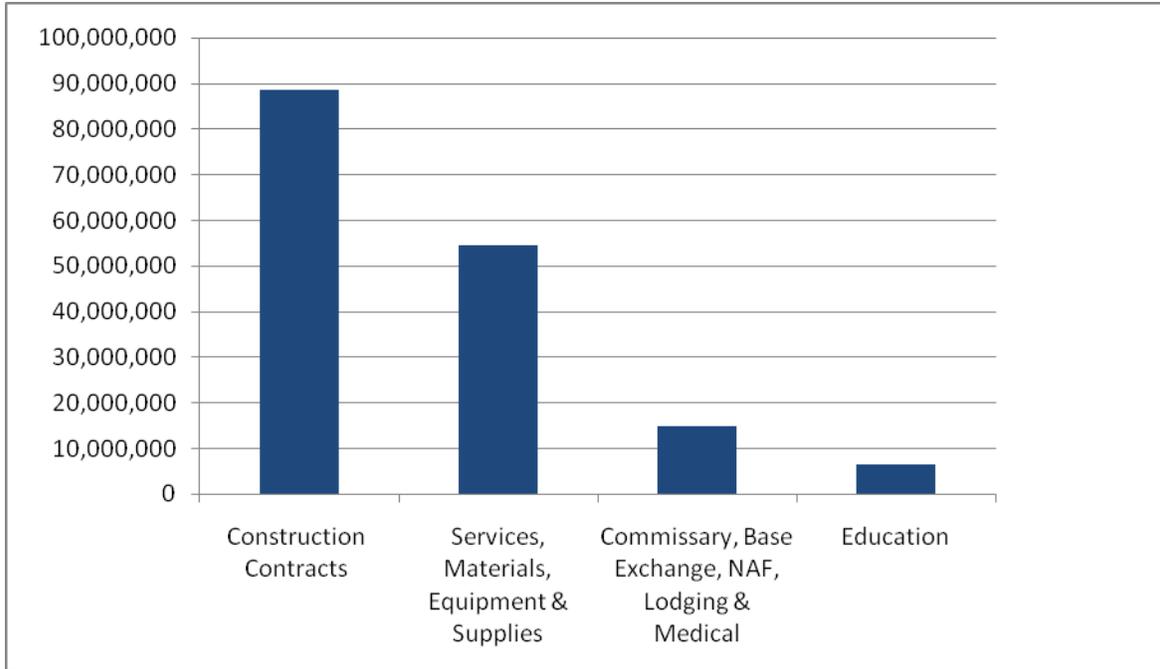
Industry	ROI	Mountain Home	Elmore County	Idaho
Population 16 Years and Over in the Labor Force	11,298	8,198	21,768	969,872
Percentage of Employed Persons in Armed Forces	20.9%	13.7%	14.5%	0.5%
Agriculture, forestry, fishing and hunting, and mining	11.2%	2.3%	7.7%	5.8%
Construction	5.1%	5.2%	6.0%	8.1%
Manufacturing	7.5%	10.7%	11.7%	13.1%
Wholesale trade	1.2%	2.1%	2.2%	3.6%
Retail trade	16.6%	13.3%	13.0%	12.6%
Transportation and warehousing, and utilities	2.3%	6.1%	5.5%	4.7%
Information	0.9%	1.8%	1.6%	2.3%
Finance, insurance, real estate, and rental and leasing	5.9%	6.6%	5.0%	5.1%
Professional, scientific, management, administrative, and waste management services	4.9%	6.8%	5.3%	8.0%
Educational, health, and social services	21.8%	21.0%	19.0%	19.2%
Arts, entertainment, recreation, accommodation, and food services	9.4%	9.9%	8.8%	8.0%
Other services (except public administration)	6.3%	3.6%	4.6%	4.5%
Public administration	12.0%	10.6%	9.7%	5.1%

Sources: USCB 2000a, USCB 2000b, USCB 2000c, USCB 2000d

**Table 3-9. Housing Characteristics, 2000**

Housing Characteristics	Total Number of Units	Occupied Units		Vacant Units	Percent Vacant
		Owner Occupied	Renter Occupied		
ROI	4,086	1,337	2,388	361	8.5
Mountain Home	4,738	2,889	1,448	401	8.5
Elmore County	10,527	5,217	3,875	1,435	13.6
Idaho	527,824	339,960	129,685	58,179	9.0

Sources: USCB 2000e, USCB 2000f, USCB 2000g, USCB 2000h, USCB 2000i



**Figure 3-6. Construction and Procurement Expenditures, FY 2008**

**Environmental Justice.** The Hispanic or Latino population represents the largest minority group within all four spatial regions (see **Table 3-10**). The percentage of Black or African Americans trends slightly higher in the ROI (4.3 percent) compared to Mountain Home (2.6 percent), Elmore County (3.2 percent), and Idaho (0.4 percent). The median household income in the ROI is \$35,316, which is slightly lower than the other three spatial regions. Consequently, the percentage of families living below the poverty level (9.2 percent) is slightly higher than the City of Mountain Home (8.6 percent), Elmore County (8.8 percent), and Idaho (8.3 percent).

**Children’s Environmental Health and Safety Risks.** The percentage of children within the ROI under the age of 5 is 9.8 percent, slightly higher than the other three spatial regions, as shown in **Table 3-10**. According to the 2000 U.S. Census, there are 2,735 children under the age of 10 within the ROI (USCB 2000e, USCB 2000f).

The health and safety of residents and children is used to measure the characteristics of environmental justice resources and determines the equal spatial distribution of burdens and benefits to minority groups and those economically disadvantaged. Potentially hazardous materials and toxic substances have been considered in this EA. The results from the 1995 LBP Survey indicate that there are LBP concerns in older MFH units on the installation. Any risks to children from LBP would be mitigated by following the Mountain Home AFB Lead-Based Paint Operations and Management Plan and applicable Federal and state regulations during demolition activities (MHAFB 2008d).

Since 2004, several studies have been conducted at Mountain Home AFB pertaining to the presence of chlordane and other pesticides under and alongside the concrete slabs of homes in several of the housing areas. The health and safety of children potentially exposed to contaminated soils would be addressed in a Risk Screening/Assessment Plan and Soil Management Plan required in the July 2009 Consent Order. Additionally, prior to any future construction and demolition activities, areas where pesticides were applied would be identified and mitigated accordingly (IDEQ 2009b).

**Table 3-10. Minority, Low-income, and Poverty Status for 2000**

Demographic	ROI	Mountain Home	Elmore County	Idaho
Total Population	15,096	11,143	29,130	1,293,953
Percent Male	58.2	50.2	55.2	50.1
Percent Female	41.7	49.8	44.8	49.9
Percent Under 5 Years	9.8	8.3	8.4	7.5
Percent Over 65 Years	3.5	9.7	7.1	11.3
Percent White	82.9	87.9	85.4	91.0
Percent Black or African American	4.3	2.6	3.2	0.4
Percent American Indian, Alaska Native	0.9	0.9	0.9	1.4
Percent Asian	1.9	1.7	1.7	0.9
Percent Native Hawaiian and Other Pacific Islander	0.2	0.3	0.2	0.1
Percent Some Other Race	6.1	3.4	5.4	4.2
Percent Reporting 2 or more races	3.5	3.1	3.3	2.0
Percent Hispanic or Latino*	13.2	8.3	12.0	7.9
Percent of Individuals Below Poverty	12.8	10.4	11.2	11.8
Percent of Families Below Poverty	9.2	8.6	8.8	8.3
Per Capita Income	\$14,701	\$17,029	\$16,773	\$17,841
Median Household Income	\$35,316	\$37,307	\$35,256	\$37,572

Sources: USCB 2000a, USCB 2000b, USCB 2000c, USCB 2000d

Note: \* Hispanic or Latino (of any race)

### 3.8.3 Environmental Consequences

#### 3.8.3.1 Evaluation Criteria

The significance of socioeconomic impacts is assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources (e.g., income, housing, employment). The magnitude of potential impacts can vary greatly, depending on the location of a proposed action. For example, implementation of an action that creates ten employment positions might be unnoticed in an urban area, but could have significant impacts in a rural community. If potential socioeconomic changes were to result in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, they would be considered significant. This section also evaluates impacts on schools and environmental justice concerns to include disproportionate impacts on low-income or minority populations, and children’s environmental health and safety risks

#### 3.8.3.2 Proposed Action

*Socioeconomic Characteristics.* No long-term significant effects would be expected on employment levels, household income, or poverty level. There would be a minor, short-term increase in employment related to MFH construction, demolition, and renovation activities on the installation. The use of local

labor would have short-term, minor, beneficial impacts on employment, particularly in the construction industry. Purchase of equipment, supplies, and materials would increase revenue to the regional community, including Mountain Home AFB and have short-term, moderately, beneficial impacts. The impact on real estate values would not be significant as all the MFH units are on-installation. Demand for off-installation housing would not increase as a result of the Proposed Action as sufficient MFH would be available during the 6-year transition period. Household income and poverty levels would not be affected by the Proposed Action.

Construction, demolition, and renovation of MFH units would be expected to have short-term, minor, beneficial impacts on household income. No effects on education would be expected as a result of the Proposed Action. The existing students would continue to attend their current schools, although their transportation between school and home would change during the MFH construction and demolition activities. If any of the 199 MFH units proposed for demolition are accepted under the OWS Program, the MFH units would be transported off-installation using OWS Program assets and beneficial impacts would be expected on American Indian reservations.

***Environmental Justice and Children's Environmental Health and Safety Risks.*** No impacts would be expected on environmental justice. The Proposed Action would not adversely or disproportionately affect minority or low-income populations, because demolition, construction, and renovation would occur only on Mountain Home AFB. Off-installation minority and low-income populations, limited in size and proximity to the installation, would not be adversely or disproportionately affected by the Proposed Action.

Demolition and construction associated with the Proposed Action would be in accordance with OSHA regulations ensuring that the safety of children would not be impacted. During demolition, construction, and renovation all units would be surveyed for ACM and LBP and remediated as appropriate. Therefore, negligible impacts on children's health and safety risks would be expected as result of the Proposed Action. Additionally, prior to construction or demolition activities, pesticide contamination in soil around building foundations would be identified and mitigated accordingly following an approved Risk Screening/Assessment and Soil Management Plan.

### **3.8.3.3 Alternative for the Three Historic Senior Officers' Quarters**

Each of the options under the alternative for the Three Historic Senior Officers' Quarters would involve the preservation of one or more of the homes and their respective settings. Each of these options would thus slightly decrease the total amount of demolition and new construction proposed at Mountain Home AFB. However, in context with the overall footprint of demolition and construction, these options would have a negligible impact on employment levels in the region. The overall impacts on socioeconomics would be below the level of significance. There would be no impacts from this alternative on environmental justice in the area.

### **3.8.3.4 No Action Alternative**

Under the No Action Alternative, Mountain Home AFB would not implement the Proposed Action and would continue to provide housing needs for military personnel and their accompanied family members. No demolition of structures would occur as planned under the Proposed Action and maintenance and repairs would be provided, as needed on the existing units.

Long-term, negligible to minor, adverse impacts would be expected from the continued use of some of the existing MFH units. The existing MFH units that likely contain ACM and LBP, would potentially expose residents and maintenance personnel to harmful substances.

## 3.9 Infrastructure

### 3.9.1 Definition of the Resource

Infrastructure consists of the systems and physical structures that enable a population in a specified area to function. Infrastructure is wholly human-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as “urban” or developed. The availability of infrastructure and its capacity to support growth are generally regarded as essential to the economic growth of an area. The infrastructure components to be discussed in this section include transportation, utilities, and solid waste management.

Transportation includes major and minor roadways that feed into the installation and the security gates, roadways, and parking areas on the installation. Public transit, rail, and pedestrian networks are also elements of transportation. Utilities include electrical supply, natural gas supply, liquid fuel supply, water supply, sanitary sewer and wastewater systems, storm water drainage, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population’s residential, commercial, and industrial needs.

### 3.9.2 Existing Conditions

**Transportation.** Mountain Home AFB is approximately 10 miles southwest of Interstate 84 (I-84). Airbase Road (Idaho State Route 67) provides primary access to Mountain Home AFB. All of the roadways, curbing, and sidewalks within the MFH areas are in excellent condition except for the Elk Heights neighborhood and older areas of Sagebrush View. These areas have had routine maintenance but no substantial upgrades since their construction in 1969 and 1959, respectively (HQ USAF 2010).

**Electrical Supply.** Electrical power is supplied to Mountain Home AFB by Idaho Power. The installation owns and operates the electrical supply system. In MFH areas, electricity is supplied through 12,470/7,200-volt primary feeders and 240/120-volt secondary feeders.

Electrical utilities within the Woodland Groves and Eagle View neighborhoods, and at the Housing Management Office, are all underground and in good condition. Falcon Estates and Elk Heights have overhead electrical utility lines that are in poor condition; the remainder of Parcel C has underground electrical utility lines that are in good condition. The former Dunes neighborhood, which will become the northern part of Sagebrush View, has underground electrical lines that are in good condition; the system was left in place during previous demolition activities though secondary feeders to individual MFH units were removed. Most MFH units have metering sockets installed with service panels, though none of the units have a meter installed. The MFH units in Falcon Estates, Gunfighter Circle, and Elk Heights do not have metering capability; however, the Housing Management Office is metered (HQ USAF 2010).

**Natural Gas Supply.** Natural gas is supplied to Mountain Home AFB by Intermountain Gas. The installation owns and operates the natural gas system. The residential system supplies natural gas to all housing neighborhoods except Eagle View. The industrial system supplies natural gas to Eagle View and a separate meter monitors gas usage.

The natural gas distribution systems in Woodland Groves, Eagle View, Desert Skies Estates, Coyote Terrace, Trinity Heights, Sagebrush View (southern portion), Gunfighter Manor, Gunfighter Circle, and the Housing Management Office consist of polyethylene mains and service laterals that are in good condition. Each service lateral has a curb-stop shut-off valve adjacent to the road and a gas regulator at the entrance to each MFH unit (and the Housing Management Office). The central portion of Sagebrush View does not have an active natural gas system; it was abandoned in-place in 2006. The northern part of

Sagebrush View, Falcon Estates, and Elk Heights has a mixture of steel and polyethylene mains and service laterals. These systems are in poor condition and are beyond their service life. There are no gas meters on any MFH facilities (HQ USAF 2010).

**Liquid Fuel Supply.** The majority of the petroleum handled at Mountain Home AFB is Jet Propellant-8 (JP-8), which is stored at the Bulk Fuel Storage Area. Other aboveground storage tanks (ASTs) and USTs at the installation contain diesel fuel, gasoline, heating oil, and used oil. A JP-8 fuel pipeline enters Mountain Home AFB near the hospital at the northeastern end of the installation, traversing in a southwesterly direction towards the installation runway. The pipeline originates from the City of Mountain Home, and is not owned by Mountain Home AFB until the pipeline enters the Bulk Fuel Storage Area by the flightline. The pipeline runs near the Woodland Groves neighborhood but does not traverse the site.

Historically, MFH units had oil heating systems. During the 1980s, MFH units were converted from heating oil systems to natural gas heating systems. Though the MFH units no longer have oil heating systems, approximately 53 oil USTs could remain in Falcon Estates (Briggs 2010). It is possible that some other MFH units still have historic inactive USTs in place. See **Section 3.10**, Hazardous Materials and Wastes, for a more detailed discussion of USTs.

**Water Supply.** Mountain Home AFB receives potable water from six on-installation government-owned water wells that draw from the Bruneau Aquifer. Two additional wells supply nonpotable water. (MHAFB 2005b). The water distribution system consists of approximately 45 miles of distribution system lines ranging in size from 2 to 12 inches in diameter. Most system lines are constructed of cast iron, galvanized iron, polyvinyl chloride (PVC), and asbestos concrete piping. Water is treated with chlorine and fluoride at each well site prior to storage in one of four storage tanks, which have a total capacity of 2.75 million gallons. Stored water is either gravity-fed (from the elevated tanks) or pumped through booster stations into the distribution system (MHAFB 2005b).

Mountain Home AFB has entered into agreement with the State of Idaho and J.R. Simplot Company (a large agricultural company) to limit annual pumping to 2,000 million gallons. The combined nominal capacity of the six active potable water wells is 8.53 mgd. The average daily demand for water is 2.17 mgd (or approximately 792 million gallons per year), while the maximum daily demand is 5.90 mgd. On-installation water demands are easily met by the existing water supply wells and within annual pumping limits (MHAFB 2005b). Mountain Home AFB has prepared a Drinking Water Protection Plan that defines procedures to protect the quality of the potable water supply (MHAFB 2002).

The potable water systems in Woodland Groves, Eagle View, Desert Skies Estates, Coyote Terrace, Trinity Heights, Sagebrush View, Gunfighter Manor, and the Housing Management Office all have PVC mains and laterals that are in excellent condition. Gunfighter Circle has an older potable water system with an asbestos concrete main and steel laterals. Falcon Estates and Elk Heights have older potable water systems with asbestos concrete mains and laterals, and service to each MFH unit is provided through galvanized iron pipe. All of these older systems have been maintained and upgraded as needed and are considered to be in good condition. All service laterals have a curb-stop valve outside each MFH unit (and the Housing Management Office), usually near the road. None of the MFH units or the Housing Management Office has water meters (HQ USAF 2010).

**Sanitary Sewer and Wastewater Systems.** Mountain Home AFB maintains its own sanitary sewer system and wastewater treatment plant. The wastewater treatment plant, on the western side of the installation, treats wastewater from MFH areas, industrial facilities, and aircraft operations. Treated effluent is conveyed to a storage lagoon where some evapotranspiration occurs and is then discharged to 11 rapid infiltration basins with a capacity of 2.55 mgd at an average flow of 0.45 mgd (MHAFB 2007b). Treated effluent can be applied as reuse irrigation water on the wastewater treatment plant grounds and

installation golf course. Per the installation's wastewater reuse permit, treated effluent may only be applied during the growing season, April thru October (MHAFB 2005b). The plant operates under NPDES Permit No. ID0027642 (USEPA 2009b) and Municipal Wastewater Reuse Permit No. LA-000154-03 (IDEQ 2009a). The wastewater NPDES permit allows up to 16 discharges per year.

The system that supports the MFH area consists of three collectors that discharge to the installation's main wastewater distribution system. A north collector provides flow from Woodland Groves, Desert Skies Estates, Sagebrush View, Gunfighter Manor, and Gunfighter Circle. A south collector supports flow for Coyote Terrace, Trinity Heights, Falcon Estates, and Elk Heights. A small collector that supports Eagle View and the Housing Management Office runs south from Parcel C and then west to the tie-in point for all three collectors. The north collector is a 12-inch concrete pipe. The south collector is a 10-inch concrete pipe. The Eagle View collector is an 8-inch concrete pipe. These collectors have been maintained on a bi-annual basis to include flushing but are in a deteriorated condition (HQ USAF 2010).

The sewerage system in Woodland Groves, Eagle View, Desert Skies Estates, Coyote Terrace, Trinity Heights, the southern portion of Sagebrush View, Gunfighter Manor, and the Housing Management Office consists of 8-inch PVC service mains and 4-inch service laterals that are in good or excellent condition. The central portion of Sagebrush View has two service mains, one main that provides service from Gunfighter Manor and an older main that was abandoned in place. The northern part of the Sagebrush View neighborhood has asbestos concrete mains and galvanized laterals that were abandoned in place. An 8-inch PVC service main also runs through this area providing service to Desert Skies Estates. Gunfighter Circle has new PVC mains and a mixture of old galvanized and new PVC service laterals; the sewer system is in good condition. Asbestos concrete service mains are abandoned in place in Gunfighter Circle. Falcon Estates and Elk Heights have older systems consisting of asbestos concrete service mains and galvanized service laterals; these sewer systems are in poor condition (HQ USAF 2010).

**Storm Water Drainage.** The storm water system at Mountain Home AFB consists of curb-line grates, runoff collectors, drainage ditches, road culverts, and underground distribution lines. The installation operates under an NPDES multi-sector general permit for storm water discharges associated with industrial activity. Storm water is discharged via one permitted outfall (Outfall 001) to a tributary of Canyon Creek. As long as the storm water meets the conditions and quality of the NPDES storm water permit, there are no limitations on the volume of storm water that may be discharged (MHAFB 2008a).

The storm drainage system throughout the MFH areas is a combination of underground and surface drainage systems. The storm water infrastructure is generally in good or excellent condition and is adequate. Coyote Terrace and Trinity Heights have networks of curb-line grates and storm water collectors to drain storm water into capped underground mains; drainage is usually adequate, but large rain events can result in local flooding. Older neighborhoods, including the former Dunes (which will be the northern portion of Sagebrush View), Falcon Estates, and Elk Heights, are the only areas that have limited and inadequate storm water infrastructure consisting of undersized underground distribution lines and drainage ditches (HQ USAF 2010). The addition of the South Storm Water Channel will assist with routing storm water away from the housing areas.

Section 402(p) of the CWA states that storm water discharges associated with industrial activity to waters of the United States must be authorized by an NPDES permit. Mountain Home AFB currently operates under an NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (Permit No. IDR050000). The permit authorizes the discharge of storm water associated with industrial activity to surface waters, in accordance with effluent limitations, monitoring requirements, and other conditions (USEPA 2008).

**Communications Systems.** Ten MFH units, one in Falcon Estates and nine in Gunfighter Circle, and the Housing Management Office, are equipped with government computer and telephone lines. The 366 Communications Squadron is responsible for maintaining these lines. Qwest provides all commercial/residential telephone service to Mountain Home AFB under an existing franchise agreement. Qwest owns all telephone lines and maintains and operates the system. Housing occupants have the option of using cable or satellite for television and Internet services. Windjammer Cable has a nonexclusive franchise agreement as a cable provider and constructs, maintains, and operates all equipment associated with this service. There are no franchise agreements or licenses for satellite service (HQ USAF 2010).

**Solid Waste Management.** Mountain Home AFB has a Solid Waste Management Plan (SWMP) in accordance with AFI 32-7042, *Solid and Hazardous Waste Compliance*. The SWMP provides a framework for organizing, managing, planning, and implementing the installation's Solid Waste Management Program as a major component of the overall Mountain Home AFB environmental program strategy. The SWMP also describes previous, current, and future solid waste management actions at Mountain Home AFB. The 366th Civil Engineer Squadron is responsible for managing the collection and disposal of all municipal solid waste and for the tracking and reporting of recycled materials (MHAFB 2010b).

The Mountain Home AFB municipal solid waste landfill was closed in March 2009, and a post-closure plan for continued monitoring and reporting is in place. The installation currently uses a contractor to collect municipal solid waste generated on-installation and dispose of it off-installation. According to the Enhanced Status of Resources and Training System report for 2008, Mountain Home AFB generated 7,124 tons of solid waste (Binder 2009).

Mountain Home AFB has a goal of reducing solid waste by 50 percent through recycling and reuse of construction and demolition debris where possible. As part of its Pollution Prevention program, Mountain Home AFB recycles materials such as aluminum, paper, tin, cardboard, wood, and plastic. Recycling is disposed of in receptacles in the MFH areas, collected by the contracted refuse hauler, and dropped off at the Recycling Center at Building 1800. All industrial recycling containers are collected and transported to the Recycling Center (MHAFB 2010b). According to Enhanced Status of Resources and Training System reporting for 2008, Mountain Home AFB generated 606 tons of recycled material in 2008 (Binder 2009).

### **3.9.3 Environmental Consequences**

#### **3.9.3.1 Evaluation Criteria**

Effects on infrastructure are evaluated for their potential to disrupt or improve existing levels of service and create additional needs for transportation resources, energy (electric, natural gas, and liquid fuels), water, sanitary sewer and wastewater service, storm water drainage, communications, and solid waste management. For example, effects might arise from physical changes to traffic circulation or energy needs created by either direct or indirect workforce and population changes related to installation activities. An effect could be significant if the Proposed Action resulted in any of the following:

- Exceeded capacity of a utility
- A long-term interruption of the utility
- A violation of a permit condition
- A violation of an approved plan for that utility.

### 3.9.3.2 Proposed Action

**Transportation.** Short-term, negligible to minor, adverse effects on the Mountain Home AFB transportation system would be expected from the implementation of the Proposed Action. The demolition of 359 MFH units and the construction of 263 MFH units would result in a slight increase in the amount of traffic at the installation from equipment being delivered, debris being removed, and contractors commuting to the work sites. However, demolition and construction traffic would compose a small percentage of the total existing traffic on the installation. Many of the heavy demolition and construction vehicles would be driven to the work sites and kept on site for the duration of demolition activities, resulting in relatively few additional trips. The proposed demolition and construction activities would be spread over a period of 6 years at various locations in the MFH area of Mountain Home AFB. This would further reduce effects on installation traffic. Any potential increases in traffic volume associated with the proposed demolition and construction activities would be temporary.

Long-term, minor, beneficial effects on the Mountain Home AFB transportation system would be expected from the Proposed Action. All roadways servicing MFH units scheduled for demolition would be removed as part of demolition activities, including the deteriorated roadways in Elk Heights and the northern part of the Sagebrush View neighborhood. New roadways would be constructed for new MFH units. Although the Proposed Action would reduce the number of MFH structures at Mountain Home AFB by 96 units, most housing units proposed for demolition are currently vacant (surplus). As such, the removal of these structures would not reduce the number of personnel at the installation and, in turn, would not reduce the amount of traffic on installation roadways.

**Electrical Supply.** Short-term, minor, adverse effects on electrical supply would be expected from the implementation of the Proposed Action. Temporary, minor electrical service interruptions might be experienced when electrical service is disconnected from the 359 MFH units proposed for demolition and connected to 263 new MFH units. Electrical service lines to the MFH units proposed for demolition would be disconnected prior to the start of demolition activities. Any underground electric utility mains scheduled for demolition would be capped at the main and abandoned in place; however, all laterals would be removed. Any aboveground electrical mains would be removed. The demolition and construction activities could result in a slight increase in the demand for electricity; however, because demolition activities would be staggered over a 6-year period, the increase in electrical demand at any one time would be minimal.

Long-term, minor, beneficial effects on the electrical supply would be expected from the Proposed Action. Following the proposed demolition of 359 MFH units, the overall electrical demand at Mountain Home AFB would be reduced by a minor amount due to the loss of these buildings. Any increase in electrical demand from the construction of 263 MFH units would be offset from the demolition of 359 MFH units. In addition, the removal of older, outdated electrical infrastructure at the MFH units proposed for demolition would be a long-term, minor, beneficial effect on the installation. The Proposed Action would convey to the PO all electrical supply infrastructure between a predetermined POD and the MFH units. The POD for electrical systems is anticipated to be at the meter of each unit (HQ USAF 2010). The PO would be responsible for installing meters on MFH units, and the USAF would continue long-term electrical system maintenance up to the meter of each MFH unit.

**Natural Gas Supply.** Short-term, negligible to minor, adverse effects on natural gas supply would be expected from the implementation of the Proposed Action. Temporary, minor natural gas service interruptions might be experienced when natural gas service is disconnected from the 359 MFH units proposed for demolition and connected to the 263 new MFH units. Natural gas service lines to the MFH units proposed for demolition would be disconnected prior to the start of demolition activities. Any

natural gas mains scheduled for demolition would be capped at the main and abandoned in place; however, all laterals would be removed.

Long-term, minor, beneficial effects on natural gas supply would be expected from the Proposed Action. Following the proposed demolition of 359 MFH units, the overall natural gas demand at Mountain Home AFB would be reduced by a negligible amount due to the loss of these buildings. Any increase in natural gas demand from the construction of 263 MFH units would be offset from the proposed demolition of 359 MFH units. The Proposed Action would convey all natural gas supply infrastructure between a predetermined POD and the MFH units to the PO. The POD for natural gas systems is anticipated to be at the meter of each unit (HQ USAF 2010). The PO would be responsible for installing meters on MFH units, and the USAF would continue long-term natural gas system maintenance up to the meter of each MFH unit.

**Liquid Fuels Supply.** Short-term, negligible, adverse effects on liquid fuels supply would be expected from the implementation of the Proposed Action. The demand for liquid fuels such as gasoline and diesel would increase during the implementation of the Proposed Action because of the use of demolition and construction vehicles and equipment. Liquid fuel ASTs might be temporarily installed at the work sites to allow onsite refueling operations. Prior to temporarily storing or installing any ASTs at the work sites, the PO would submit the completed “Mountain Home AFB Contractor Site Specific Contingency Plan.” All AST’s must be in good working condition and meet all Federal, state, and local regulations and requirements. No long-term effects on liquid fuels supply would be expected because the Proposed Action would not alter demand for liquid fuels following demolition and construction activities or modify long-term liquid fuels storage methods at the installation. There are known and possibly other unknown inactive heating oil USTs in MFH areas. Historic and inactive USTs would be removed and properly disposed of during demolition activities. See **Section 3.10**, Hazardous Materials and Wastes, for a discussion of regulatory and environmental concerns with USTs.

**Water Supply.** Short-term, minor, adverse effects on water supply would be expected from the implementation of the Proposed Action. Temporary, minor water service interruptions might be experienced when water service is disconnected from the 359 MFH units proposed for demolition and connected to the 263 new MFH units. Water supply lines to the MFH units proposed for demolition would be disconnected prior to the start of demolition activities. Any water supply mains scheduled for demolition would be capped at the main and abandoned in place; however, all laterals would be removed. Demolition and construction activities would require water for dust suppression purposes. Potable water would be obtained from the Mountain Home AFB water supply system. Because demolition and construction activities would be staggered over a 6-year period, the increase in water demand at any one time would be minimal.

Long-term, minor, beneficial effects on water supply would be expected from the Proposed Action. Following the proposed demolition of 359 MFH units, the overall water demand at Mountain Home AFB would be reduced by a negligible amount due to the loss of these buildings. Any increase in potable water demand from the construction of 263 MFH units would be offset from the proposed demolition of 359 MFH units. The Proposed Action would convey all water supply infrastructure between a predetermined POD and the MFH units to the PO. The POD for water systems is anticipated to be at the service connection and lateral side of the curb-stop valve for each MFH unit (HQ USAF 2010). The PO would be responsible for installing meters on MFH units and all long-term maintenance from the curb-stop valve to the MFH units, and the USAF would continue long-term water system maintenance up to the shutoff valve.

**Sanitary Sewer and Wastewater Systems.** Short-term, negligible to minor, adverse effects on the sanitary sewer and wastewater systems would be expected from the implementation of the Proposed Action.

Temporary, minor sanitary sewer service interruptions might be experienced when wastewater piping is disconnected from the MFH units proposed for demolition and connected to the new MFH units. Sanitary sewer and wastewater lines to the MFH units proposed for demolition would be disconnected prior to the start of demolition activities. Any sanitary sewer mains scheduled for demolition would be capped at the main and abandoned in place; however, all laterals would be removed.

Long-term, minor, beneficial effects on sanitary sewer and wastewater systems would be expected from the Proposed Action. Following the proposed demolition of 359 MFH units, the overall volume of wastewater generated at Mountain Home AFB would be reduced by a negligible amount due to the loss of these buildings. Any increase in wastewater generation from the construction of 263 MFH units would be offset from the proposed demolition of 359 MFH units. The Proposed Action would convey all sanitary sewer and wastewater infrastructure between a predetermined POD and the MFH units to the PO. The POD for wastewater systems is anticipated to be the external cleanout closest to the MFH unit (HQ USAF 2010); therefore, the PO would be responsible for all long-term wastewater system maintenance from the cleanout to the MFH units, while the USAF would continue long-term wastewater system maintenance up to the cleanout.

***Storm Water Systems.*** Short-term, minor, adverse effects on storm water drainage would be expected from the implementation of the Proposed Action. The proposed demolition of 359 MFH units and the proposed construction of 263 MFH units would require ground disturbance as heavy equipment reworks and contours land surfaces. These activities would temporarily disrupt man-made storm water drainage systems and, consequently, increase the potential for storm water runoff to erode soil during demolition activities. Demolition BMPs that would minimize ground surface disturbance and attempt to provide adequate temporary storm water management techniques would be used to minimize adverse effects on storm water drainage during the implementation of the Proposed Action. Because demolition activities would be staggered over a 6-year period, the disruption to storm water systems would be minimized at any one time.

Long-term, minor, beneficial effects on storm water systems would be expected from the Proposed Action. Following the proposed demolition of 359 MFH units and the removal of the associated roadways and driveways, the amount of impervious surface at Mountain Home AFB would be reduced. Any increase in the amount of impervious surfaces from the new 263 MFH units would be offset from the demolition of 359 MFH units. This decrease in impervious surface would allow additional quantities of storm water to permeate into the ground and reduce the amount of storm water runoff.

***Communications Systems.*** Short-term, negligible to minor, adverse effects on communications systems would be expected from the implementation of the Proposed Action. Temporary, minor communications service interruptions might be experienced when communications lines are disconnected from the MFH units proposed for demolition. Communications lines to the MFH units proposed for demolition would be disconnected prior to the start of demolition activities. Any underground communications lines scheduled for demolition would be capped at the main and abandoned in place; however, all laterals would be removed. Any aboveground communications mains would be removed.

Long-term, negligible, beneficial effects on the communications systems would be expected from the Proposed Action. Following the proposed MFH unit demolition, the overall demand for communications systems at Mountain Home AFB would be reduced by a minor amount due to the loss of these buildings. Any increase in communications demand from the 263 new MFH units would be offset from the demolition of 359 MFH units. The existing telephone service and cable franchise agreements would be transferred to the PO.

***Solid Waste Management.*** Short-term, minor, adverse effects on solid waste management would be expected from the implementation of the Proposed Action. There are 199 excess MFH units in Elk

Heights that would first be offered for donation through OWS’s Housing Relocation Program, which would reduce short-term, adverse effects associated with solid waste management by substantially reducing the amount of demolition debris generated. If the excess MFH units cannot be reused through OWS, the proposed demolition of 359 total MFH units would generate approximately 31,718 tons of demolition waste. Additional quantities of solid waste would also be generated from the demolition of garages, shelters, roadways, driveways, sidewalks, curbs, and utility mains; and the construction of 263 MFH units. Total solid waste anticipated to be generated from the implementation of the Proposed Action is approximately 67,322 tons. **Table 3-11** summarizes the amounts of solid waste anticipated to be generated from the various aspects of the Proposed Action. The solid wastes would consist mainly of building materials such as concrete, metals (conduit, piping, and wiring), and lumber; and soil piles and yard debris such as trees and shrubs.

**Table 3-11. Quantities of Construction and Demolition Debris Generated from the Proposed Action**

Project	Total Square Footage <sup>a</sup>	Multiplier (pounds/ft <sup>2</sup> )	Debris Generated	
			(pounds)	(tons)
Demolition of 359 MFH Units	499,500	127 <sup>b</sup>	63,436,500	31,718
Demolition of Parking Lots, Driveways, Roads, and Sidewalks	987,500	69.9 <sup>c</sup>	69,057,076	34,529
Construction of 263 MFH Units	495,427	4.34 <sup>b</sup>	2,150,153	1,075
<b>Total Debris Generated</b>				<b>67,322</b>

Sources:

a. Calculated using Mountain Home AFB GIS Data, HQ USAF 2010, MHAFB 2003, and MHAFB 2009c.

b. USEPA 2009c.

c. Calculated assuming concrete asphalt density of 139.8 pounds/cubic foot (SI Metric 2009) and pavement thickness of 6 inches.

Mountain Home AFB does not have a landfill that is available to receive construction and demolition debris. It would be the contractor’s responsibility to dispose of all construction and demolition debris at an off-installation government-approved site. The closest landfill that accepts construction and demolition debris is the Idaho Waste Systems’ Simco Road Regional Landfill off I-84 exit 74, approximately 37 miles away (IWS 2009). The IWS Landfill has operated since 2000 and has adequate capacity to accommodate construction and demolition waste from the Proposed Action. Contractors would be required to recycle demolition debris to the greatest extent possible, thereby diverting it from landfills. Site-generated scrap metals, wiring, clean ductwork, and structural steel would be separated and recycled off site. Vegetation debris would be converted to mulch or recycled to the greatest extent possible. Clean fill material, ground-up asphalt, and broken-up cement would be diverted from landfills and reused whenever possible. All excess soils generated would be reused to the greatest extent possible for grading and contouring.

Long-term, negligible, beneficial effects on solid waste management would be expected from the Proposed Action. Following the proposed MFH unit demolitions, the amount of solid waste generated at Mountain Home AFB would be reduced by a negligible amount because of the loss of these buildings.

### 3.9.3.3 Alternative for the Three Historic Senior Officers’ Quarters

For each of the options under the alternative action for the Three Historic Senior Officers’ Quarters, one or more of the quarters would not be demolished. As demolition activities are decreased due to the

preservation of one or more of the homes and their respective settings, the amount of waste generated from demolition activities would decrease. No impacts on transportation or utilities would be expected to occur. The overall impacts on infrastructure would be negligible and beneficial, but would not be significant.

#### **3.9.3.4 No Action Alternative**

The No Action Alternative would result in continuation of the existing conditions of infrastructure resources, as discussed in **Section 3.9.2**. Older utility systems in the Sagebrush View, Falcon Estates, and Elk Heights neighborhoods would require frequent maintenance or upgrades to provide adequate service. No additional effects on infrastructure resources would be expected as a result of the Proposed Action not being implemented.

### **3.10 Hazardous Materials and Waste**

#### **3.10.1 Definition of the Resource**

A hazardous substance, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601(14)), is defined as: “(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33; (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, (42 U.S.C. §6921); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any HAPs listed under section 112 of the CAA (42 U.S.C. §7412); and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator of the USEPA has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).”

Hazardous materials are defined by 49 CFR 171.8 as “hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions” in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105–180.

RCRA defines a hazardous waste in 42 U.S.C. §6903, as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

#### **3.10.2 Existing Conditions**

**Hazardous Materials.** AFI 32-7086, *Hazardous Materials Management*, establishes procedures and standards governing procurement, issuance, use, or disposal of hazardous materials and tracking and record-keeping for public safety and for compliance with all laws and regulations. Under AFI 32-7086, the USAF has established roles, responsibilities, and requirements for a hazardous material management program (HMMP). The purpose of the HMMP is to control the procurement and use of hazardous material to support USAF missions, ensure the safety and health of personnel and surrounding communities, and minimize USAF dependence on hazardous materials. The HMMP includes the

activities and infrastructure required for ongoing identification, management, tracking, and minimization of hazardous materials. AFI 32-7080, *Pollution Prevention Program*, incorporates the requirements of all Federal regulations, AFIs, and DOD Directives for the reduction of hazardous material uses and purchases. The primary hazardous materials addressed by AFI 32-7080 are ozone-depleting substances and the 17 chemicals listed under the USEPA Industrial Toxics Program. EO 12088, *Federal Compliance with Pollution Control Standards*, ensures that necessary actions are taken for the prevention, management, and abatement of environmental pollution from hazardous materials or hazardous waste due to Federal facility activities.

Hazardous materials are managed at Mountain Home AFB according to the 366 FW plans 3209-CY, *Hazardous Materials Emergency Planning and Response Plan*, and 3210-CY, *Pollution Prevention Management Plan*. Plan 3209-CY documents the program that Mountain Home AFB will use when responding to hazardous material releases; identifies personnel responsible for review and execution of the plan; identifies hazardous materials and wastes that pose a hazard to the environment, on-installation workers, and the public; and identifies the response procedures for a spill of hazardous materials and wastes (MHAFB 2008b). Plan 3210-CY provides a framework for organizing, managing, planning, and implementing the Pollution Prevention Program as a major component of the overall Mountain Home AFB environmental strategy (MHAFB 2010a).

Hazardous materials such as flammable and combustible liquids, acids, corrosives, caustics, anti-icing chemicals, compressed gases, solvents, paints, paint thinners, and pesticides are used throughout Mountain Home AFB. Mountain Home AFB operates a hazardous materials pharmacy (HAZMART) program. The HAZMART is responsible for purchasing hazardous materials, maintaining an inventory database, and maintaining Material Safety Data Sheets (MSDS) for hazardous materials (MHAFB 2008b).

Small quantities of hazardous materials such as household cleaners, solvents, antifreeze, gasoline, motor oil, and pesticides might be stored inside or outside the MFH units at Mountain Home AFB for domestic use (MHAFB 2007b).

**Hazardous Wastes.** AFI 32-7042, *Solid and Hazardous Waste Compliance*, directs roles and responsibilities with waste stream management including planning, training, emergency response, and pollution prevention. The management of hazardous waste is governed by the RCRA Subtitle C regulations (40 CFR Parts 260 through 270), which are administered by the USEPA. Mountain Home AFB maintains a Hazardous Waste Management Plan (MHAFB 2008c), as directed by AFI 32-7042. The plan prescribes the roles and responsibilities of all members of Mountain Home AFB with respect to the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution prevention. In addition, the plan establishes the procedures for compliance with applicable Federal, state, and local standards for solid waste and hazardous waste management.

Mountain Home AFB is considered a large-quantity generator (LQG) of hazardous waste (MHAFB 2007b). An LQG generates more than 2,200 pounds of hazardous waste per month or more than 2.2 pounds of acute hazardous waste per month (USEPA 2010d). In 2008, the installation produced approximately 25,000 pounds of hazardous waste (MHAFB 2009d). Hazardous wastes generated at Mountain Home AFB include spent acids, corrosive liquids, paint wastes, combustible solvents, and battery acid. Other sources of hazardous waste include residues and contaminated material generated from groundwater and soil remediation activities; wastewater treatment; medical facilities; and activities that require the storage of hazardous materials, including flammable and combustible liquids, caustics, paint thinners, pesticides, solvents, fire retardant, and compressed gases. Aircraft operations generate the largest quantities of hazardous waste on the installation (MHAFB 2007b, MHAFB 2007c).

There are approximately 155 satellite accumulation points (SAPs) at Mountain Home AFB. A contractor transports hazardous waste from the SAPs to a 90-day accumulation site (Building 1296) (MHAFB 2007c). A SAP is an area at or near the point of waste generation where the user accumulates small quantities of “regulated hazardous waste” up to 55 gallons or up to 1 quart of “acutely hazardous waste.” When volume reaches this limit, the user turns the container into the 90-day accumulation site (Building 1296) designated the Central Collection Facility (CCF) (MHAFB 2008c). A SAP can also accumulate nonhazardous waste and universal wastes. Regulatory accumulation limits are not imposed on nonhazardous wastes; however, there are accumulation time limits for universal waste. Universal waste generators are allowed to accumulate universal waste at their location for no more than 6 months from the accumulation start date. Once the 6-month time limit has been reached, the universal waste must be turned in to the CCF for disposal. In Idaho, universal wastes include the following (IDEQ 2006):

- Batteries, including nickel-cadmium and small sealed lead-acid batteries
- Agricultural pesticides, including those that have been recalled or banned from use, obsolete pesticides, and those that are no longer needed due to changes in use
- Mercury-containing devices, including thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches
- Spent lamps, including fluorescent tubes, and high-intensity discharge, neon mercury vapor, high-pressure sodium, mercury vapor, and metal halide lamps.

Maintenance contractors store hazardous waste (e.g., rags with thinners and paint, waste paint) in Building 4401 on the proposed project site prior to it being transported to the CCF (MHAFB 2008c).

***Environmental Restoration Program.*** The DOD’s ERP requires each installation to identify, investigate, and clean up hazardous waste disposal or release sites. The objectives of the ERP are to identify and fully evaluate any areas suspected to be contaminated with hazardous materials caused by past USAF operations and to eliminate or control any hazards to the public health, welfare, or the environment. The ERP is a subcomponent of the DERP that became law under the Superfund Amendments and Reauthorization Act.

The ERP at Mountain Home AFB began in July 1983 with an installationwide records search that identified 17 ERP sites for further investigation. Supplemental assessments and investigations in the 1990s have brought the total number of ERP sites to 32, including two Solid Waste Management Units, which were investigated under the ERP (ERP sites ST-13 and ST-38) (MHAFB 2007e). On August 30, 1990, the USEPA added Mountain Home AFB to the NPL due to the presence of contamination. The NPL is a part of CERCLA and is commonly known as “Superfund.” The National Superfund electronic database identification number for Mountain Home AFB is ID3572124557 (USEPA 2009d). A Federal Facilities Agreement (FFA) was signed in 1992 by the USAF, USEPA, and Idaho Department of Health and Welfare, pursuant to certain sections of CERCLA, RCRA, NEPA, DERP, and Idaho’s Hazardous Waste Management Act and Environmental Protection Health Act. The FFA is cited in the Management Action Plan as the regulatory mechanism, which defines the ERP sites and the criteria for their closeout. Under the FFA, the USAF agreed to implement and report on field investigations, feasibility studies, remedial designs, and remedial actions for specified sites (MHAFB 2007e).

Of the 32 ERP sites at Mountain Home AFB, 6 are closed, 3 of which have land use controls; 4 are in the Remedial Action-Operation stage and are included in the Long Term Monitoring (LTM) Program; and the remaining 22 have unlimited use/unrestricted exposure (UU/UE) status and do not have restrictions on the use of the land or other natural resources (Roller 2010). Each ERP site is organized into one of six operable units (OUs) that clusters them with other sites with similar types of contamination, because of geographic proximity, or based on the type or phase of work required for the sites (MHAFB 2007e).

**Table 3-12** presents a summary of the ERP sites within 0.5 miles of the proposed project area, including the ERP site numbers, OUs, descriptions of the ERP sites, and current status of the ERP sites (see also **Figure 3-7**). Eleven ERP sites are within 0.5 miles of the Proposed Project area. Of the 11 ERP sites, 10 (FT-04, FT-05, SD-12, DP-18, SS-26, SD-27, SS-28, SS-30, ST-31, and ST-35) have achieved UU/UE status and 1 (FT-08) is in the LTM Program.

**Table 3-12. ERP Sites within 0.5 Miles of the Proposed Project Area**

Site Number	OUs	Description	Status
FT-04	OU1, OU3	Fire Training Area 4	UU/UE
FT-05	OU1, OU3	Fire Training Area 5	UU/UE
FT-08	OU3, OU4	Fire Training Area 8	RA-O/LTM
SD-12	OU1, OU3, OU6	Entomology Shop Yard	UU/UE
DP-18	OU1, OU3	Old Burial Trench	UU/UE
SS-26	OU1, OU3	Drum Accumulation Pad, Building 208	UU/UE
SD-27	OU1, OU3, OU6	Vehicle Wash Rack	UU/UE
SS-28	OU1, OU3	Former Wash Water Accumulation Basin	UU/UE
SS-30	OU1, OU3	DRMO Storage Area 1	UU/UE
ST-31	OU3	BX Gasoline Station	UU/UE
ST-35	OU3	Hospital Fuel Spill	UU/UE

Sources: Roller 2009, Roller 2010

Key:

RA-O: Remedial Action – Operation

LTM: Long-Term Monitoring

UU/UE: Unlimited Use /Unrestricted Exposure

ERP site FT-08 is a fire training area in the southeastern portion of the installation. FT-08 is a 125-foot-diameter burn area that was previously used for fire control training from 1962 to 1986. During remedial investigations, trace soil concentrations of VOCs were discovered. A risk analysis performed at FT-08 indicated there were no risks of impacts on groundwater. During sampling conducted in 2002 and 2004, potential contaminants of concern (i.e., trichloroethylene, benzene, toluene, ethylbenzene, and xylenes) were found to be at higher concentrations and more widespread than previously discovered (MHAFB 2007e). The selected remedy at FT-08, based on additional investigation and field operational testing from 2007 to 2009, is vacuum extraction. A vacuum extraction system was completed in November 2009 and will be operational for several years. ERP site SD-27 is a vehicle wash rack site within a paved area in the north-central portion of the installation. SD-27 was previously used to clean construction vehicles and is composed of a concrete wash rack, the wash rack drainage ditch, and a concrete drum storage pad northeast of the wash rack area. Prior to the mid-1980s a petroleum-distillate-based degreasing agent was used to clean grease and asphalt from vehicles. Wash water was discharged to the unlined wash rack drainage ditch, and soils and sediment were reportedly removed from the ditch on an annual basis until approximately 1990. Results from previous investigations conducted at SD-27 indicated that the shallow soils near the concrete drum storage pad and the wash rack drainage ditch sediments were contaminated with VOCs, semi-volatile organic compounds, pesticides, polychlorinated biphenyl (PCBs), petroleum hydrocarbons, and metals. Resampling conducted at SD-27 in 2002 identified “hot spot” contamination exceeding screening criteria for UU/UE. In 2005, removal of “hot spot” contaminated soils was conducted (MHAFB 2007e). Currently, SD-27 has a UU/UE status and does not have restrictions on the use of land or other natural resources at the site. In 2008, soils were removed at ERP Sites SD-25, SD-27, and SD-29. All of these sites are closed and returned to UU/UE land use.

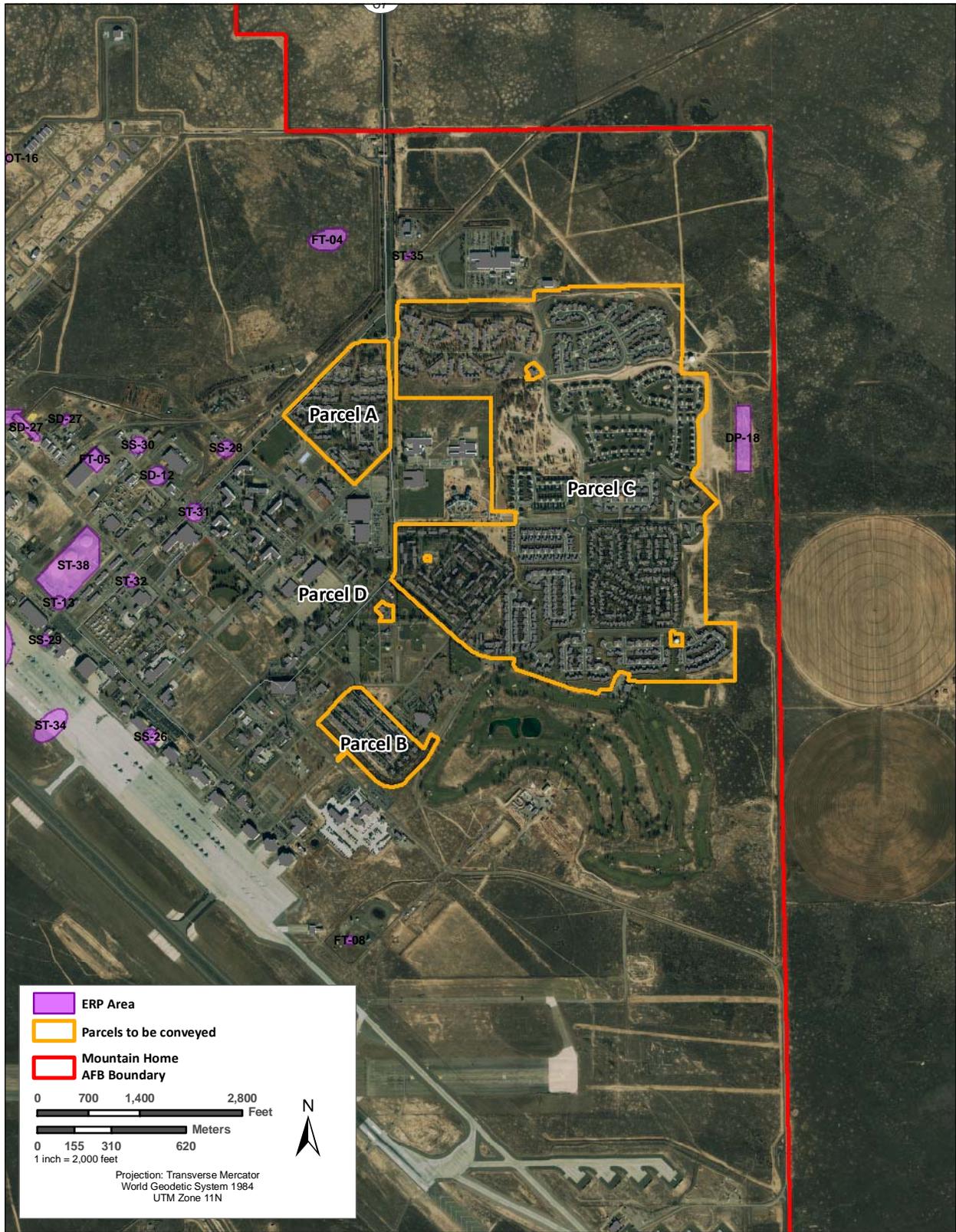


Figure 3-7. ERP Sites in the Vicinity of Mountain Home AFB MFH

Areas of Concern (AOCs) are locations where investigations indicate contamination might have occurred and are further evaluated to determine whether they fall under the ERP. AOCs that are found to be ERP sites are assigned to an OU and incorporated into the FFA. The following are AOCs that have been identified at Mountain Home AFB: AOC 12, Liberator Street Sanitary Sewer; AOC 13, nine oil/water separators; AOC 14, Aircraft Control Tower; AOC 7 (SA-40), Coal Storage Yard; AOC 9 (SS-41), Motor Pool Site A; and AOC 10 (SS-42), Strike Dam Recreation Annex. All of the AOC sites are in the industrial or flightline portion of the installation. All the AOCs have been investigated and closed (MHAFB 2007e).

***Aboveground and Underground Storage Tanks.*** AFI 32-7044, *Storage Tank Compliance*, implements AFPD 32-70. It identifies compliance requirements for USTs, ASTs, and associated piping that store petroleum products and hazardous substances. USTs are subject to regulation under RCRA, 42 U.S.C. 6901, and 40 CFR 280.

There are 138 ASTs at Mountain Home AFB. Of the 138 ASTs, 3 are within the proposed project area and 25 are in the vicinity (0.25 miles) of the proposed project area (see **Table 3-13**). Included in these 25 is a dispensing rack located in Building 315 that has six storage tanks, each with a holding capacity of 137 gallons. Two of the tanks have new oil, two contain antifreeze, one contains transmission fluid, and one tank is empty.

Currently, there are no active USTs in the Proposed Action area. From the 1950s to the early 1980s, MFH units were heated with heating oil, which was contained in USTs. Each MFH unit had its own heating oil UST. In the 1980s, all of the MFH units on Mountain Home AFB were converted from oil heating systems to gas heating systems. The use of the USTs was discontinued and they were abandoned in place and filled with sand. Approximately 53 fuel oil USTs could remain in the Falcon Estates neighborhood. Each of the duplex MFH units in the Falcon Estates neighborhood was constructed with a 500-gallon fuel oil UST approximately 6 feet from the foundation on either side of the central driveway (Briggs 2010). There are no known closure documents for these USTs and it is unknown whether they were pumped or whether sampling was conducted. Other MFH units within the proposed project area might also have historic inactive USTs in place (MHAFB 2007b).

***Asbestos-Containing Materials.*** AFI 32-1052, *Facilities Asbestos Management*, provides the direction for asbestos management at USAF installations. This instruction incorporates by reference applicable requirements of 29 CFR Part 669 et seq., 29 CFR 1910.1025, 29 CFR 1926.58, 40 CFR 61.3.80, Section 112 of the CAA, and other applicable AFIs and DOD Directives. AFI 32-1052 requires installations to develop an asbestos management plan for the purpose of maintaining a permanent record of the status and condition of ACM in installation facilities, and documenting asbestos management efforts. In addition, the instruction requires installations to develop an asbestos operating plan detailing how the installation accomplishes asbestos-related projects.

Asbestos is regulated by USEPA under the CAA; Toxic Substances Control Act; CERCLA; and Century Code 23, *Health and Safety Chapter 25 Air Pollution Control*, with the authority promulgated under the OSHA. Identification of ACM in installation facilities is governed by OSHA under the authority of the *Occupational Safety and Health Act*, 29 U.S.C. §§ 669 et seq. Section 112 of the CAA regulates emissions of asbestos fibers to ambient air. Building materials in older buildings are assumed to contain asbestos. It exists in a variety of forms and can be found in floor tiles, floor tile mastic, roofing materials, joint compound used between two pieces of wallboard, some wallboard thermal system insulation, and boiler gaskets. If asbestos is disturbed, fibers can become friable. Common sense measures, such as avoiding damage to walls and pipe insulation, will help keep the fibers from becoming airborne. Friable ACM is any material containing more than 1 percent asbestos, and that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Nonfriable ACM is any ACM that does not meet the criteria for friable ACM.

**Table 3-13. ASTs Within the Vicinity of the Proposed Project Area**

<b>AST Number</b>	<b>Contents</b>	<b>Capacity (gallons)</b>
196-01ST	Diesel fuel	100
197-02ST	Diesel fuel	550
197-01ST	Diesel fuel	550
6000-01ST	Diesel fuel	20,000
508-01ST	Diesel fuel	1,000
197-04ST	Diesel fuel	550
4109-01ST	Gasoline	500
517-01ST	Diesel fuel	115
6200-02ST	Gasoline	10,000
6200-01ST	Gasoline	10,000
197-03ST	Diesel fuel	550
8077-01ST*	Diesel fuel	540
610-01ST	Diesel fuel	1,100
4799-01ST	Diesel fuel	300
4827-01ST	Diesel fuel	550
5250-01ST*	Diesel fuel	150
6300-01ST*	Diesel fuel	250
2708-01ST	Diesel fuel	115
315-02ST	Waste oil	250
2316-01ST	Diesel fuel	1,000
2192-01ST	Diesel fuel	600
1501-01ST	Diesel fuel	350
21	Propane gas	0
22	Propane gas	0
28	Propane gas	0
205-04ST	Waste oil	500
205-05ST	Other	500
6200-03ST	Diesel fuel	10,000

Source: Lopez 2010

Note: \* AST within the proposed project area.

Mountain Home AFB maintains an *Asbestos Operations and Management Plan* that is designed to establish operations and management organizational responsibilities and procedures for ensuring that personnel in USAF facilities are not exposed to excessive levels of airborne asbestos fibers. The plan provides the foundation for maintaining a permanent record on the current status and condition of ACM on Mountain Home AFB, and guidelines for dealing with ACM removal and control operations (MHAFB 2007f).

In 2006, an ACM survey was completed at the installation. During the survey, asbestos was found in tile and linoleum flooring, roofing materials, acoustical ceiling materials, and joint compound. Sanitary sewer transite pipe containing asbestos is present in the Falcon Estates and Elk Heights neighborhoods at the proposed project site (MHAFB 2007b, MHAFB 2010c). In July 2009, the IDEQ entered into a Consent Order with Mountain Home AFB to address the presence of ACM in MFH units. In accordance with this Consent Order, Mountain Home AFB is currently developing a Risk Screening/Assessment Plan for all MFH areas where demolition, renovation, construction, and trenching has already occurred, and has resulted in ACM becoming regulated ACM via crumbling, pulverizing, or reduction to a powder. If the Risk Screening/Assessment reveals an unacceptable risk, consistent with guidance set forth in the Consent Order requiring compliance with 40 CFR Part 61, Subpart M, Mountain Home AFB would submit a Contaminant Management Plan to the IDEQ within 90 days of completing the activities required by the IDEQ-approved Risk Screening/Assessment Plan. The Consent Order also mandates a protocol to address future demolition, renovation, and construction activities as they relate to ACM (IDEQ 2009b).

***Lead-Based Paint.*** Lead is a heavy, ductile metal commonly found simply as metallic lead or in association with organic compounds, oxides, and salts. It was commonly used in house paint until the Federal government banned the use of most LBP in 1978. Therefore, it is assumed that all structures constructed prior to 1978 could contain LBP. Paint chips that fall from the exterior of buildings can potentially contaminate the soil if the paint contains lead. The USEPA has established recommendations for maximum lead soil contamination levels. No action is required if the lead concentration is less than 400 ppm in areas expected to be used by children, or less than 2,000 ppm in areas where contact by children is less likely. Soil abatement and public notice are recommended when lead levels exceed 5,000 ppm.

USAF policy and guidance establishes LBP management at USAF facilities. The policy incorporates by reference the requirements of 29 CFR 1910.120, 29 CFR Part 1926, 40 CFR 50.12, 40 CFR Parts 240 through 280, the CAA, and other applicable Federal regulations. In addition, the policy requires each installation to develop and implement a facility management plan for identifying, evaluating, managing, and abating LBP hazards. The Residential Lead-Based Paint Hazard Reduction Act of 1992, Subtitle B, Section 408 (commonly called Title X) regulates the use and disposal of LBP on Federal facilities. Federal agencies are required to comply with applicable Federal, state, and local laws relating to LBP activities and hazards.

Mountain Home AFB maintains a *Lead-Based Paint Operations and Management Plan* that details the policy and procedures implemented at Mountain Home AFB to ensure lead-containing materials (MHAFB 2010d) are managed in accordance with applicable Federal and state regulations and DOD and USAF directives and policies (MHAFB 2008d).

Results from an LBP study conducted in 1995 indicated that all MFH units in Falcon Estates and Sagebrush View (the former Dunes neighborhood) at the proposed project site contained LBP. However, all MFH units in the former Presidential Acres, Oasis, and Dunes neighborhoods have since been or are currently slated for demolition. LBP was found on doorframes, window sills and jambs, thresholds, and wood soffits. Most surfaces have been painted over with non-LBP (MHAFB 2007b).

***Polychlorinated Biphenyls.*** PCBs are a group of chemical mixtures used as insulators in electrical equipment such as transformers and fluorescent light ballasts. Federal regulations govern items containing 50 to 499 ppm PCBs. Chemicals classified as PCBs were widely manufactured and used in the United States throughout the 1950s and 1960s. PCB-containing oil is typically found in older electrical transformers and light fixtures (ballasts). Transformers containing greater than 500 ppm PCBs, between 50 and 500 ppm PCBs, and less than 50 ppm PCBs are considered PCB, PCB-contaminated, and non-PCB, respectively.

Transformers containing more than 50 ppm PCBs have been removed from use at Mountain Home AFB. Some of the MFH units within the proposed project area might have light ballasts containing PCBs.

**Radon.** Mountain Home AFB and Elmore County are in Federal USEPA Radon Zone 1, or the highest priority zone, where the predicted average indoor radon screening level is more than 4 pCi/L (USEPA 2010e). Radon gas accumulations of more than 4 pCi/L are considered to represent a health risk to occupants. Several studies have been conducted in Idaho to determine radon levels. Since 1990, the state radon project has been tracking the number of tests reported in Idaho. As of August 2005, 6,668 homes have reported results to the state radon project with 37 percent of the homes showing high radon test results. It is recommended by the State of Idaho, that all homes test for radon (IDHW 2007). In a 1988 Radon Assessment and Mitigation Program Initial Screen Survey, several MFH units at Mountain Home AFB were surveyed for radon. Results from the survey indicated that radon levels were between 0.5 and 2.5 pCi/L, which are below the USEPA-recommended action level (USAF 1988).

**Pesticides.** Mountain Home AFB maintains a *Pest Management Plan* that covers pest management practices on the installation. In addition, Mountain Home AFB has a Self-Help Pest Management Program established to assist MFH residents with pest control operations. The program stresses sanitation, exclusion, education, and limited use of pesticides to control nuisance pests in housing (MHAFB 2007g).

Historic insecticide use on the installation included chlordane for termite and ant control. Chlordane was used primarily during the initial construction of MFH units, in soils adjacent to foundations and footings and beneath concrete slabs. Chlordane was prohibited in 1988 by the USEPA. Other pesticides applied in the proposed project area included aldrin and dieldrin (HDR 2010). The use of these chemicals was suspended in 1974. With the exception of the airfield; munitions storage area; petroleum, oils, and lubricants (POL) storage area; and the fire training area, most sterilization operations have been suspended. Products such as Arsenal and phenoxy herbicides have replaced the more persistent sterilants (MHAFB 2007g).

Since 2004 there have been several studies conducted pertaining to the presence of chlordane in several of the housing areas in Parcels A and C. Other pesticides detected during the course of these studies have included aldrin, dieldrin, dichlorodiphenyltrichloroethane (DDT), heptachlor, and others. The highest concentrations of chlordane were found in samples collected under and alongside the concrete slabs which the housing units were constructed on. Chlordane concentrations in some of these samples for previously demolished units exceeded the USEPA Risk Based Preliminary Remediation Goal for residential areas and hazardous waste toxicity characteristics, though the majority of samples have been below risk-based and hazardous waste threshold values (HDR 2009).

In July 2009, the IDEQ entered into a Consent Order with Mountain Home AFB to address the presence of chlordane in soils in the MFH areas. In accordance with this Consent Order, Mountain Home AFB is currently developing a Risk Screening/Assessment Plan for recently developed MFH areas that contained chlordane. Additionally, a pilot study is underway to support proper management of soils (e.g. special handling and disposal or institutional controls) during future development activities. Vapor studies have been conducted under concrete slabs to measure the potential for intrusion of pesticides into indoor air. Preliminary results reveal that this is not a pathway of concern; a final report is pending. Mountain Home AFB is currently developing maps and descriptions of areas where pesticides were applied. Future development activities must comply with the Consent Order. The areas would be mitigated in accordance with the findings of the Risk Screening/Assessment Plan mandated under the Consent Order, and ongoing or future studies. Few concerns exist for contamination into wells, as chlordane is not very mobile and is of little concern once mitigated (HDR 2010, AFCEE 2009).

### 3.10.3 Environmental Consequences

#### 3.10.3.1 Evaluation Criteria

Impacts on hazardous materials or hazardous waste would be considered significant if a proposed action resulted in noncompliance with applicable Federal or state regulations, or increased the amounts generated or procured beyond current Mountain Home AFB waste management procedures and capacities. Impacts on the ERP would be considered significant if a proposed action disturbed or created contaminated sites resulting in negative effects on human health or the environment, or if a proposed action made it more difficult or costly to remediate existing contaminated sites.

#### 3.10.3.2 Proposed Action

**Hazardous Materials.** Short-term, minor, adverse impacts would be expected. Construction, demolition, and renovation activities would require the use of certain hazardous materials such as paints, welding gases, solvents, preservatives, and sealants. It is anticipated that the quantity of products containing hazardous materials used during the Proposed Action would be minimal and their use would be of short duration. Contractors would be responsible for the management of hazardous materials and petroleum products, which would be handled in accordance with Federal, state, and USAF regulations. No long-term, direct or indirect, adverse impacts would be expected.

**Hazardous Wastes.** Short-term, minor, adverse impacts would be expected. The quantity of hazardous wastes generated from proposed construction, demolition, and renovation activities would be minor and would not be expected to exceed the capacities of existing hazardous waste disposal facilities. Hazardous wastes would be handled under the existing DOD RCRA-compliant waste management programs and, therefore, would not be expected to increase the risks of exposure to workers and installation personnel. Prior to commencement of construction, demolition, and renovation activities, the contractor would be required to obtain the necessary permits. Some of the MFH units could have mercury-containing thermostats, ionization smoke detectors that contain Americium-241, or heat pumps that contain ozone-depleting substances. Mercury-containing thermostats are treated as universal waste in Idaho; therefore, if they are encountered during demolition or renovation, they would be removed and disposed of as universal waste in accordance with Federal, state, and local regulations. If ionization smoke detectors that contain Americium-241 or heat pumps that contain ozone-depleting substances are encountered during demolition or renovation, they would be removed and disposed of as hazardous waste in accordance with Federal, state, and local regulations and the Hazardous Waste Management Plan. No long-term, direct or indirect, adverse impacts would be expected.

A pilot study is currently being conducted to support proper management of soils containing chlordane (see **Section 3.9.2, Pesticides**). If results from the pilot study or future studies in MFH areas indicate that soils exceed the Toxicity Characteristic Leaching Procedure (TCLP) standard for pesticides, excavated soils would be handled and disposed of as hazardous waste in accordance with Federal, state, and local regulations and the Mountain Home AFB *Hazardous Waste Management Plan*. No long-term, direct, or indirect, adverse impacts would be expected.

**Environmental Restoration Program.** Short-term, negligible, adverse impacts could be expected. ERP sites FT-08 and SD-27 are within 0.5 miles of the proposed project area and are in the LTM program and have a UU/UE status, respectively. The potential for encountering contaminated groundwater or soil from these nearby ERP sites during construction or demolition activities is low. However, if contaminated groundwater or soil is inadvertently discovered during construction or demolition activities, the handling, storage, transportation, and disposal of hazardous substances would be conducted in accordance with applicable Federal, state, and local regulations; USAF regulations; and Mountain Home

AFB management procedures. MFH privatization project planning would include avoiding disruption of remediation activities and minimizing potential impacts on ERP infrastructure. No long-term, direct or indirect, adverse impacts would be expected.

***Aboveground and Underground Storage Tanks.*** Short-term, minor, adverse impacts could be expected. There is the potential for uncovering historic heating oil USTs in the proposed project area during demolition and construction. All MFH units with historic heating oil USTs in place would be identified prior to commencement of demolition and construction activities. The PO would be responsible for the removal and disposition of the tanks in a closely coordinated effort with the 366 CES Environmental Office. All heating oil USTs identified would be removed and properly disposed of in accordance with BMPs for heating oil tanks, Mountain Home AFB management plans, and the Idaho Administrative Procedures Act regulations. Sampling would be conducted at these UST sites to investigate the presence of contamination. If results of the sampling were to indicate the presence of contamination above action levels, the PO would be responsible for completing corrective actions prior to commencement of construction and demolition activities. ASTs within the proposed project area are not anticipated to be affected by the Proposed Action and would continue to be used with appropriate BMPs in place (e.g., secondary containment, leak detection systems, alarm systems). No long-term, direct, or indirect, adverse impacts would be expected.

***Asbestos-Containing Material.*** Short-term, minor, adverse, and long-term, beneficial impacts would be expected. Some of the older MFH units scheduled for demolition or renovation likely contain ACM and, therefore, would need to be surveyed for asbestos by a certified inspector prior to commencement of demolition or renovation activities, and suspect ACM would be sampled in accordance with the Risk Screening/Assessment Plan, as mandated by the Consent Order IDEQ 2009b). There is also the potential for uncovering sanitary sewer transite pipes during construction and demolition. Construction, demolition, and renovation plans would be reviewed to ensure appropriate measures were taken to reduce potential exposure to, and release of, asbestos. Under the terms of the 2009 Consent Order with IDEQ, Mountain Home AFB is required to prepare a Risk Screening/Assessment Plan where prior demolition, construction renovation, or trenching has occurred that could have resulted in ACM becoming regulated ACM via crumbling, pulverizing, or other disturbance of ACM materials. Hence, all ACM discovered would be removed by certified individuals prior to demolition and renovation and disposed of at a USEPA-approved landfill. Contractors would be required to adhere to all Federal, state, and local regulations in addition to the *Asbestos Operations and Management Plan*. The removal of ACM during demolition and renovation activities would result in long-term, beneficial impacts by reducing potential exposure to personnel.

USAF regulations restrict the use of ACM for new construction. AFI 32-1023 requires that a substitution study be conducted whenever the use of an ACM in construction, maintenance, or repair is considered. If it is determined that the ACM is superior in cost and performance characteristics, and has minimal actual or potential health hazards, then the ACM should be used. In all other cases non-ACM should be used.

***Lead-Based Paint.*** Short-term, minor, adverse, and long-term, beneficial impacts would be expected. Some of the older MFH units scheduled for demolition or renovation likely contain LBP and, therefore, would need to be surveyed by a certified inspector prior to demolition or renovation activities. Debris containing LBP would be characterized as either construction and demolition waste or LBP-contaminated construction debris, which would be disposed of at a USEPA-approved landfill. Demolition and renovation plans would be reviewed by Mountain Home AFB civil engineering personnel to ensure appropriate measures were taken to reduce potential exposure to, and release of, lead from LBP. Contractors would be required to adhere to all Federal, state, and local regulations, in addition to Mountain Home AFB management plans. The removal of LBP during demolition activities would result in long-term, beneficial impacts by reducing potential exposure to personnel.

**Polychlorinated Biphenyls.** Short-term, negligible, adverse impacts could be expected. Some of the older MFH units scheduled for demolition or renovation could contain light ballasts containing PCBs. If light ballasts that do not have a PCB-free label are encountered during demolition or renovation, the ballasts would be removed and handled in accordance with Federal and DOD regulations and the *Hazardous Waste Management Plan*. No long-term, direct or indirect, adverse impacts would be expected.

**Radon.** Short-term, negligible, adverse impacts could be expected. Results from a radon survey conducted in 1988 indicated that none of the existing MFH units surveyed had radon concentrations greater than 4 pCi/L. However, as new MFH units are constructed, they should be tested for radon. If results reveal radon levels exceed the USEPA-recommended action level, passive radon elimination systems or fans to mitigate radon would be installed, as necessary, to minimize impacts from radon. No long-term, direct or indirect, adverse impacts would be expected.

**Pesticides.** Short-term, minor, adverse impacts would be expected. Chlordane could be present at various concentration levels within the proposed project area, particularly under and alongside the concrete slabs where MFH units were constructed. Some sampling has revealed concentrations above hazardous waste toxicity characteristics; however, the majority of samples have been below risk-based and hazardous waste threshold values. Mountain Home AFB is currently conducting a pilot study to further identify the concentrations of chlordane present in the soil. Prior to commencement of demolition and construction activities, the location and description of all the areas where pesticides have been applied would be required. In addition, soil sampling would be conducted in areas that have not been previously sampled to determine if chlordane is present in concentrations that exceed the USEPA Risk Based Preliminary Remediation Goal for residential areas and hazardous waste toxicity characteristics. If results indicate that there is chlordane present in the soil that exceeds the USEPA goal, the area would be mitigated by excavating the contaminated soil or covering the area with clean fill as appropriate prior to demolition and construction. Excavated soil from construction and demolition activities would be handled and disposed of as hazardous waste in accordance with Federal, state, and local regulations and the Mountain Home AFB *Hazardous Waste Management Plan*.

The Proposed Action would not require any change in the quantities of pesticides or herbicides used or significantly alter pesticide or herbicide application areas. In accordance with the *Pest Management Plan*, the least toxic method for controlling pests encountered within the proposed project area would be used. In addition, future pesticide and herbicide applications within the proposed project area would be conducted according to Federal, state, and local regulations and the *Pest Management Plan*. No long-term, direct, or indirect, adverse impacts would be expected.

### **3.10.3.3 Alternative for the Three Historic Senior Officers' Quarters**

For each of the options under the alternative for the Three Historic Senior Officers' Quarters, one or more of the quarters would be preserved. This is anticipated to result in negligible impacts on hazardous materials and waste. The impacts on hazardous materials and waste from any of the three options would not be significant.

### **3.10.3.4 No Action Alternative**

Under the No Action Alternative, Mountain Home AFB would not implement the Proposed Action and would continue to provide for the housing needs of military personnel and family members. No demolition of structures would occur as planned under the Proposed Action. There would be no change in hazardous materials, hazardous wastes, the ERP, ASTs, USTs, PCBs, radon, and pesticides. Impacts from other hazardous materials and waste categories are identified as follows.

**Asbestos-Containing Material.** Long-term, negligible to minor, adverse impacts would be expected from the continued use of some of the existing MFH units. Some of the existing MFH units likely contain ACM; therefore, residents and maintenance personnel would potentially be at risk from exposure to, and release of, asbestos.

**Lead-Based Paint.** Long-term, negligible to minor, adverse impacts would be expected from the continued use of some of the MFH units. Some of the MFH units are likely to contain LBP; therefore, residents and maintenance personnel would potentially be at risk from exposure to, and release of, lead from LBP.

## 3.11 Safety

### 3.11.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Human health and safety addresses workers' health and safety during demolition activities and facilities construction, and public safety during demolition and construction activities and during subsequent operations of those facilities.

Construction site safety requires adherence to regulatory requirements imposed for the benefit of employees. It includes implementation of engineering and administrative practices that aim to reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by numerous DOD and USAF regulations designed to ensure compliance with standards issued by the Federal OSHA, USEPA, and state occupational safety and health agencies. These standards specify health and safety requirements, the amount and type of training required for industrial workers, the use of personal protective equipment (PPE), administrative controls, engineering controls, and permissible exposure limits for workplace stressors.

Various stressors in the environment can adversely affect human health and safety. Identification and control or elimination of these stressors can reduce risks to health and safety to acceptable levels.

- **Physical stressors.** Physical hazards in the environment can cause injury, temporary or permanent disability, disease, or death. These stressors encompass a wide range of factors, such as dust, humidity, temperature, noise, and radiation.
- **Behavioral stressors.** Behavioral stressors include the effects of military activities on (1) psychological characteristics such as emotion, motivation, the learning process, and general behavior; and (2) psychological needs such as freedom, space, privacy, and societal acceptance. Behavioral stressors can cause mental effects ranging from direct physical damage to the brain tissue to temporary irritability.
- **Psychological stressors.** Some chemical and physical elements and situations can cause mental tension and strain. These psychological stressors are closely related to behavioral stressors. Psychological stressors can be physical in nature, such as traffic congestion, excessive noise, air pollution, or inadequate working and living facilities, or they can be emotional in nature, such as the effects of discrimination or sexual harassment.
- **Chemical stressors.** Several chemical substances have the potential to produce undesired or toxic health effects. Some chemicals act locally and some act systemically (requiring absorption into the blood stream). Chemical stressors can also be transmitted by air; by ground water or surface water used for drinking, irrigation, or recreation; or by direct contact.

- **Endocrine disrupters.** A relatively new but increasingly important health concern is “endocrine disrupters.” Endocrine disrupters are generally caused by synthetic chemicals (e.g., pesticides), which, when absorbed into the body, can cause hormonal disruption. Limiting the presence of endocrine disrupters should, therefore, be included in planning for facilities, systems, and equipment associated with the transforming force.

Health and safety hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Hazards include transportation, maintenance and repair activities, and the creation of noisy environments or a potential fire hazard. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human-use area with potential explosive or other rapid oxidation process creates unsafe environments due to noise or fire hazards for nearby populations. Noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

**Explosives and Munitions Safety.** Explosive safety clearance zones must be established around facilities used for storage, handling, or maintenance of munitions. Air Force Manual 91-201 establishes the size of the clearance zone based upon quantity-distance (QD) criteria or the category and weight of the explosives contained within the facility.

AFI 91-301, Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program, implements AFD 91-3, Occupational Safety and Health, by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program, these standards ensure all USAF workplaces meet Federal safety and health requirements. This instruction applies to all USAF activities.

### **3.11.2 Existing Conditions**

Mountain Home AFB is a secure military installation. Access is limited to military personnel, civilian employees, and military families. Mountain Home AFB has provides emergency services (e.g., fire, law enforcement) to the MFH areas, which include emergency response and force protection. Therefore, emergency situations can be responded to within a quick timeframe.

**Construction Safety.** All contractors performing construction and demolition activities are responsible for following ground safety regulations and worker compensation programs and are required to conduct construction and demolition activities in a manner that does not pose any risk to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of PPE, and availability of MSDS. Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplace operations; to monitor exposure to workplace chemicals (e.g., asbestos, lead, hazardous material), physical hazards (e.g., noise propagation), and biological agents (e.g., infectious waste); to recommend and evaluate controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures.

An ACM survey is conducted whenever maintenance, repair, or minor construction could result in exposure to ACM. The most recent ACM survey was completed in 2006, in which asbestos was found in tile and linoleum flooring, roofing and acoustical ceiling materials, and joint compound (MHAFB 2007c, MHAFB 2010c). Sanitary sewer transite pipes are present in some neighborhoods within the Proposed Action area. The potential exists for uncovering transite pipe during demolition and construction

activities. If sanitary sewer transite pipes require removal, they should be handled and disposed of in accordance with the installation's Asbestos Operations and Management Plan and the 2009 IDEQ Consent Order (MHAFB 2007f, IDEQ 2009b).

According to a LBP study conducted by the installation in 1995, all MFH units in the Falcon Estates neighborhood contain LBP (MFAFB 2010c). The study also indicated that all MFH units in the former Dunes neighborhood also contain LBP; however, all MFH in the former Presidential Acres, Oasis, and Dunes neighborhoods have since been or are currently being demolished. LBP was found on doorframes, windowsills and jambs, thresholds, and wood soffits. Most surfaces have been painted over with non-LBP (MHAFB 2007b).

Numerous AOCs and ERP sites are located on Mountain Home AFB (MHAFB 2007e). There are no ERP or AOCs sites within the Proposed Action area. However, the nearest ERP site to the Proposed Action area is approximately 400 feet east of the Gunfighter Manor neighborhood, another approximately 700 feet north of the former Dunes neighborhood. No sites directly or indirectly impact the Proposed Action area (see **Figure 3-7**).

**Explosives and Munitions Safety.** Mountain Home AFB has several activities that require QD explosive safety clearance zones, and these must be established around facilities used for the storage, handling, or maintenance of munitions. Potential explosive sites at Mountain Home AFB that require QD safety arcs include the live ordnance loading areas at the end of the runway, aircraft parking ramps, and munitions storage areas (MHAFB 2007c). The nearest QD arc to the Proposed Action Area is approximately 750 feet northwest of the Woodland Groves neighborhood. The source for the QD arc contains U.S. Department of Transportation Class A explosives. No QD arcs are present within the Proposed Action area.

Historically, personally owned small arms ordnance has been stored in the MFH units. No military-owned ordnance is known or suspected to have been stored, used, or disposed of at the Proposed Action area.

### **3.11.3 Environmental Consequences**

#### **3.11.3.1 Evaluation Criteria**

Any increase in safety risks would be considered an adverse effect on safety. A proposed action could have a significant effect with respect to health and safety if the following were to occur:

- Substantially increase risks associated with the safety of construction personnel, contractors, or the local community
- Substantially hinder the ability to respond to an emergency
- Introduce a new health or safety risk for which the installation is not prepared or does not have adequate management and response plans in place.

#### **3.11.3.2 Proposed Action**

Short-term, negligible to minor, direct adverse and long-term, beneficial effects on health and safety would be expected from the Proposed Action.

**Construction Safety.** Short-term, minor, direct, adverse effects could occur from implementation of the Proposed Action. The short-term risk associated with construction contractors would slightly increase at

Mountain Home AFB during the normal workday (i.e., 7:00 am to 5:00 pm) as construction activity levels would increase. However, all construction contractors are required to follow and implement OSHA standards to establish and maintain safety procedures. Demolition of MFH homes and the construction of new homes associated with the Proposed Action would not pose new or unacceptable safety risks to installation personnel or activities at the installation.

Because of the age of some of the MFH homes and associated infrastructure slated for conveyance, tile and linoleum flooring, roofing and acoustical ceiling materials, and joint compound, and sanitary sewer pipe could contain ACM and LBP (MHAFB 2009c). These materials require appropriate removal, handling, and disposal during renovation and demolition activities by qualified personnel. Short-term, adverse impacts could be experienced, but adherence to all Federal, state, and local regulations and Mountain Home AFB management plans (MHAFB 2007f, MHAFB 2008b, MHAFB 2008c, MHAFB 2008d) would result in negligible to minor impacts on worker safety during demolition, construction, and infrastructure activities. Long-term, direct, beneficial impacts would be expected from the removal of LBP and ACM materials by reducing exposure to military personnel and families.

The nearest ERP site is approximately 400 feet from the Proposed Action area; therefore, adverse impacts would not be expected. If contamination is encountered, it would be handled, stored, transported, and disposed of in accordance with applicable Federal, state, and local regulations, and the installation's Hazardous Waste Management Plan (MHAFB 2008c).

***Explosives and Munitions Safety.*** Because there are no munitions stored or handled in the immediate vicinity of the Proposed Action at Mountain Home AFB, no short- or long-term, adverse impacts on explosives and munitions safety would be anticipated. Further, munitions transport would not occur during demolition or construction activities to minimize contractors' exposure to safety hazards associated with explosives.

### **3.11.3.3 Alternative for the Three Historic Senior Officers' Quarters**

Each of the options under the alternative for the Three Historic Senior Officers' Quarters involves the preservation of one or more of the quarters and its associated setting. This is anticipated to result in no impacts on safety. The remaining quarters would be maintained in accordance with all applicable USAF, Federal, state, and local standards and regulations. The impacts on safety from any of the three options would not be significant.

### **3.11.3.4 No Action Alternative**

Under the No Action Alternative, Mountain Home AFB would not implement the Proposed Action. Mountain Home AFB would continue to provide for the housing needs of military personnel and family members, which would result in the continuation of existing conditions as described in **Section 3.11.2**. Short- and long-term, negligible, adverse impacts on safety could be expected from the No Action Alternative due to LBP and ACM contained in the current MFH units and associated infrastructure.

## 4. Cumulative and Adverse Impacts

### 4.1 Definition of Cumulative Effects

CEQ defines cumulative effects as the “impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). Although individual impacts of various actions might be minor, taken together their effects could be significant.

Impacts subject to cumulative effects analysis are identified by reference to the temporal span and spatial area in which the Proposed Action would cause effects.

### 4.2 Projects Identified With the Potential for Cumulative Effects

It is estimated that the construction and demolition of MFH would occur over 6 years. For the purposes of this analysis, the temporal span of the Proposed Action includes projects reasonably foreseeable during the 6-year construction, demolition, and renovation period. For most resources, the spatial area for consideration of cumulative effects is within the boundary of Mountain Home AFB, and, more specifically, the areas near the MFH parcels (i.e., past, ongoing, and proposed demolition of MFH units). The essence of the Proposed Action is redevelopment (i.e., demolition, renovation, use, and maintenance of MFH on the installation).

Under the Proposed Action, there would be a substantial reduction in the number of MFH units for USAF and other qualified personnel. Ongoing MILCON MFH improvements have reduced the number of existing housing units to 1,155 MFH units. Implementation of the Proposed Action would result in a reduction of the existing HRMA requirement of 1,324 units to a revised end-state requirement of 1,059 MFH units. The present action would reverse the past actions of constructing and maintaining a large on-installation MFH inventory for USAF personnel. The majority of MFH for personnel assigned to Mountain Home AFB would continue to be supplied by the local economy. No cumulative effects would be expected as a result of comparing the present action to historic actions leading to the installation’s relatively high inventory of MFH.

***Demolition of Housing Units in the Former Dunes Neighborhood.*** Housing units in the former Dunes neighborhood are slated for demolition by Mountain Home AFB and would not be conveyed with the land to the PO under the Proposed Action. Several of these are multiplex units that are currently abandoned and fenced off. Approximately 64 remaining units would be demolished prior to conveyance of the land to the PO. The land would then be included in the new boundaries of the Sagebrush View neighborhood (HQ USAF 2010).

***Logistics Readiness Center.*** The existing Logistics Readiness Center is currently housed in a condemned wooden structure that is at least 50 years old and beyond economical repair. The facilities formerly occupying the Logistics Readiness Center have been relocated to other temporary locations throughout the installation. As a result of being scattered throughout the installation there is a delay in the mobilization of troops and equipment. Since operations have been relocated into substandard buildings, scheduled demolition projects have been placed on hold (MHAFB 2009a). The new facility is scheduled for FY 2010 and would store bulk and bin items in one centralized location to receive, process, store, control, and issue aircraft parts, wartime equipment, firearms, and other combat-essential supplies.

**Civil Engineering Facility.** All civil engineering facilities would be moved into a new Civil Engineer Maintenance complex in FY 2011, increasing support capabilities. These facilities would replace some of the oldest facilities on the installation, dating back to 1943 (MHAFB 2009c).

**Expeditionary Deployment Center.** Current expeditionary deployment facilities are not capable of efficiently and effectively processing 600 to 800 personnel at one time. Since separate locations currently handle rapid deployment, mobility equipment, deployable assets, processing, briefing, and administration functions, the conditions are worsened. Creating the expeditionary deployment center would consolidate these functions by locating command, control, critical functions, and materials adjacent to the heavy aircraft parking area of the ramp. The facility would locate 366 Wing Mobility Deployment functions into one location in FY 2012 on the flight line close to the logistics readiness center (MHAFB 2009a).

**Child Development Center.** Current child development center operations are scattered across three locations. The primary facility has been remodeled multiple times and currently does not operate efficiently. This project would consolidate all child development centers into one location near MFH (MHAFB 2009a).

**F-35 Joint Strike Fighter Basing.** On December 30, 2009, the Air Force published a notice in the *Federal Register* of its intent to prepare an EIS to assess the potential environmental impacts of establishing operational F-35 Joint Strike Fighter aircraft at one or more existing Air Force installations including Mountain Home AFB. The actual noise contour maps for Mountain Home AFB to be developed by the Air Force will be made available via the public release of the draft EIS. At this time, no information exists as to the impact this would have on housing at Mountain Home AFB. If Mountain Home AFB is selected, additional personnel and new construction projects could be necessary to support the change in mission (HQ USAF undated). Basing for the aircraft, scheduled for initial deployment in 2013, is to be analyzed in a separate EIS. Should Mountain Home AFB be selected, additional NEPA analysis would be required to analyze any changes to the housing privatization parcels.

### 4.3 Cumulative Effects Analysis

No significant adverse cumulative effects were identified in the cumulative effects analysis.

**Noise.** The noise environment on Mountain AFB would continue to be dominated mainly by aircraft operations and automobile traffic. Short-term, minor, adverse, cumulative effects could occur during any construction or demolition activities, particularly when construction or demolition activities are occurring at the same time and in proximity to each other. No significant adverse cumulative effects would be expected. Cumulative aircraft operations noise associated with the potential F-35 Joint Strike Fighter Basing would be analyzed in a separate EIS for that specific action.

**Land Use.** Land uses surrounding the project area would be compatible with existing and foreseeable future land uses. No significant adverse cumulative effects would be expected.

**Air Quality.** Air emissions associated with the Proposed Action and other installation development would not be expected to result in violations of NAAQS or noticeably degrade ambient air quality. No significant adverse cumulative effects would be expected.

**Geological Resources.** Soils on Mountain Home AFB have been modified by previous development activities. Short-term, minor, adverse, cumulative effects on soil could be expected during construction or demolition activities, particularly when these activities are occurring at the same time and in proximity to each other. However, BMPs would be used to control erosion and sedimentation, minimizing the potential for adverse cumulative effects. No significant adverse cumulative effects would be expected.

**Water Resources.** Short-term, minor, adverse, cumulative effects on water resources could be expected during construction or demolition activities, particularly when construction or demolition activities are occurring at the same time and in proximity to each other. However, BMPs would be used to prevent sediment-laden storm water from leaving the construction and demolition sites and entering surface water bodies. No significant adverse, cumulative effects would be expected.

Any new facility development on or in the vicinity of Mountain Home AFB has the potential to result in increased impervious surfaces. If the Proposed Action resulted in a net increase in impervious surfaces (i.e., if the total square footage of the new housing and community facilities is greater than the total square footage of the MFH units proposed for demolition), then long-term, minor, adverse cumulative effects on water resources would be expected from the slight increase in impervious surfaces in the region.

**Biological Resources.** Long-term, negligible, adverse, cumulative effects on vegetation would be expected. The Proposed Action and other installation development projects would primarily occur in previously developed areas, so disturbed vegetation would be primarily grasses and ornamental landscaping. Short-term, negligible to minor, adverse, cumulative effects on wildlife could be expected during construction or demolition activities, particularly when these activities are occurring at the same time and in proximity to each other. No cumulative effects on threatened and endangered species or migratory birds would be expected to occur. No significant adverse, cumulative effects would be expected.

**Cultural Resources.** No cumulative effects on archaeological resources would be expected. No known present or future projects beyond the Proposed Action are anticipated to have an impact on architectural resources eligible for inclusion on the NRHP. As a result, the only long-term adverse cumulative effects would be as a result of the demolition of the Three Historic Senior Officers' Quarters; however, these would be reduced to insignificance by the consultation and mitigation measures that Mountain Home AFB has carried out.

**Socioeconomic Resources and Environmental Justice.** Short-term economic expenditures and long-term installation growth associated with the Proposed Action in conjunction with other installation development projects would cumulatively have beneficial socioeconomic effects in Elmore County and the City of Mountain Home. The Proposed Action would be consistent with the goals and objectives of Elmore County's Comprehensive Growth and Development Plan. No significant adverse, cumulative effects would be expected.

**Infrastructure.** Localized service disruptions could result in short-term, minor, adverse, cumulative effects on all utility and infrastructure systems, particularly when construction or demolition activities are occurring at the same time and in proximity to each other. Long-term, minor, beneficial, cumulative effects would be expected as utility and infrastructure systems are upgraded with each installation development project. No significant adverse cumulative effects would be expected.

**Hazardous Materials and Wastes.** Short-term, negligible, adverse cumulative effects could be expected during construction or demolition activities. Any hazardous materials, hazardous wastes, ACM, LBP, PBCs, and soil or groundwater contamination encountered would be handled, transported, and disposed of in accordance with Mountain Home AFB management plans and Consent Orders; and Federal, state, and local regulations. Long-term, minor, beneficial, cumulative effects would be expected following the removal and disposal of ACM and LBP in buildings or the cleanup of soil or groundwater by removing these sources of contamination from Mountain Home AFB. No significant adverse cumulative effects would be expected.

**Safety.** Continued adherence to health and safety standards set forth by USEPA, OSHA, and USAF would minimize the potential for adverse, cumulative effects on humans. No significant adverse cumulative effects would be expected.

#### **4.4 Reasonable and Prudent Measures and Best Management Practices**

The Proposed Action would not result in significant adverse effects on the land or the surrounding area. However, BMPs and other minimization measures would be implemented to eliminate or reduce the impacts of adverse effects.

General BMPs that might be included as parts of the Proposed Action are summarized as follows:

- Clearing and grubbing would be timed with construction to minimize the exposure of cleared surfaces. Such activities would not be conducted during periods of wet weather. Construction activities would be staged to allow for the stabilization of disturbed soils.
- Fugitive dust-control techniques such as soil watering and soil stockpiling would be used to minimize adverse effects. All such techniques would conform to applicable regulations.
- Soil erosion-control measures, such as soil erosion-control mats, silt fences, straw bales, diversion ditches, riprap channels, water bars, water spreaders, and hardened stream crossings, would be used as appropriate.
- Disturbance of environmental resources and topography would be minimized by integrating existing vegetation, trees, and topography into site design.
- Where feasible, areas of impervious surface would be minimized through shared parking, decked or structured parking, increased building height, or other measures as appropriate.
- Provisions would be taken to prevent pollutants from reaching the soil, groundwater, or surface water. During project activities, contractors would be required to perform daily inspections of equipment, maintain appropriate spill-containment materials on site, and store all fuels and other materials in appropriate containers. Equipment maintenance activities would not be conducted on the construction site.
- Prior to commencement of construction and demolition activities, sampling would be conducted at UST sites to investigate the presence of contamination. If results of the sampling were to indicate the presence of contamination, remediation efforts would take place prior to commencement of construction and demolition activities.
- Physical barriers and “no trespassing” signs would be placed around the demolition and construction sites to deter children and unauthorized personnel. All construction vehicles and equipment would be locked or otherwise secured when not in use.
- Construction equipment would be used only as necessary during the daylight hours and would be maintained to the manufacturer’s specifications to minimize noise impacts.
- The PO would take initial awareness training in Environmental Management Systems (EMS) and be familiar with how their actions affect the installation’s EMS program.

Construction impacts are short-term environmental effects resulting from the process of building the Proposed Action. Construction impacts might involve temporary changes in noise levels, air quality, water quality, land use, and community access.

## 4.5 Unavoidable Adverse Impacts

Unavoidable adverse impacts would result from the implementation of the Proposed Action. None of these impacts would be significant.

**Hazardous Materials and Waste.** The generation of hazardous materials and wastes is an unavoidable condition associated with the Proposed Action. However, the potential for this would not significantly increase over baseline conditions and, therefore, is not considered significant.

**Energy Resources.** The use of nonrenewable resources is an unavoidable occurrence, although not considered significant. The Proposed Action would require the use of fossil fuels, a nonrenewable natural resource. Energy supplies, although relatively small, would be committed to the Proposed Action or No Action Alternative.

**Cultural Resources.** The demolition of the Three Historic Senior Officers' Quarters is an unavoidable adverse impact resulting from the Proposed Action. Although mitigation in the form of documentation of the historic homes has been carried out, these state-level and nationally significant buildings would no longer exist. Mountain Home AFB has completed consultation and mitigation measures, and the unavoidable adverse impact of the Proposed Action under NEPA has been reduced below the threshold of significance.

## 4.6 Compatibility of the Proposed Action and Alternatives with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls

Impacts on the ground surface as a result of the Proposed Action would occur entirely within the boundaries of Mountain Home AFB. The Proposed Action would not conflict with any applicable off-installation land use ordinances or designated clear zones. Construction activities would not result in any significant land use changes off of the installation.

On the installation, however, some current land use conflicts might continue under the Proposed Action. The northeastern half of the Eagle View neighborhood and the southwestern portions of the Woodland Groves, Trinity Heights, and Falcon Estates neighborhoods and the housing office are within the 65 to 69 dBA DNL noise zone. Additionally, the southwestern half of the Eagle View neighborhood is within the 70 to 74 dBA DNL noise zone. AFH 32-7084 states that residential uses are discouraged inside the 65 dBA DNL noise contour and strongly discouraged inside the 70 dBA DNL noise contour (USAF 1999).

If the MFH units to be conveyed within these neighborhoods have NLR measures, the units are considered compatible with the existing land uses. If the MFH units do not have NLR measures, all of the units are considered incompatible land uses. It is not known at this time whether new units would be constructed within the neighborhoods located in elevated noise zones. Any new units within the elevated noise zones would be required to include outdoor-to-indoor NLR measures to achieve NLR for the appropriate DNL noise zone. Construction of new MFH units with NLR measures in the neighborhoods mentioned in the preceding paragraph would perpetuate an adverse impact on land use at Mountain Home AFB. New housing construction should be limited to the extent possible within the elevated noise zones.

## 4.7 Relationship Between the Short-term Use of the Environment and Long-term Productivity

Short-term uses of the biophysical components of human environment include direct construction-related disturbances and direct impacts associated with an increase in population and activity that occurs over a period of less than 5 years. Long-term uses of the human environment include those impacts occurring over a period of more than 5 years, including permanent resource loss.

Several kinds of activities could result in short-term resource uses that compromise long-term productivity. Loss of especially important habitats and consumptive use of high-quality water at nonrenewable rates are examples of actions that affect long-term productivity.

The Proposed Action would not result in an intensification of land use at Mountain Home AFB and in the surrounding area. Development of the Proposed Action would not represent a significant loss of open space. Therefore, it is anticipated that the Proposed Action would not result in any cumulative land use or aesthetic impacts. Long-term productivity of these sites would be increased by the implementation of the Proposed Action. There would be a long-term (permanent) loss of the historic Senior Officer's Quarters and their historical and architectural significance.

## 4.8 Irreversible and Irrecoverable Commitments of Resources

The irreversible environmental changes that would result from implementation of the Proposed Action involve the consumption of material resources, energy resources, land, biological habitat, human resources, and wetlands. The use of these resources is considered to be permanent.

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use of these resources would have on future generations. Irreversible effects primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals).

**Material Resources.** Material resources used for the Proposed Action and alternatives include building materials (for renovation or construction of facilities), concrete and asphalt (for parking lots and roads), and various material supplies (for infrastructure), and would be irreversibly lost. Most of the materials that would be consumed are not in short supply, would not limit other unrelated construction activities, and would not be considered significant.

**Energy Resources.** No significant impacts would be expected on energy resources used as a result of the Proposed Action, though any energy resources consumed would be irretrievably lost. These include petroleum-based products (e.g., gasoline and diesel), natural gas, and electricity. During construction, gasoline and diesel would be used for the operation of construction vehicles. During operation, gasoline or diesel would be used for the operation of privately owned and government-owned vehicles. Natural gas and electricity would be used by operational activities. Consumption of these energy resources would not place a significant demand on their availability in the region.

**Biological Habitat.** The Proposed Action would result in the loss of some vegetation and wildlife habitat at the proposed construction areas.

**Human Resources.** The use of human resources for construction and operation is considered an irretrievable loss, but only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action and alternatives represent employment opportunities, and is considered beneficial.

**Wetlands.** The Proposed Action would result in a local reduction in soil permeability and groundwater recharge rates as a result of soil compaction. However, this would be considered negligible when compared with the total recharge area available. The Proposed Action would not be expected to adversely impact wetlands.

**Cultural Resources.** The Proposed Action would result in the loss of the Three Historic Senior Officers' Quarters that are eligible for the NRHP, are Properties of Particular Interest as defined in the 2004 Capehart-Wherry housing PC, and are of state and national architectural and historical significance. The Proposed Action would pose a long-term, adverse impact. This impact would be permanent. However the consultation and mitigation measures that Mountain Home AFB has carried out have reduced the adverse impact on cultural resources below the threshold of significance.

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## **APPENDIX A**

### **MILITARY HOUSING PRIVATIZATION INITIATIVE**



# Appendix A

## Military Housing Privatization Initiative

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<b>Title 10</b>	<b>Armed Forces</b>
<b>Subtitle A</b>	<b>General Military Law</b>
<b>Part IV</b>	<b>Service, Supply, and Procurement</b>
<b>Chapter 169</b>	<b>Military Construction and Military Family Housing</b>
<b>Subchapter IV</b>	<b>Alternative Authority for Acquisition and Improvement of Military Housing</b>

Title 10 of the US Code as currently published by the US Government reflects the laws passed by Congress as of January 5, 2009.

### **Sec. 2871. Definitions**

In this subchapter:

1. The term “ancillary supporting facilities” means facilities related to military housing units, including facilities to provide or support elementary or secondary education, child care centers, day care centers, child development centers, tot lots, community centers, housing offices, dining facilities, unit offices, and other similar facilities for the support of military housing.
2. The term “child development center” includes a facility, and the utilities to support such facility, the function of which is to support the daily care of children aged six weeks old through five years old for full-day, part-day, and hourly service.
3. The term “construction” means the construction of military housing units and ancillary supporting facilities or the improvement or rehabilitation of existing units or ancillary supporting facilities.
4. The term “contract” includes any contract, lease, or other agreement entered into under the authority of this subchapter.
5. The term “eligible entity” means any private person, corporation, firm, partnership, company, State or local government, or housing authority of a State or local government that is prepared to enter into a contract as a partner with the Secretary concerned for the construction of military housing units and ancillary supporting facilities.
6. The term “Fund” means the Department of Defense Family Housing Improvement Fund or the Department of Defense Military Unaccompanied Housing Improvement Fund established under section 2883 (a) of this title.
7. The term “military unaccompanied housing” means military housing intended to be occupied by members of the armed forces serving a tour of duty unaccompanied by dependents and transient housing intended to be occupied by members of the armed forces on temporary duty.
8. The term “United States” includes the Commonwealth of Puerto Rico.

### **Sec. 2872. General authority**

In addition to any other authority provided under this chapter for the acquisition or construction of military family housing or military unaccompanied housing, the Secretary concerned may exercise any authority or any combination of authorities provided under this subchapter in order to provide for the acquisition or construction by eligible entities of the following:

1. Family housing units on or near military installations within the United States and its territories and possessions.
2. Military unaccompanied housing units on or near such military installations.

**Sec. 2872a. Utilities and services**

- (a) Authority To Furnish.— The Secretary concerned may furnish utilities and services referred to in subsection (b) in connection with any military housing acquired or constructed pursuant to the exercise of any authority or combination of authorities under this subchapter if the military housing is located on a military installation.
- (b) Covered Utilities and Services.— The utilities and services that may be furnished under subsection (a) are the following:
  - (1) Electric power.
  - (2) Steam.
  - (3) Compressed air.
  - (4) Water.
  - (5) Sewage and garbage disposal.
  - (6) Natural gas.
  - (7) Pest control.
  - (8) Snow and ice removal.
  - (9) Mechanical refrigeration.
  - (10) Telecommunications service.
  - (11) Firefighting and fire protection services.
  - (12) Police protection services.
- (c) Reimbursement.
  - (1) The Secretary concerned shall be reimbursed for any utilities or services furnished under subsection (a).
  - (2) The amount of any cash payment received under paragraph (1) shall be credited to the appropriation or working capital account from which the cost of furnishing the utilities or services concerned was paid. Amounts so credited to an appropriation or account shall be merged with funds in such appropriation or account, and shall be available to the same extent, and subject to the same terms and conditions, as such funds.

**Sec. 2873. Direct loans and loan guarantees**

- (a) Direct Loans.
  - (1) Subject to subsection (c), the Secretary concerned may make direct loans to an eligible entity in order to provide funds to the eligible entity for the acquisition or construction of housing units that the Secretary determines are suitable for use as military family housing or as military unaccompanied housing.
  - (2) The Secretary concerned shall establish such terms and conditions with respect to loans made under this subsection, as the Secretary considers appropriate to protect the interests of the United States, including the period and frequency for repayment of such loans and the obligations of the obligors on such loans upon default.
- (b) Loan Guarantees.
  - (1) Subject to subsection (c), the Secretary concerned may guarantee a loan made to an eligible entity if the proceeds of the loan are to be used by the eligible entity to acquire, or construct

housing units that the Secretary determines are suitable for use as military family housing or as military unaccompanied housing.

- (2) The amount of a guarantee on a loan that may be provided under paragraph (1) may not exceed the amount equal to the lesser of—
    - (A) the amount equal to 80 percent of the value of the project; or
    - (B) the amount of the outstanding principal of the loan.
  - (3) The Secretary concerned shall establish such terms and conditions with respect to guarantees of loans under this subsection as the Secretary considers appropriate to protect the interests of the United States, including the rights and obligations of obligors of such loans and the rights and obligations of the United States with respect to such guarantees.
- (c) **Limitation on Direct Loan and Guarantee Authority.**— Direct loans and loan guarantees may be made under this section only to the extent that appropriations of budget authority to cover their cost (as defined in section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a (5))) are made in advance, or authority is otherwise provided in appropriation Acts. If such appropriation or other authority is provided, there may be established a financing account (as defined in section 502(7) of such Act (2 U.S.C. 661a (7))), which shall be available for the disbursement of direct loans or payment of claims for payment on loan guarantees under this section and for all other cash flows to and from the Government as a result of direct loans and guarantees made under this section.

#### **Sec. 2874. Leasing of housing**

- (a) **Lease Authorized.**— The Secretary concerned may enter into contracts for the lease of housing units that the Secretary determines are suitable for use as military family housing or military unaccompanied housing.
- (b) **Use of Leased Units.**— The Secretary concerned shall utilize housing units leased under this section as military family housing or military unaccompanied housing, as appropriate.
- (c) **Lease Terms.**— A contract under this section may be for any period that the Secretary concerned determines appropriate and may provide for the owner of the leased property to operate and maintain the property.

#### **Sec. 2875. Investments**

- (a) **Investments Authorized.**— The Secretary concerned may make investments in an eligible entity carrying out projects for the acquisition or construction of housing units suitable for use as military family housing or as military unaccompanied housing.
- (b) **Forms of Investment.**— An investment under this section may take the form of an acquisition of a limited partnership interest by the United States, a purchase of stock or other equity instruments by the United States, a purchase of bonds or other debt instruments by the United States, or any combination of such forms of investment.
- (c) **Limitation on Value of Investment.**
  - (1) The cash amount of an investment under this section in an eligible entity may not exceed an amount equal to 33 1/3 percent of the capital cost (as determined by the Secretary concerned) of the project or projects that the eligible entity proposes to carry out under this section with the investment.
  - (2) If the Secretary concerned conveys land or facilities to an eligible entity as all or part of an investment in the eligible entity under this section, the total value of the investment by the Secretary under this section may not exceed an amount equal to 45 percent of the capital cost (as

determined by the Secretary) of the project or projects that the eligible entity proposes to carry out under this section with the investment.

- (3) In this subsection, the term “capital cost”, with respect to a project for the acquisition or construction of housing, means the total amount of the costs included in the basis of the housing for Federal income tax purposes.
- (d) Collateral Incentive Agreements.— The Secretary concerned shall enter into collateral incentive agreements with eligible entities in which the Secretary makes an investment under this section to ensure that a suitable preference will be afforded members of the armed forces and their dependents in the lease or purchase, as the case may be, of a reasonable number of the housing units covered by the investment.
- (e) Congressional Notification Required.— Amounts in the Department of Defense Family Housing Improvement Fund or the Department of Defense Military Unaccompanied Housing Improvement Fund may be used to make a cash investment under this section in an eligible entity only after the end of the 30-day period beginning on the date the Secretary of Defense submits written notice of, and justification for, the investment to the appropriate committees of Congress or, if earlier, the end of the 14-day period beginning on the date on which a copy of the notice and justification is provided in an electronic medium pursuant to section 480 of this title.

#### **Sec. 2876. Rental guarantees**

The Secretary concerned may enter into agreements with eligible entities that acquire or construct military family housing units or military unaccompanied housing units under this subchapter in order to assure –

- (a) the occupancy of such units at levels specified in the agreements; or
- (b) rental income derived from rental of such units at levels specified in the agreements.

#### **Sec. 2877. Differential lease payments**

Pursuant to an agreement entered into by the Secretary concerned and a lessor of military family housing or military unaccompanied housing to members of the armed forces, the Secretary may pay the lessor an amount in addition to the rental payments for the housing made by the members as the Secretary determines appropriate to encourage the lessor to make the housing available to members of the armed forces as military family housing or as military unaccompanied housing.

#### **Sec. 2878. Conveyance or lease of existing property and facilities**

- (a) Conveyance or Lease Authorized.— The Secretary concerned may convey or lease property or facilities (including ancillary supporting facilities) to eligible entities for purposes of using the proceeds of such conveyance or lease to carry out activities under this subchapter.
- (b) Inapplicability to Property at Installation Approved for Closure.— The authority of this section does not apply to property or facilities located on or near a military installation approved for closure under a base closure law.
- (c) Competitive Process.— The Secretary concerned shall ensure that the time, method, and terms and conditions of the reconveyance or lease of property or facilities under this section from the eligible entity permit full and free competition consistent with the value and nature of the property or facilities involved.

- (d) Terms and Conditions.
  - (1) The conveyance or lease of property or facilities under this section shall be for such consideration and upon such terms and conditions as the Secretary concerned considers appropriate for the purposes of this subchapter and to protect the interests of the United States.
  - (2) As part or all of the consideration for a conveyance or lease under this section, the purchaser or lessor (as the case may be) shall enter into an agreement with the Secretary to ensure that a suitable preference will be afforded members of the armed forces and their dependents in the lease or sublease of a reasonable number of the housing units covered by the conveyance or lease, as the case may be, or in the lease of other suitable housing units made available by the purchaser or lessee.
- (e) Inapplicability of Certain Property Management Laws.— The conveyance or lease of property or facilities under this section shall not be subject to the following provisions of law:
  - (1) Section 2667 of this title.
  - (2) Subtitle I of title 40 and title III of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251 et seq.).
  - (3) Section 1302 of title 40.
  - (4) Section 501 of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11411).

**Sec. 2879.**

(Repealed. Public Law 107-314, div. B, title XXVIII, Sec. 2802(c)(1), Dec. 2, 2002, 116 Stat. 2703)

**Sec. 2880. Unit size and type**

- (a) Conformity With Similar Housing Units in Locale.— The Secretary concerned shall ensure that the room patterns and floor areas of military family housing units and military unaccompanied housing units acquired or constructed under this subchapter are generally comparable to the room patterns and floor areas of similar housing units in the locality concerned.
- (b) Inapplicability of Limitations on Space by Pay Grade.— Sections 2826 and 2856 of this title shall not apply to military family housing or military unaccompanied housing units acquired or constructed under this subchapter.

**Sec. 2881. Ancillary supporting facilities**

- (a) Authority To Acquire or Construct.— Any project for the acquisition or construction of military family housing units or military unaccompanied housing units under this subchapter may include the acquisition or construction of ancillary supporting facilities for the housing units concerned.
- (b) Restriction.— A project referred to in subsection (a) may not include the acquisition or construction of an ancillary supporting facility (other than a child development center) if, as determined by the Secretary concerned, the facility is to be used for providing merchandise or services in direct competition with –
  - (1) the Army and Air Force Exchange Service;
  - (2) the Navy Exchange Service Command;
  - (3) a Marine Corps exchange;
  - (4) the Defense Commissary Agency; or

- (5) any nonappropriated fund activity of the Department of Defense for the morale, welfare, and recreation of members of the armed forces.

**Sec. 2881a. Pilot projects for acquisition or construction of military unaccompanied housing**

- (a) Pilot Projects Authorized.— The Secretary of the Navy may carry out not more than three pilot projects under the authority of this section or another provision of this subchapter to use the private sector for the acquisition or construction of military unaccompanied housing in the United States, including any territory or possession of the United States.
- (b) Treatment of Housing; Assignment of Members.— The Secretary of the Navy may assign members of the armed forces without dependents to housing units acquired or constructed under the pilot projects, and such housing units shall be considered as quarters of the United States or a housing facility under the jurisdiction of the Secretary for purposes of section 403 of title 37.
- (c) Basic Allowance for Housing.
  - (1) The Secretary of Defense may prescribe and, under section 403(n) of title 37, pay for members of the armed forces without dependents in privatized housing acquired or constructed under the pilot projects higher rates of partial basic allowance for housing than the rates authorized under paragraph (2) of such section.
  - (2) The partial basic allowance for housing paid for a member at a higher rate under this subsection may be paid directly to the private sector source of the housing to whom the member is obligated to pay rent or other charge for residing in such housing if the private sector source credits the amount so paid against the amount owed by the member for the rent or other charge.
- (d) Funding.
  - (1) The Secretary of the Navy shall use the Department of Defense Military Unaccompanied Housing Improvement Fund to carry out activities under the pilot projects.
  - (2) Subject to 30 days prior notification to the appropriate committees of Congress, such additional amounts as the Secretary of Defense considers necessary may be transferred to the Department of Defense Military Unaccompanied Housing Improvement Fund from amounts appropriated for construction of military unaccompanied housing in military construction accounts. The amounts so transferred shall be merged with and be available for the same purposes and for the same period of time as amounts appropriated directly to the Fund.
- (e) Reports.
  - (1) The Secretary of the Navy shall transmit to the appropriate committees of Congress a report describing –
    - (A) each contract for the acquisition of military unaccompanied housing that the Secretary proposes to solicit under the pilot projects;
    - (B) each conveyance or lease proposed under section 2878 of this title in furtherance of the pilot projects; and
    - (C) the proposed partial basic allowance for housing rates for each contract as they vary by grade of the member and how they compare to basic allowance for housing rates for other contracts written under the authority of the pilot programs.
  - (2) The report shall describe the proposed contract, conveyance, or lease and the intended method of participation of the United States in the contract, conveyance, or lease and provide a justification of such method of participation. The report shall be submitted not later than 30 days before the date on which the Secretary issues the contract solicitation or offers the conveyance or lease.

- (f) Expiration.— The authority of the Secretary of the Navy to enter into a contract under the pilot programs shall expire September 30,2009.

**Sec. 2882. Effect of assignment of members to housing units acquired or constructed under alternative authority**

- (a) Treatment as Quarters of the United States.— Except as provided in subsection (b), housing units acquired or constructed under this subchapter shall be considered as quarters of the United States or a housing facility under the jurisdiction of a uniformed service for purposes of section 403 of title 37.
- (b) Availability of Basic Allowance for Housing.— A member of the armed forces who is assigned to a housing unit acquired or constructed under this subchapter that is not owned or leased by the United States shall be entitled to a basic allowance for housing under section 403 of title 37.
- (c) Lease Payments Through Pay Allotments.— The Secretary concerned may require members of the armed forces who lease housing in housing units acquired or constructed under this subchapter to make lease payments for such housing pursuant to allotments of the pay of such members under section 701 of title 37.

**Sec. 2883. Department of Defense Housing Funds**

- (a) Establishment.— There are hereby established on the books of the Treasury the following accounts:
  - (1) The Department of Defense Family Housing Improvement Fund.
  - (2) The Department of Defense Military Unaccompanied Housing Improvement Fund.
- (b) Commingling of Funds Prohibited.
  - (1) The Secretary of Defense shall administer each Fund separately.
  - (2) Amounts in the Department of Defense Family Housing Improvement Fund may be used only to carry out activities under this subchapter with respect to military family housing.
  - (3) Amounts in the Department of Defense Military Unaccompanied Housing Improvement Fund may be used only to carry out activities under this subchapter with respect to military unaccompanied housing.
- (c) Credits to Funds.
  - (1) There shall be credited to the Department of Defense Family Housing Improvement Fund the following:
    - (A) Amounts authorized for and appropriated to that Fund.
    - (B) Subject to subsection (f), any amounts that the Secretary of Defense transfers, in such amounts as provided in appropriation Acts, to that Fund from amounts authorized and appropriated to the Department of Defense for the acquisition, improvement, or construction of military family housing.
    - (C) Proceeds from the conveyance or lease of property or facilities under section 2878 of this title for the purpose of carrying out activities under this subchapter with respect to military family housing.
    - (D) Income derived from any activities under this subchapter with respect to military family housing, including interest on loans made under section 2873 of this title, income and gains realized from investments under section 2875 of this title, and any return of capital invested as part of such investments.

- (E) Any amounts that the Secretary of the Navy transfers to that Fund pursuant to section 2814(i)(3) of this title, subject to the restrictions on the use of the transferred amounts specified in that section.
  - (F) Any amounts that the Secretary concerned transfers to that Fund pursuant to section 2869 of this title.
  - (G) Subject to subsection (f), any amounts that the Secretary of Defense transfers to that Fund from amounts in the Department of Defense Base Closure Account 2005.
- (d) Use of Amounts in Funds.
- (1) In such amounts as provided in appropriation Acts and except as provided in subsection (e), the Secretary of Defense may use amounts in the Department of Defense Family Housing Improvement Fund to carry out activities under this subchapter with respect to military family housing, including activities required in connection with the planning, execution, and administration of contracts entered into under the authority of this subchapter. The Secretary may also use for expenses of activities required in connection with the planning, execution, and administration of such contracts funds that are otherwise available to the Department of Defense for such types of expenses.
  - (2) In such amounts as provided in appropriation Acts and except as provided in subsection (e), the Secretary of Defense may use amounts in the Department of Defense Military Unaccompanied Housing Improvement Fund to carry out activities under this subchapter with respect to military unaccompanied housing, including activities required in connection with the planning, execution, and administration of contracts entered into under the authority of this subchapter. The Secretary may also use for expenses of activities required in connection with the planning, execution, and administration of such contracts funds that are otherwise available to the Department of Defense for such types of expenses.
  - (3) Amounts made available under this subsection shall remain available until expended. The Secretary of Defense may transfer amounts made available under this subsection to the Secretaries of the military departments to permit such Secretaries to carry out the activities for which such amounts may be used.
- (e) Limitation on Obligations.
- (1) The Secretary may not incur an obligation under a contract or other agreement entered into under this subchapter in excess of the unobligated balance, at the time the contract is entered into, of the Fund required to be used to satisfy the obligation.
  - (2) The Funds established under subsection (a) shall be the sole source of funds for activities carried out under this subchapter.
- (f) Notification Required for Transfers.— A transfer of appropriated amounts to a Fund under subparagraph (B) or (G) of paragraph (1) or subparagraph (B) or (G) of paragraph (2) of subsection (c) may be made only after the end of the 30-day period beginning on the date the Secretary of Defense submits written notice of, and justification for, the transfer to the appropriate committees of Congress or, if earlier, the end of the 14-day period beginning on the date on which a copy of the notice and justification is provided in an electronic medium pursuant to section 480 of this title. In addition, the notice required in connection with a transfer under subparagraph (G) of paragraph (1) or subparagraph (G) of paragraph (2) shall include a certification that the amounts to be transferred from the Department of Defense Base Closure Account 2005 were specified in the conference report to accompany the most recent Military Construction Authorization Act.

**Sec. 2883a. Funds for housing allowances of members of the armed forces assigned to certain military family housing units**

- (a) Authority to Transfer Funds To Cover Housing Allowances.— During the fiscal year in which a contract is awarded for the acquisition or construction of military family housing units under this subchapter that are not to be owned by the United States, the Secretary of Defense may transfer the amount determined under subsection (b) with respect to such housing from appropriations available for support of military housing for the armed force concerned for that fiscal year to appropriations available for pay and allowances of military personnel of that same armed force for that same fiscal year.
- (b) Amount Transferred.— The total amount authorized to be transferred under subsection (a) in connection with a contract under this subchapter may not exceed an amount equal to any additional amounts payable during the fiscal year in which the contract is awarded to members of the armed forces assigned to the acquired or constructed housing units as basic allowance for housing under section 403 of title 37 that would not otherwise have been payable to such members if not for assignment to such housing units.
- (c) Transfers Subject to Appropriations.— The transfer of funds under the authority of subsection (a) is limited to such amounts as may be provided in advance in appropriations Acts.

**Sec. 2884. Reports**

- (a) Project Reports.
  - (1) The Secretary of Defense shall transmit to the appropriate committees of Congress a report describing—
    - (A) each contract for the acquisition or construction of family housing units or unaccompanied housing units that the Secretary proposes to solicit under this subchapter; and
    - (B) each conveyance or lease proposed under section 2878 of this title.
  - (2) For each proposed contract, conveyance, or lease described in paragraph (1), the report required by such paragraph shall include the following:
    - (A) A description of the contract, conveyance, or lease, including a summary of the terms of the contract, conveyance, or lease.
    - (B) A description of the authorities to be utilized in entering into the contract, conveyance, or lease and the intended method of participation of the United States in the contract, conveyance, or lease, including a justification of the intended method of participation.
    - (C) A statement of the scored cost of the contract, conveyance, or lease, as determined by the Office of Management and Budget.
    - (D) A statement of the United States funds required for the contract, conveyance, or lease and a description of the source of such funds, including a description of the specific construction, acquisition, or improvement projects from which funds were transferred to the Funds established under section 2883 of this title in order to finance the contract, conveyance, or lease.
    - (E) An economic assessment of the life cycle costs of the contract, conveyance, or lease, including an estimate of the amount of United States funds that would be paid over the life of the contract, conveyance, or lease from amounts derived from payments of government allowances, including the basic allowance for housing under section 403 of title 37, if the housing affected by the project were fully occupied by military personnel over the life of the contract, conveyance, or lease.

- (3)
- (A) In the case of a contract described in paragraph (1) proposed to be entered into with a private party, the report shall specify whether the contract will or may include a guarantee (including the making of mortgage or rental payments) by the Secretary to the private party in the event of—
- (i) the closure or realignment of the installation for which housing will be provided under the contract;
  - (ii) a reduction in force of units stationed at such installation; or
  - (iii) the extended deployment of units stationed at such installation.
- (B) If the contract will or may include such a guarantee, the report shall also—
- (i) describe the nature of the guarantee; and
  - (ii) assess the extent and likelihood, if any, of the liability of the United States with respect to the guarantee.
- (4) The report shall be submitted not later than 30 days before the date on which the Secretary issues the contract solicitation or offers the conveyance or lease.
- (b) Annual Reports.— The Secretary of Defense shall include each year in the materials that the Secretary submits to Congress in support of the budget submitted by the President pursuant to section 1105 of title 31 the following:
- (1) A separate report on the expenditures and receipts during the preceding fiscal year covering each of the Funds established under section 2883 of this title, including a description of the specific construction, acquisition, or improvement projects from which funds were transferred and the privatization projects or contracts to which those funds were transferred. Each report shall also include, for each military department or defense agency, a description of all funds to be transferred to such Funds for the current fiscal year and the next fiscal year.
  - (2) A methodology for evaluating the extent and effectiveness of the use of the authorities under this subchapter during such preceding fiscal year, and such recommendations as the Secretary considers necessary for improving the extent and effectiveness of the use of such authorities in the future.
  - (3) A review of activities of the Secretary under this subchapter during such preceding fiscal year, shown for military family housing, military unaccompanied housing, dual military family housing and military unaccompanied housing, and ancillary supporting facilities.
  - (4) If a contract for the acquisition or construction of military family housing, military unaccompanied housing, or dual military family housing and military unaccompanied housing entered into during the preceding fiscal year did not include the acquisition or construction of the types of ancillary supporting facilities specifically referred to in section 2871 (1) of this title, a explanation of the reasons why such ancillary supporting facilities were not included.
  - (5) A report setting forth, by armed force—
    - (A) an estimate of the amounts of basic allowance for housing under section 403 of title 37 that will be paid, during the current fiscal year and the fiscal year for which the budget is submitted, to members of the armed forces living in housing provided under the authorities in this subchapter; and
    - (B) the number of units of military family housing and military unaccompanied housing upon which the estimate under subparagraph (A) for the current fiscal year and the next fiscal year is based.
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- (6) A description of the Secretary's plans for housing privatization activities under this subchapter:
  - (A) during the fiscal year for which the budget is submitted; and
  - (B) during the period covered by the then-current future-years defense plan under section 221 of this title.
- (7) A report on best practices for the execution of housing privatization initiatives, including—
  - (A) effective means to track and verify proper performance, schedule, and cash flow;
  - (B) means of overseeing the actions of bondholders to properly monitor construction progress and construction draws;
  - (C) effective structuring of transactions to ensure the United States Government has adequate abilities to oversee project owner performance;
  - (D) ensuring that notices to proceed on new work are not issued until proper bonding is in place; and
  - (E) such other topics that are identified as pertinent by the Department of Defense.
- (8) A report identifying each family housing unit acquired or constructed under this subchapter that is used, or intended to be used, as quarters for a general officer or flag officer and for which the total operation, maintenance, and repair costs for the unit exceeded \$50,000. For each housing unit so identified, the report shall also include the total of such operation, maintenance, and repair costs.

**Sec. 2885. Oversight and accountability for privatization projects**

- (a) Oversight and Accountability Measures.— Each Secretary concerned shall prescribe regulations to effectively oversee and manage military housing privatization projects carried out under this subchapter. The regulations shall include the following requirements for each privatization project:
  - (1) The installation asset manager shall conduct monthly site visits and provide quarterly reports on the progress of the construction or renovation of the housing units. The reports shall be submitted quarterly to the assistant secretary for installations and environment of the respective military department.
  - (2) The installation asset manager, and, as applicable, the resident construction manager, privatization asset manager, bondholder representative, project owner, developer, general contractor, and construction consultant for the project shall conduct meetings to ensure that the construction or renovation of the units meets performance and schedule requirements and that appropriate operating and ground lease agreements are in place and adhered to.
  - (3) If a project is 90 days or more behind schedule or otherwise appears to be substantially failing to adhere to the obligations or milestones under the contract, the assistant secretary for installations and environment of the respective military department shall submit a notice of deficiency to the Deputy Under Secretary of Defense (Installations and Environment), the Secretary concerned, the managing member, and the trustee for the project.
  - (4)
    - (A) Not later than 15 days after the submittal of a notice of deficiency under paragraph (3), the Secretary concerned or designated representative shall submit to the project owner, developer, or general contractor responsible for the project a summary of deficiencies related to the project.

- (B) If the project owner, developer, or general contractor responsible for the privatization project is unable, within 60 days after receiving a notice of deficiency under subparagraph (A), to make progress on the issues outlined in such notice, the Secretary concerned shall notify the congressional defense committees of the status of the project, and shall provide a recommended course of action to correct the problems.
- (b) Required Qualifications.— The Secretary concerned or designated representative shall ensure that the project owner, developer, or general contractor that is selected for each military housing privatization initiative project has construction experience commensurate with that required to complete the project.
- (c) Bonding Levels.— The Secretary concerned shall ensure that the project owner, developer, or general contractor responsible for a military housing privatization initiative project has sufficient payment and performance bonds or suitable instruments in place for each phase of a construction or renovation portion of the project to ensure successful completion of the work in amounts as agreed to in the project’s legal documents, but in no case less than 50 percent of the total value of the active phases of the project, prior to the commencement of work for that phase.
- (d) Reporting of Efforts To Select Successor in Event of Default.— In the event a military housing privatization initiative project enters into default, the assistant secretary for installations and environment of the respective military department shall submit a report to the congressional defense committees every 90 days detailing the status of negotiations to award the project to a new project owner, developer, or general contractor.
- (e) Effect of Notices of Deficiency on Contractors and Affiliated Entities.
- (1) The Secretary concerned shall keep a record of all plans of action or notices of deficiency issued to a project owner, developer, or general contractor under subsection (a)(4), including the identity of each parent, subsidiary, affiliate, or other controlling entity of such owner, developer, or contractor.
- (2) Each military department shall consult all records maintained under paragraph (1) when reviewing the past performance of owners, developers, and contractors in the bidding process for a contract or other agreement for a military housing privatization initiative project.

## **APPENDIX B**

### **APPLICABLE LAWS, REGULATIONS, POLICIES, AND PLANNING CRITERIA**



## Appendix B

### Applicable Laws, Regulations, Policies, and Planning Criteria

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When considering the affected environment, the various physical, biological, economic, and social environmental factors must be considered. In addition to the National Environmental Policy Act (NEPA), there are other environmental laws and Executive Orders (EOs) to be considered when preparing environmental analyses. These laws are summarized below.

*NOTE: This is not a complete list of all applicable laws, regulations, policies, and planning criteria potentially applicable to documents, however, it does provide a general summary for use as a reference.*

#### **Airspace Management**

Airspace management procedures assist in preventing potential conflicts or accidents associated with aircraft using designated airspace in the United States, including restricted military airspace. Airspace management involves the coordination, integration, and regulation of the use of airspace. The Federal Aviation Administration (FAA) has overall responsibility for managing airspace through a system of flight rules and regulations, airspace management actions, and air traffic control (ATC) procedures. All military and civilian aircraft are subject to Federal Aviation Regulations (FARs). The FAA's *Aeronautical Information Manual* defines the operational requirements for each of the various types or classes of military and civilian airspace.

Some military services have specific guidance for airspace management. Airspace management in the U.S. Air Force (USAF) is guided by Air Force Instruction (AFI) 13-201, *Air Force Airspace Management*. This AFI provides guidance and procedures for developing and processing special use airspace (SUA). It covers aeronautical matters governing the efficient planning, acquisition, use, and management of airspace required to support USAF flight operations. It applies to activities that have operational or administrative responsibility for using airspace, establishes practices to decrease disturbances from flight operations that might cause adverse public reaction, and provides flying unit commanders with general guidance for dealing with local problems.

#### **Noise**

Federal, state, and local governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. The Noise Control Act of 1972, as amended, by the Quiet Communities Act of 1978, requires compliance with state and local noise laws and ordinances.

The U.S. Department of Housing and Urban Development (HUD), in coordination with the Department of Defense (DOD) and the FAA, has established criteria for acceptable noise levels for aircraft operations relative to various types of land use.

The USAF's Air Installation Compatible Use Zone (AICUZ) Program, (AFI 32-7063), provides guidance to air bases and local communities in planning land uses compatible with airfield operations. The AICUZ program describes existing aircraft noise and flight safety zones on and near USAF installations.

## Land Use

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activities occurring on a defined parcel of land. In many cases, land use descriptions are codified in local zoning laws. However, there is no nationally recognized convention or uniform terminology for describing land use categories.

Land use planning in the USAF is guided by AFI 32-7062, *Comprehensive Planning* (October 1, 1997), and Air Force Pamphlet 32-1010, *Land Use Planning*, (November 1, 1988). These documents provide for the use of 12 basic land use types found on a USAF installation. The land use types are primarily functional in nature and encompass activities that have a common general purpose. In addition, land use guidelines established by the HUD and based on findings of the Federal Interagency Committee on Noise (FICON) are used to recommend acceptable levels of noise exposure for land use.

## Air Quality

The Clean Air Act (CAA) of 1970, and Amendments of 1977 and 1990, recognizes that increases in air pollution result in danger to public health and welfare. To protect and enhance the quality of the Nation’s air resources, the CAA authorizes the U.S. Environmental Protection Agency (USEPA) to set six National Ambient Air Quality Standards (NAAQS) which regulate carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter pollution emissions. The CAA seeks to reduce or eliminate the creation of pollutants at their source, and designates this responsibility to state and local governments. States are directed to utilize financial and technical assistance and leadership from the Federal government to develop implementation plans to achieve NAAQS. Geographic areas are officially designated by the USEPA as being in attainment or nonattainment for pollutants in relation to their compliance with NAAQS. Geographic regions established for air quality planning purposes are designated as Air Quality Control Regions (AQCRs). Pollutant concentration levels are measured at designated monitoring stations within the AQCR. An area with insufficient monitoring data is designated as unclassified. Section 309 of the CAA authorizes USEPA to review and comment on impact statements prepared by other agencies.

An agency should consider what effect an action might have on NAAQS due to short-term increases in air pollution during construction and long-term increases resulting from changes in traffic patterns. For actions in attainment areas, a Federal agency could also be subject to USEPA’s Prevention of Significant Deterioration (PSD) regulations. These regulations apply to new major stationary sources and modifications to such sources. Although few agency facilities will actually emit pollutants, increases in pollution can result from a change in traffic patterns or volume. Section 118 of the CAA waives Federal immunity from complying with the CAA and states all Federal agencies will comply with all Federal- and state-approved requirements.

The General Conformity Rule requires that any Federal action meet the requirements of a State Implementation Plan (SIP) or Federal Implementation Plan. More specifically, CAA conformity is ensured when a Federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS.

The General Conformity Rule applies only to actions in nonattainment or maintenance areas and considers both direct and indirect emissions. The rule applies only to Federal actions that are considered “regionally significant” or where the total emissions from the action meet or exceed the *de minimis* thresholds presented in 40 CFR 93.153. An action is regionally significant when the total nonattainment pollutant emissions exceed 10 percent of the AQCR’s total emissions inventory for that nonattainment

pollutant. If a Federal action does not meet or exceed the *de minimis* thresholds and is not considered regionally significant, then a full Conformity Determination is not required.

On May 13, 2010, the USEPA issued the Greenhouse Gas (GHG) Tailoring Rule that sets thresholds for GHG emissions from large stationary sources. The new GHG emissions thresholds define when permits under the New Source Review Prevention of PSD and title V Operating Permit programs are required for new and existing industrial facilities. Beginning January 2, 2011, large industrial facilities that must already obtain CAA permits for non-GHGs must also include GHG requirements in these permits. Beginning July 1, 2011, all new facilities and facilities making changes that emit GHGs above certain thresholds will be required to obtain construction permits that address GHG emissions. Operating permits will be needed by all sources that emit GHGs above threshold quantities beginning in July 2011.

## **Health and Safety**

Human health and safety relates to workers' health and safety during demolition or construction of facilities, or applies to work conditions during operations of a facility that could expose workers to conditions that pose a health or safety risk. The Federal Occupational Safety and Health Administration (OSHA) issues standards to protect persons from such risks, and the DOD and state and local jurisdictions issue guidance to comply with these OSHA standards. Safety also can refer to safe operations of aircraft or other equipment.

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, implements Air Force Policy Directive (AFPD) 91-3, *Occupational Safety and Health*, by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program, these standards ensure all USAF workplaces meet Federal safety and health requirements.

AFI 91-202, *USAF Mishap Prevention Program*, implements AFPD 91-2, *Safety Programs*. It establishes mishap prevention program requirements (including the Bird/Wildlife Aircraft Strike Hazard [BASH] Program), assigns responsibilities for program elements, and contains program management information.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 23, 1997), directs Federal agencies to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Federal agencies must also ensure that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

## **Geological Resources**

Recognizing that millions of acres per year of prime farmland are lost to development, Congress passed the Farmland Protection Policy Act (FPPA) to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland (7 Code of Federal Regulations [CFR] Part 658). Prime farmland is described as soils that have a combination of soil and landscape properties that make them highly suitable for cropland, such as high inherent fertility, good water-holding capacity, and deep or thick effective rooting zones, and that are not subject to periodic flooding. Under the FPPA, agencies are encouraged to conserve prime or unique farmlands when alternatives are practicable. Some activities that are not subject to the FPPA include Federal permitting and licensing, projects on land already in urban development or used for water storage, construction for national defense purposes, or construction of new minor secondary structures such as a garage or storage shed.

## Water Resources

The Clean Water Act (CWA) of 1977 is an amendment to the Federal Water Pollution Control Act of 1972, is administered by USEPA, and sets the basic structure for regulating discharges of pollutants into U.S. waters. The CWA requires USEPA to establish water quality standards for specified contaminants in surface waters and forbids the discharge of pollutants from a point source into navigable waters without a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits are issued by USEPA or the appropriate state if it has assumed responsibility. Section 404 of the CWA establishes a Federal program to regulate the discharge of dredge and fill material into waters of the United States. Section 404 permits are issued by the U.S. Army Corps of Engineers (USACE). Waters of the United States include interstate and intrastate lakes, rivers, streams, and wetlands that are used for commerce, recreation, industry, sources of fish, and other purposes. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Each agency should consider the impact on water quality from actions such as the discharge of dredge or fill material into U.S. waters from construction, or the discharge of pollutants as a result of facility occupation.

Section 303(d) of the CWA requires states and USEPA to identify waters not meeting state water quality standards and to develop Total Maximum Daily Loads (TMDLs). A TMDL is the maximum amount of a pollutant that a waterbody can receive and still be in compliance with state water quality standards. After determining TMDLs for impaired waters, states are required to identify all point and nonpoint sources of pollution in a watershed that are contributing to the impairment and to develop an implementation plan that will allocate reductions to each source to meet the state standards. The TMDL program is currently the Nation's most comprehensive attempt to restore and improve water quality. The TMDL program does not explicitly require the protection of riparian areas. However, implementation of the TMDL plans typically calls for restoration of riparian areas as one of the required management measures for achieving reductions in nonpoint source pollutant loadings.

The USEPA issued a Final Rule for the CWA concerning technology-based Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development point source category. All NPDES storm water permits issued by the USEPA or states must incorporate requirements established in the Final Rule. As of February 1, 2010, all new construction sites are required to meet the non-numeric effluent limitations and design, install, and maintain effective erosion and sedimentation controls. In addition, construction site owners and operators that disturb 1 or more acres of land are required to use best management practices (BMPs) to ensure that soil disturbed during construction activities does not pollute nearby water bodies. Effective August 1, 2011, construction activities disturbing 20 or more acres must comply with the numeric effluent limitation for turbidity in addition to the non-numeric effluent limitations. The maximum daily turbidity limitation is 280 nephelometric turbidity units (ntu). On February 2, 2014, construction site owners and operators that disturb 10 or more acres of land are required to monitor discharges to ensure compliance with effluent limitations as specified by the permitting authority. Construction site owners are encouraged to phase ground-disturbing activities to limit the applicability of the monitoring requirements and the turbidity limitation. The USEPA's limitations are based on its assessment of what specific technologies can reliably achieve. Permittees can select management practices or technologies that are best suited for site-specific conditions.

The Safe Drinking Water Act (SDWA) of 1974 establishes a Federal program to monitor and increase the safety of all commercially and publicly supplied drinking water. Congress amended the SDWA in 1986, mandating dramatic changes in nationwide safeguards for drinking water and establishing new Federal enforcement responsibility on the part of USEPA. The 1986 amendments to the SDWA require USEPA to establish Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), and Best Available Technology (BAT) treatment techniques for organic, inorganic, radioactive, and microbial

contaminants; and turbidity. MCLGs are maximum concentrations below which no negative human health effects are known to exist. The 1996 amendments set current Federal MCLs, MCLGs, and BATs for organic, inorganic, microbiological, and radiological contaminants in public drinking water supplies.

The Wild and Scenic Rivers Act of 1968 provides for a wild and scenic river system by recognizing the remarkable values of specific rivers of the Nation. These selected rivers and their immediate environment are preserved in a free-flowing condition, without dams or other construction. The policy not only protects the water quality of the selected rivers but also provides for the enjoyment of present and future generations. Any river in a free-flowing condition is eligible for inclusion, and can be authorized as such by an Act of Congress, an act of state legislature, or by the Secretary of the Interior upon the recommendation of the governor of the state(s) through which the river flows.

EO 11988, *Floodplain Management* (May 24, 1977), directs agencies to consider alternatives to avoid adverse effects and incompatible development in floodplains. An agency may locate a facility in a floodplain if the head of the agency finds there is no practicable alternative. If it is found there is no practicable alternative, the agency must minimize potential harm to the floodplain, and circulate a notice explaining why the action is to be located in the floodplain prior to taking action. Finally, new construction in a floodplain must apply accepted floodproofing and flood protection to include elevating structures above the base flood level rather than filling in land.

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* (October 5, 2009), directed the USEPA to issue guidance on Section 438 of the Energy Independence and Security Act (EISA). The EISA establishes into law new storm water design requirements for Federal construction projects that disturb a footprint of greater than 5,000 square feet of land. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology would be calculated and site design would incorporate storm water retention and reuse technologies to the maximum extent technically feasible. Post-construction analyses will be conducted to evaluate the effectiveness of the as-built storm water reduction features. These regulations are applicable to DOD Unified Facilities Criteria. Additional guidance is provided in the USEPA's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*.

EO 13514 also requires Federal agencies to improve water efficiency and management by reducing potable water consumption intensity 2% annually through fiscal year 2020, or 26% by the end of fiscal year 2020, relative to a fiscal year 2007 baseline. Furthermore, Federal agencies must also reduce agency industrial, landscaping, and agricultural water consumption 2% annually, or 20% by the end of fiscal year 2020, relative to a fiscal year 2010 baseline.

## **Biological Resources**

The Endangered Species Act (ESA) of 1973 establishes a Federal program to conserve, protect, and restore threatened and endangered plants and animals and their habitats. The ESA specifically charges Federal agencies with the responsibility of using their authority to conserve threatened and endangered species. All Federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species, unless the agency has been granted an exemption. The Secretary of the Interior, using the best available scientific data, determines which species are officially endangered or threatened, and the U.S. Fish and Wildlife Service (USFWS) maintains the list. A list of Federal endangered species can be obtained from the Endangered Species Division, USFWS (703-358-2171). States might also have their own lists of threatened and endangered species which can be obtained by

calling the appropriate State Fish and Wildlife office. Some species also have laws specifically for their protection (e.g., Bald Eagle Protection Act).

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, implements treaties and conventions between the United States, Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless otherwise permitted by regulations, the MBTA makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess; offer to or sell, barter, purchase, or deliver; or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. The MBTA also makes it unlawful to ship, transport, or carry from one state, territory, or district to another; or through a foreign country, any bird, part, nest, or egg that was captured, killed, taken, shipped, transported, or carried contrary to the laws from where it was obtained; and import from Canada any bird, part, nest, or egg obtained contrary to the laws of the province from which it was obtained. The U.S. Department of the Interior has authority to arrest, with or without a warrant, a person violating the MBTA.

The Sikes Act (16 U.S.C. 670a-670o, 74 Stat. 1052), as amended, P.L. 86-797, approved September 15, 1960, 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. In November 1997, the Sikes Act was amended via the Sikes Act Improvement Amendment (Public Law 105-85, Division B, Title XXIX) to require the Secretary of Defense to carry out a program to provide for the conservation and rehabilitation of natural resources on military installations. To facilitate this program, the amendments require the Secretaries of the military departments to prepare and implement Integrated Natural Resources Management Plans (INRMPs) for each military installation in the United States unless the absence of significant natural resources on a particular installation makes preparation of a plan for the installation inappropriate.

EO 11514, *Protection and Enhancement of Environmental Quality* (March 5, 1970), states that the President, with assistance from the Council on Environmental Quality (CEQ), will lead a national effort to provide leadership in protecting and enhancing the environment for the purpose of sustaining and enriching human life. Federal agencies are directed to meet national environmental goals through their policies, programs, and plans. Agencies should also continually monitor and evaluate their activities to protect and enhance the quality of the environment. Consistent with NEPA, agencies are directed to share information about existing or potential environmental problems with all interested parties, including the public, in order to obtain their views.

EO 11990, *Protection of Wetlands* (May 24, 1977), directs agencies to consider alternatives to avoid adverse effects and incompatible development in wetlands. Federal agencies are to avoid new construction in wetlands, unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland. Agencies should use economic and environmental data, agency mission statements, and any other pertinent information when deciding whether or not to build in wetlands. EO 11990 directs each agency to provide for early public review of plans for construction in wetlands.

EO 13186, *Conservation of Migratory Birds* (January 10, 2001), creates a more comprehensive strategy for the conservation of migratory birds by the Federal government. EO 13186 provides a specific framework for the Federal government's compliance with its treaty obligations to Canada, Mexico, Russia, and Japan. EO 13186 provides broad guidelines on conservation responsibilities and requires the development of more detailed guidance in a Memorandum of Understanding (MOU). EO 13186 will be coordinated and implemented by the USFWS. The MOU will outline how Federal agencies will promote conservation of migratory birds. EO 13186 requires the support of various conservation planning efforts already in progress; incorporation of bird conservation considerations into agency planning, including

NEPA analyses; and reporting annually on the level of take of migratory birds. The Federal Noxious Weed Act (Public Law 93-629) of 1975, as amended in 1990, established a Federal program to control the spread of noxious weeds. The Secretary of Agriculture was given the authority to designate plants as noxious weeds by regulation and the movement of such weeds in interstate or foreign commerce was prohibited except under permit. The Secretary was also given authority to inspect, seize, and destroy products and quarantine areas, if necessary, to prevent the spread of such weeds. The Secretary was also authorized to cooperate with Federal, state, and local agencies; farmer associations, and private individuals in measures to control, eradicate, prevent, or retard the spread of noxious weeds. This law also requires that any environmental assessments or impact statements that are required to implement plant control agreements must be completed within 1 year of the time the need for the document is established.

EO 13112, *Invasive Species* (February 3, 1999), provides direction to use relevant programs and authorities to prevent introduction of invasive species, detect and respond rapidly to control populations of invasive species, monitor invasive species populations, provide restoration of native species and habitat conditions in ecosystems that have been invaded, conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species, and promote public education on invasive species with means to address them. EO 13112 was created to minimize the economic, ecological, and human health impacts that invasive species cause.

## **Cultural Resources**

The American Indian Religious Freedom Act of 1978 and Amendments of 1994 recognize that freedom of religion for all people is an inherent right, and traditional American Indian religions are an indispensable and irreplaceable part of Indian life. It also recognized the lack of Federal policy on this issue and made it the policy of the United States to protect and preserve the inherent right of religious freedom for Native Americans. The 1994 Amendments provide clear legal protection for the religious use of peyote cactus as a religious sacrament. Federal agencies are responsible for evaluating their actions and policies to determine if changes should be made to protect and preserve the religious cultural rights and practices of Native Americans. These evaluations must be made in consultation with native traditional religious leaders.

The Archaeological Resource Protection Act (ARPA) of 1979 protects archaeological resources on public and American Indian lands. It provides felony-level penalties for the unauthorized excavation, removal, damage, alteration, or defacement of any archaeological resource, defined as material remains of past human life or activities which are at least 100 years old. Before archaeological resources are excavated or removed from public lands, the Federal land manager must issue a permit detailing the time, scope, location, and specific purpose of the proposed work. ARPA also fosters the exchange of information about archaeological resources between governmental agencies, the professional archaeological community, and private individuals. ARPA is implemented by regulations found in 43 CFR Part 7.

The National Historic Preservation Act (NHPA) of 1966 sets forth national policy to identify and preserve properties of state, local, and national significance. The NHPA establishes the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), and the National Register of Historic Places (NRHP). The ACHP advises the President, Congress, and Federal agencies on historic preservation issues. Section 106 of the NHPA directs Federal agencies to take into account effects of their undertakings (actions and authorizations) on properties included in or eligible for the NRHP. Section 110 sets inventory, nomination, protection, and preservation responsibilities for federally owned cultural properties. Section 106 of the act is implemented by regulations of the ACHP, 36 CFR Part 800. Agencies should coordinate studies and documents prepared under Section 106 with NEPA where appropriate. However, NEPA and NHPA are separate statutes and compliance with one does not

constitute compliance with the other. For example, actions which qualify for a categorical exclusion under NEPA might still require Section 106 review under NHPA. It is the responsibility of the agency official to identify properties in the area of potential effects, and whether they are included or eligible for inclusion in the NRHP. Section 110 of the NHPA requires Federal agencies to identify, evaluate, and nominate historic property under agency control to the NRHP.

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 establishes rights of American Indian tribes to claim ownership of certain “cultural items,” defined as Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, held or controlled by Federal agencies. Cultural items discovered on Federal or tribal lands are, in order of primacy, the property of lineal descendants, if these can be determined, and then the tribe owning the land where the items were discovered or the tribe with the closest cultural affiliation with the items. Discoveries of cultural items on Federal or tribal land must be reported to the appropriate American Indian tribe and the Federal agency with jurisdiction over the land. If the discovery is made as a result of a land use, activity in the area must stop and the items must be protected pending the outcome of consultation with the affiliated tribe.

EO 11593, *Protection and Enhancement of the Cultural Environment* (May 13, 1971), directs the Federal government to provide leadership in the preservation, restoration, and maintenance of the historic and cultural environment. Federal agencies are required to locate and evaluate all Federal sites under their jurisdiction or control which might qualify for listing on the NRHP. Agencies must allow the ACHP to comment on the alteration, demolition, sale, or transfer of property which is likely to meet the criteria for listing as determined by the Secretary of the Interior in consultation with the SHPO. Agencies must also initiate procedures to maintain federally owned sites listed on the NRHP.

EO 13007, *Indian Sacred Sites* (May 24, 1996), provides that agencies managing Federal lands, to the extent practicable, permitted by law, and not inconsistent with agency functions, shall accommodate American Indian religious practitioners’ access to and ceremonial use of American Indian sacred sites, shall avoid adversely affecting the physical integrity of such sites, and shall maintain the confidentiality of such sites. Federal agencies are responsible for informing tribes of proposed actions that could restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

EO 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000), was issued to provide for regular and meaningful consultation and collaboration with Native American tribal officials in the development of Federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Native American tribes. EO 13175 recognizes the following fundamental principles: Native American tribes exercise inherent sovereignty over their lands and members, the United States government has a unique trust relationship with Native American tribes and deals with them on a government-to-government basis, and Native American tribes have the right to self-government and self-determination.

EO 13287, *Preserve America* (March 3, 2003), orders Federal agencies to take a leadership role in protection, enhancement, and contemporary use of historic properties owned by the Federal government, and promote intergovernmental cooperation and partnerships for preservation and use of historic properties. EO 13287 established new accountability for agencies with respect to inventories and stewardship.

## **Socioeconomics and Environmental Justice**

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), directs Federal agencies to make achieving environmental justice part of their mission. Agencies must identify and address the adverse human health or environmental effects

that its activities have on minority and low-income populations, and develop agencywide environmental justice strategies. The strategy must list “programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations, ensure greater public participation, improve research and data collection relating to the health of and environment of minority populations and low-income populations, and identify differential patterns of consumption of natural resources among minority populations and low-income populations.” A copy of the strategy and progress reports must be provided to the Federal Working Group on Environmental Justice. Responsibility for compliance with EO 12898 is with each Federal agency.

## **Hazardous Materials and Waste**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 authorizes USEPA to respond to spills and other releases of hazardous substances to the environment, and authorizes the National Oil and Hazardous Substances Pollution Contingency Plan. CERCLA also provides a Federal “Superfund” to respond to emergencies immediately. Although the “Superfund” provides funds for cleanup of sites where potentially responsible parties cannot be identified, USEPA is authorized to recover funds through damages collected from responsible parties. This funding process places the economic burden for cleanup on polluters. Section 120(h) of CERCLA requires Federal agencies to notify prospective buyers of contaminated Federal properties about the type, quantity and location of hazardous substances.

The Pollution Prevention Act (PPA) of 1990 encourages manufacturers to avoid the generation of pollution by modifying equipment and processes; redesigning products; substituting raw materials; and making improvements in management techniques, training, and inventory control. Consistent with pollution prevention principles, EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (January 24, 2007 [revoking EO 13148]), sets a goal for all Federal agencies to promote environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products; and use of paper of at least 30 percent post-consumer fiber content. In addition, EO 13423 sets a goal that requires Federal agencies to ensure that they reduce the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of; increase diversion of solid waste, as appropriate; and maintain cost-effective waste prevention and recycling programs at their facilities. Additionally, in *Federal Register* Volume 58 Number 18 (January 29, 1993), CEQ provides guidance to Federal agencies on how to “incorporate pollution prevention principles, techniques, and mechanisms into their planning and decisionmaking processes and to evaluate and report those efforts, as appropriate, in documents pursuant to NEPA.”

The Resource Conservation and Recovery Act (RCRA) of 1976 is an amendment to the Solid Waste Disposal Act. RCRA authorizes USEPA to provide for “cradle-to-grave” management of hazardous waste and sets a framework for the management of nonhazardous municipal solid waste. Under RCRA, hazardous waste is controlled from generation to disposal through tracking and permitting systems, and restrictions and controls on the placement of waste on or into the land. Under RCRA, a waste is defined as hazardous if it is ignitable, corrosive, reactive, toxic, or listed by USEPA as being hazardous. With the Hazardous and Solid Waste Amendments (HSWA) of 1984, Congress targeted stricter standards for waste disposal and encouraged pollution prevention by prohibiting the land disposal of particular wastes. The HSWA amendments strengthen control of both hazardous and nonhazardous waste and emphasize the prevention of pollution of groundwater.

The Superfund Amendments and Reauthorization Act (SARA) of 1986 mandates strong clean-up standards and authorizes USEPA to use a variety of incentives to encourage settlements. Title III of

SARA authorizes the Emergency Planning and Community Right to Know Act (EPCRA), which requires facility operators with “hazardous substances” or “extremely hazardous substances” to prepare comprehensive emergency plans and to report accidental releases. If a Federal agency acquires a contaminated site, it can be held liable for cleanup as the property owner/operator. A Federal agency can also incur liability if it leases a property, as the courts have found lessees liable as “owners.” However, if the agency exercises due diligence by conducting a Phase I Environmental Site Assessment, it can claim the “innocent purchaser” defense under CERCLA. According to Title 42 United States Code (U.S.C.) 9601(35), the current owner/operator must show it undertook “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” before buying the property to use this defense.

The Toxic Substance Control Act (TSCA) of 1976 consists of four titles. Title I established requirements and authorities to identify and control toxic chemical hazards to human health and the environment. TSCA authorized USEPA to gather information on chemical risks, require companies to test chemicals for toxic effects, and regulate chemicals with unreasonable risk. TSCA also singled out polychlorinated biphenyls (PCBs) for regulation, and, as a result, PCBs are being phased out. PCBs are persistent when released into the environment and accumulate in the tissues of living organisms. They have been shown to cause adverse health effects on laboratory animals and could cause adverse health effects in humans. TSCA and its regulations govern the manufacture, processing, distribution, use, marking, storage, disposal, clean-up, and release reporting requirements for numerous chemicals like PCBs. TSCA Title II provides statutory framework for “Asbestos Hazard Emergency Response,” which applies only to schools. TSCA Title III, “Indoor Radon Abatement,” states indoor air in buildings of the United States should be as free of radon as the outside ambient air. Federal agencies are required to conduct studies on the extent of radon contamination in buildings they own. TSCA Title IV, “Lead Exposure Reduction,” directs Federal agencies to “conduct a comprehensive program to promote safe, effective, and affordable monitoring, detection, and abatement of lead-based paint and other lead exposure hazards.” Further, any Federal agency having jurisdiction over a property or facility must comply with all Federal, state, interstate, and local requirements concerning lead-based paint.

## **Energy**

The Energy Policy Act (EPAc) of 2005, Public Law 109-58, amended portions of the National Energy Conservation Policy Act and established a number of energy management goals for Federal facilities and fleets. Section 109 of EPAc 2005 directs new Federal buildings (commercial or residential) to be designed 30% below American Society of Heating, Refrigerating, and Air-Conditioning Engineers standards or the International Energy Code. Section 109 also includes the application of sustainable design principles for new buildings and requires Federal agencies to identify new buildings in their budget requests and those that meet or exceed the standards. Section 203 of EPAc 2005 requires that all Federal agencies’ renewable electricity consumption meet or exceed 3% from fiscal years 2007-2009, with increases to at least 5% in fiscal years 2010-2012 and 7.5% in 2013 and thereafter. Section 203 also establishes a double credit bonus for Federal agencies if renewable electricity is produced on-site at a Federal facility, on Federal lands, or on Native American lands. Section 204 of EPAc 2005 establishes a photovoltaic energy commercialization program in Federal buildings.

EO 13514, *Federal Leadership In Environmental, Energy, And Economic Performance*, dated October 5, 2009, directs Federal agencies to improve water use efficiency and management; implement high performance sustainable Federal building design, construction, operation and management; and advance regional and local integrated planning by identifying and analyzing impacts from energy usage and alternative energy sources. EO 13514 also directs Federal agencies to prepare and implement a Strategic Sustainability Performance Plan to manage its greenhouse gas emissions, water use, pollution prevention, regional development and transportation planning, sustainable building design and promote sustainability

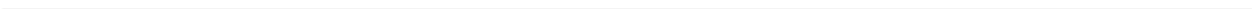
in its acquisition of goods and services. Section 2(g) requires new construction, major renovation, or repair and alteration of buildings to comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*. The CEQ regulations at 40 CFR 1502.16(e) directs agencies to consider the energy requirements and conservation potential of various alternatives and mitigation measures.

Section 503(b) of Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, instructs Federal agencies to conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner. EO 13423 sets goals in energy efficiency, acquisition, renewable energy, toxic chemical reduction, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Sustainable design measures such as the use of “green” technology (e.g., photovoltaic panels, solar collection, heat recovery systems, wind turbines, green roofs, and habitat-oriented storm water management) would be incorporated where practicable.

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## **APPENDIX C**

### **INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING CORRESPONDENCE**





## **Interagency and Intergovernmental Coordination for Environmental Planning Distribution List**

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Mr. Cal Groen, Director  
Idaho Department of Fish and Game  
600 S. Walnut St.  
Boise, ID 83712

Mr. Jack G. Peterson, BLM Military Liaison  
BLM Idaho State Office  
1387 S. Vinnell Way  
Boise, ID 83709

Ms. Janet Gallimore, Executive Director  
Idaho State Historical Society  
2205 Old Penitentiary Road  
Boise, ID 83712-8250

Mr. Brian Kelly, Idaho State Supervisor  
U.S. Fish and Wildlife Service  
1387 S. Vinnell Way, Suite 368,  
Boise, ID 83709

Col. Billy Ritchie, USAF Retired  
Special Assistant, Military Affairs  
Office of the Governor  
150 South 3rd Street East  
Mountain Home, ID 83647

The Honorable Mike Crapo  
251 East Front Street  
Suite 205  
Boise, ID 83702

The Honorable James E. Risch  
350 North 9<sup>th</sup> Street  
Suite 302  
Boise ID 83702

The Honorable Michael K. Simpson  
802 West Bannock  
Suite 600  
Boise ID 83702

Ms. Connie Crusier, Commissioner  
Elmore County Commissioners  
150 South 4th East, Suite 3  
Mountain Home, ID 83647

Mr. Arlie Shaw, Chairperson  
Elmore County Commissioners  
150 South 4th East, Suite 3  
Mountain Home, ID 83647

The Honorable David Bieter  
Mayor, City of Boise  
150 North Capitol Boulevard  
Boise, ID 83702-5920

The Honorable Donald Hall  
Mayor, City of Twin Falls  
P.O. Box 1907  
Twin Falls, ID 83303-1907

The Honorable Thomas Rist  
Mayor, Mountain Home  
160 South 3<sup>rd</sup> East  
Mountain Home, ID 83624

The Honorable Paul Spang  
Mayor, Grand View  
P.O. Box 126  
Grand View, ID 83624

Twin Falls Chamber of Commerce  
858 Blue Lakes Boulevard North  
Twin Falls, ID 83301

Boise Metro Chamber of Commerce  
250 South 5<sup>th</sup> Street, Suite 300  
Boise, ID 83702

Mountain Home Chamber of Commerce  
205 North 3<sup>rd</sup> East  
Mountain Home, ID 83647

Twin Falls Public Library  
201 4<sup>th</sup> Avenue East  
Twin Falls, ID 83301

Mountain Home Public Library  
790 North 10<sup>th</sup> East  
Mountain Home, ID 83647

Mountain Home AFB Library  
480 5<sup>th</sup> Avenue, Suite 100  
Mountain Home AFB, ID 83702

Boise Public Library  
715 S. Capital Blvd.  
Boise, ID 83702

Bruneau District Library  
32073 Ruth St.  
Bruneau, ID 83604

Ms. Suzy Pengilly  
Deputy SHPO  
Compliance Coordinator  
210 Main Street  
Boise, ID 83702

Eastern Owyhee County Library  
1520 Boise Avenue, P.O. Box 100  
Grand View, ID 83624



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 366TH FIGHTER WING (ACC)  
MOUNTAIN HOME AIR FORCE BASE IDAHO**

Colonel Ronald D. Buckley  
Commander, 366th Fighter Wing  
366 Gunfighter Avenue, Ste 331  
Mountain Home AFB ID 83648

Dear Interested Public

The US Air Force has prepared a Draft Environmental Assessment (EA) addressing the Privatization of Military Family Housing at Mountain Home Air Force Base (MHAFB). A Draft Finding of No Significant Impact (FONSI) is included inside the Draft EA. The Proposed Action is to convey military family housing units, grant leases of land, and transfer responsibility for providing housing at Mountain Home AFB to a private developer so that through construction and demolition the end-state total would be 1,059 housing units.

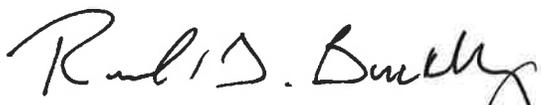
The environmental impact analysis process for the PA and No-Action Alternative is being conducted by Air Combat Command in accordance with Council on Environmental Quality guidelines, pursuant to requirements of the National Environmental Policy Act of 1969. We request your participation by reviewing the attached EA and solicit your comments concerning the proposal and any potential environmental consequences.

Written comments on the Draft EA and Draft FONSI will be accepted for a 30-day period beginning upon the date of this letter. All written comments should be forwarded to:

366th Fighter Wing Public Affairs Office  
Attn: MFH Privatization EA  
366 Gunfighter Avenue, Ste 314  
Mountain Home AFB ID 83648

We look forward to hearing from you on this proposal.

Very respectfully

  
RONALD D. BUCKLEY, Colonel, USAF

Attachment:  
Draft EA with Draft FONSI

## North American Tribal Consultation Distribution List

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Mr. Nathan Small, Chairman  
Shoshone-Bannock Tribes of  
Fort Hall Indian Reservation  
P.O. Box 306  
Fort Hall, ID 83203-0306

Mr. Jason Walker, Chairman  
Northwestern Band, Shoshone  
Brigham City Tribal Office  
707 N. Main St.  
Brigham City, UT 84302

Mr. Terry Gibson, Chairman  
Shoshone-Paiute Tribes of  
Duck Valley Indian Reservation  
P.O. Box 219  
Owyhee, NV 89832

Mr. Billy Bell, Chairman  
Paiute-Shoshone Tribes of  
Fort McDermitt Indian Reservation  
P.O. Box 457  
McDermitt, NV 89421

Ms. Diane Teeman, Chairman  
Burns Paiute Tribe  
H.C. 71, 100 Pasigo St.  
Burns, OR 97720



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 366TH FIGHTER WING (ACC)  
MOUNTAIN HOME AIR FORCE BASE IDAHO**

Colonel Ronald D. Buckley  
Commander, 366th Fighter Wing  
366 Gunfighter Avenue, Ste 331  
Mountain Home AFB ID 83648

Mr. Terry Gibson, Chairman  
Shoshone-Paiute Tribes of the Duck Valley Indian Reservation  
P.O. Box 219  
Owyhee NV 89832

Dear Chairman Gibson

The US Air Force has prepared a Draft Environmental Assessment (EA) addressing privatization of military family housing (MFH) at Mountain Home Air Force Base (MHAFB). A Draft Finding of No Significant Impact (FONSI) is included inside the Draft EA. The Proposed Action (PA) is to convey MFH units, grant leases of land and transfer responsibility for providing housing at MHAFB to a private developer; so that through construction and demolition, the end-state total would be 1,059 housing units. Housing units slated for demolition would be made available to American Indian tribes through the Operation WALKING SHIELD program.

The environmental impact analysis process for the PA and No-Action Alternative is being conducted by Air Combat Command in accordance with Council on Environmental Quality guidelines, pursuant to requirements of the National Environmental Policy Act of 1969. We request your participation by reviewing the attached EA and solicit your comments concerning the proposal and any potential environmental consequences. Also enclosed is the distribution list of federally recognized tribes, and federal, state and local agencies that have been contacted. If there are any additional agencies or federally recognized tribes you feel should review and comment on the proposal, please forward their contact information to us so we may provide them the materials. Written comments on the Draft EA and Draft FONSI will be accepted for a 30-day period beginning upon the date of this letter. All written comments should be forwarded to:

366th Fighter Wing Public Affairs Office  
Attn: MFH Privatization EA  
366 Gunfighter Avenue, Ste 314  
Mountain Home AFB ID 83648

In addition to inviting your written comments under the National Environmental Policy Act, we are eager to meet with you at your earliest convenience for a Government-to-Government consultation on this proposal. Please don't hesitate to contact Colonel Bruce M. Smith, 366th Fighter Wing Vice Commander, at 208-828-2366 with any questions that you may have. We look forward to hearing from you soon.

Very respectfully

  
RONALD D. BUCKLEY, Colonel USAF

2 Attachments:

1. Draft EA with Draft FONSI
2. Distribution List

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## **APPENDIX F**

### **AIR EMISSIONS CALCULATIONS**



<b>Summary</b>	Summarizes total emissions by calendar year for Privatization of Military Family Housing at Mountain Home Air Force Base, Idaho
<b>Combustion</b>	Estimates emissions from non-road equipment exhaust.
<b>Fugitive</b>	Estimates particulate emissions from construction activities including earthmoving, vehicle traffic, and windblown dust.
<b>Grading</b>	Estimates the number of days of site preparation, to be used for estimating heavy equipment exhaust and earthmoving dust emissions.
<b>Haul Truck On-Road</b>	Estimates emissions from haul and water trucks delivering materials to the job site.
<b>Construction Commuter</b>	Estimates emissions for construction workers commuting to the site.
<b>AQCR Tier Report</b>	Summarizes total emissions for the State of Idaho Air Quality Control Region 63 Tier report for 2002, to be used to compare the project to regional emissions.

**Air Quality Emissions from Privatization of Military Family Housing at Mountain Home AFB**

	<b>NO<sub>x</sub></b> <b>(ton)</b>	<b>VOC</b> <b>(ton)</b>	<b>CO</b> <b>(ton)</b>	<b>SO<sub>2</sub></b> <b>(ton)</b>	<b>PM<sub>10</sub></b> <b>(ton)</b>	<b>PM<sub>2.5</sub></b> <b>(ton)</b>	<b>CO<sub>2</sub></b> <b>(ton)</b>
Construction Combustion	28.041	2.335	11.310	0.842	1.751	1.699	3,256.798
Construction Fugitive Dust	-	-	-	-	63.056	4.054	-
Haul and Water Trucks	23.571	17.044	69.263	1.857	28.031	7.289	5,967.473
Construction Commuter	0.275	0.274	2.479	0.003	0.026	0.016	328.705
<b>TOTAL</b>	<b>51.888</b>	<b>19.652</b>	<b>83.052</b>	<b>2.702</b>	<b>92.865</b>	<b>13.058</b>	<b>9,552.976</b>

Note: Total CY2010 PM<sub>10/2.5</sub> fugitive dust emissions are assuming USEPA 50% control efficiencies.

CO<sub>2</sub> annual emissions converted to metric tons = **8,664.549 metric tons**  
 State of Idaho's annual CO<sub>2</sub> emissions = **16,160,335 metric tons** (DOE/EIA 2010)  
 Percent of Idaho's annual CO<sub>2</sub> emissions = **0.054% metric tons**

Source: U.S. Department of Energy (DOE)/Energy Information Administration (EIA). 2010. State Carbon Dioxide Emissions Summary for the State of Idaho. Released 4 February 2010. Available online: <[http://www.eia.doe.gov/oiaf/1605/state/state\\_emissions.html](http://www.eia.doe.gov/oiaf/1605/state/state_emissions.html)>. Accessed 29 March 2010.

Since future year budgets were not readily available, actual 2002 air emissions inventories for the counties were used as an approximation of the regional inventory. Because the Proposed Action is several orders of magnitude below significance, the conclusion would be the same, regardless of whether future year budget data set were used.

**State of Idaho Air Quality Control Region 63**

Year	Point and Area Sources Combined					
	<b>NO<sub>x</sub></b> <b>(tpy)</b>	<b>VOC</b> <b>(tpy)</b>	<b>CO</b> <b>(tpy)</b>	<b>SO<sub>2</sub></b> <b>(tpy)</b>	<b>PM<sub>10</sub></b> <b>(tpy)</b>	<b>PM<sub>2.5</sub></b> <b>(tpy)</b>
2002	39,692	88,677	293,883	4,022	147,766	27,706

Source: USEPA-AirData NET Tier Report (<http://www.epa.gov/air/data/geosel.html>). Site visited on 18 March 2010.

**Air Emissions from Privatization of Military Family Housing at Mountain Home AFB  
 Determination Significance (Significance Threshold = 10% of regional)**

Point and Area Sources Combined						
	<b>NO<sub>x</sub></b> <b>(tpy)</b>	<b>VOC</b> <b>(tpy)</b>	<b>CO</b> <b>(tpy)</b>	<b>SO<sub>2</sub></b> <b>(tpy)</b>	<b>PM<sub>10</sub></b> <b>(tpy)</b>	<b>PM<sub>2.5</sub></b> <b>(tpy)</b>
Regional Emissions	39,692	88,677	293,883	4,022	147,766	27,706
Emissions	51.888	19.652	83.052	2.702	92.865	13.058
% of Regional	<b>0.131%</b>	<b>0.022%</b>	<b>0.028%</b>	<b>0.067%</b>	<b>0.063%</b>	<b>0.047%</b>

Regional Emissions  
Emissions  
% of Regional

### Combustion Emissions

Combustion Emissions of VOC, NO<sub>x</sub>, SO<sub>2</sub>, CO, PM<sub>2.5</sub>, PM<sub>10</sub>, and CO<sub>2</sub> due to Construction

General Construction Activities	Area Disturbed		Backup/Assumptions
Construct Community Center	30,000	ft <sup>2</sup>	Assume one centralized Community Center (30,000 ft <sup>2</sup> ).
Install Utility Lines for new Community Center	1,500	ft <sup>2</sup>	Assume 500 ft long by 3 ft wide.
Construct 263 MFH Units	468,120	ft <sup>2</sup>	Areas obtained from a combination of Air Force Northern Group Housing Privatization Feb. 2010 Fact Sheet (Ref. MHAFB 94) and DOPPA standard size housing units (Max. Gross ft <sup>2</sup> ) based on housing type.
Install Utility Lines for 263 MFH units	23,670	ft <sup>2</sup>	Assume 30 ft. by 3 ft. area per housing unit disturbed for constructing utility lines/connections.
Construct Driveways and Walkways for 263 new MFH units.	137,871	ft <sup>2</sup>	Assume all new MFH units require new driveways and walkways; 155 new units in Desert Vista and 108 new units in Sagebrush View. Driveway/walkway acreage obtained from GIS analysis for Desert Vista. Assume 15ft. by 20ft. Driveways and 4ft. by 80 ft. Walkways for Sagebrush View per unit.
Construct New Roads for new MFH units at Sagebrush View.	130,108	ft <sup>2</sup>	Assume new road area is proportional to existing roads at Sagebrush View, i.e. twice the existing road area or twice 1.77 acres. Road acreage obtained from GIS analysis.
Construct Pavements for new Community Center (driveways, sidewalks, vehicular parking areas, and roadways)	43,560	ft <sup>2</sup>	Assume 1 acre of pavement for Community Center.
Demolish Roads for portion of 359 demolished MHF units where no new road repaving construction occurs.	435,773	ft <sup>2</sup>	Assume only Old Gunfighter Manor roads will be demolished due to conversion to a park, and the portion of roads for Eagle View housing will be demolished; 52/64 x 1.22 acres. Assume 44/199 of the Desert Vista area roads will be demolished.
Demolish Driveways and Walkways for 359 MFH Units.	225,695	ft <sup>2</sup>	Calculated from GIS analysis of driveways and walkways. Desert Vista acres: Driveways/Walkways = 2.09, Roads = 4.60; Old Gunfighter Manor acres: Driveways/Walkways = 2.1, Roads = 5.81; Eagle View acres: Driveways/Walkways = 1.22 (multiply by 52/64), Roads = 3.91.
Demolish 359 MFH Units, including utility areas.	535,987	ft <sup>2</sup>	Area taken from Historic Building and Structures List 2009. Assume 30 ft. by 3 ft. area per housing unit disturbed for demolishing utilities.
Total MFH Grading Area	2,032,284	ft <sup>2</sup>	

Total General Construction Area:	523,290 ft <sup>2</sup> 12.0 acres
Total Demolition Area:	1,197,455 ft <sup>2</sup> 27.5 acres
Total Pavement Area:	311,539 ft <sup>2</sup> 7.2 acres
Total Disturbed Area:	2,032,284 ft <sup>2</sup> 46.7 acres
Construction Duration:	12 months
Annual Construction Activity:	240 days/yr

Assume work occurs over 12 months at 4 weeks per month, 5 days per week.

## Emission Factors Used for Construction Equipment

References: Guide to Air Quality Assessment, SMAQMD, 2004; and U.S. EPA NONROAD Emissions Model, Version 2005.0.0

Emission factors are taken from the NONROAD model and were provided to e2M by Larry Landman of the Air Quality and Modeling Center (Landman.Larry@epamail.epa.gov) on 12/14/07. Factors provided are for the weighted average US fleet for CY2007.

Assumptions regarding the type and number of equipment are from SMAQMD Table 3-1 unless otherwise noted.

### Grading

Equipment	No. Req <sup>d</sup> . <sup>a</sup> per 10 acres	NO <sub>x</sub> (lb/day)	VOC <sup>b</sup> (lb/day)	CO (lb/day)	SO <sub>2</sub> <sup>c</sup> (lb/day)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)	CO <sub>2</sub> (lb/day)
Bulldozer	1	13.60	95.742%	5.50	1.02	0.89	0.87	1456.90
Motor Grader	1	9.69	0.73	3.20	0.80	0.66	0.64	1141.65
Water Truck	1	18.36	0.89	7.00	1.64	1.00	0.97	2342.98
Total per 10 acres of activity	3	41.64	2.58	15.71	0.83	2.55	2.47	4941.53

### Paving

Equipment	No. Req <sup>d</sup> . <sup>a</sup> per 10 acres	NO <sub>x</sub> (lb/day)	VOC <sup>b</sup> (lb/day)	CO (lb/day)	SO <sub>2</sub> <sup>c</sup> (lb/day)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)	CO <sub>2</sub> (lb/day)
Paver	1	3.83	0.37	2.06	0.28	0.35	0.34	401.93
Roller	1	4.82	0.44	2.51	0.37	0.43	0.42	536.07
Truck	2	36.71	1.79	14.01	3.27	1.99	1.93	4685.95
Total per 10 acres of activity	4	45.37	2.61	18.58	0.91	2.78	2.69	5623.96

### Demolition

Equipment	No. Req <sup>d</sup> . <sup>a</sup> per 10 acres	NO <sub>x</sub> (lb/day)	VOC <sup>b</sup> (lb/day)	CO (lb/day)	SO <sub>2</sub> <sup>c</sup> (lb/day)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)	CO <sub>2</sub> (lb/day)
Loader	1	13.45	0.99	5.58	0.95	0.93	0.90	1360.10
Haul Truck	1	18.36	0.89	7.00	1.64	1.00	0.97	2342.98
Total per 10 acres of activity	2	31.81	1.89	12.58	0.64	1.92	1.87	3703.07

### Building Construction

Equipment <sup>d</sup>	No. Req <sup>d</sup> . <sup>a</sup> per 10 acres	NO <sub>x</sub> (lb/day)	VOC <sup>b</sup> (lb/day)	CO (lb/day)	SO <sub>2</sub> <sup>c</sup> (lb/day)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)	CO <sub>2</sub> (lb/day)
<b>Stationary</b>								
Generator Set	1	2.38	0.32	1.18	0.15	0.23	0.22	213.06
Industrial Saw	1	2.62	0.32	1.97	0.20	0.32	0.31	291.92
Welder	1	1.12	0.38	1.50	0.08	0.23	0.22	112.39
<b>Mobile (non-road)</b>								
Truck	1	18.36	0.89	7.00	1.64	1.00	0.97	2342.98
Forklift	1	5.34	0.56	3.33	0.40	0.55	0.54	572.24
Crane	1	9.57	0.66	2.39	0.65	0.50	0.49	931.93
Total per 10 acres of activity	6	39.40	3.13	17.38	3.12	2.83	2.74	4464.51

Note: Footnotes for tables are on following page

**Architectural Coatings**

Equipment	No. Reqd. <sup>a</sup> per 10 acres	NO <sub>x</sub> (lb/day)	VOC <sup>b</sup> (lb/day)	CO (lb/day)	SO <sub>2</sub> <sup>c</sup>	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)	CO <sub>2</sub> (lb/day)
Air Compressor	1	3.57	0.37	1.57	0.25	0.31	0.30	359.77
Total per 10 acres of activity	1	3.57	0.37	1.57	0.25	0.31	0.30	359.77

- a) The SMAQMD 2004 guidance suggests a default equipment fleet for each activity, assuming 10 acres of that activity, (e.g., 10 acres of grading, 10 acres of paving, etc.). The default equipment fleet is increased for each 10 acre increment in the size of the construction project. That is, a 26 acre project would round to 30 acres and the fleet size would be three times the default fleet for a 10 acre project.
- b) The SMAQMD 2004 reference lists emission factors for reactive organic gas (ROG). For the purposes of this worksheet ROG = VOC. The NONROAD model contains emissions factors for total HC and for VOC. The factors used here are the VOC factors.
- c) The NONROAD emission factors assume that the average fuel burned in nonroad trucks is 1100 ppm sulfur. Trucks that would be used for the Proposed Actions will all be fueled by highway grade diesel fuel which cannot exceed 500 ppm sulfur. These estimates therefore over-estimate SO2 emissions by more than a factor of two.
- d) Typical equipment fleet for building construction was not itemized in SMAQMD 2004 guidance. The equipment list above was assumed based on SMAQMD 1994 guidance.

## PROJECT-SPECIFIC EMISSION FACTOR SUMMARY

Source	Equipment Multiplier*	Project-Specific Emission Factors (lb/day)						
		NO <sub>x</sub>	VOC	CO	SO <sub>2</sub> **	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Grading Equipment	5	208.206	12.885	78.549	4.164	12.728	12.346	24707.632
Paving Equipment	1	45.367	2.606	18.578	0.907	2.776	2.693	5623.957
Demolition Equipment	3	95.423	5.657	37.751	1.908	5.770	5.596	11109.221
Building Construction	1	39.396	3.130	17.382	3.116	2.829	2.744	4464.512
Air Compressor for Architectural Coating	1	3.574	0.373	1.565	0.251	0.309	0.300	359.773
Architectural Coating**			57.521					

\*The equipment multiplier is an integer that represents units of 10 acres for purposes of estimating the number of equipment required for the project.

\*\*Emission factor is from the evaporation of solvents during painting, per "Air Quality Thresholds of Significance", SMAQMD, 1994

Example: SMAQMD Emission Factor for Grading Equipment NO<sub>x</sub> = (Total Grading NO<sub>x</sub> per 10 acre)\*(Equipment Multiplier)

### Summary of Input Parameters

	Total Area (ft <sup>2</sup> )	Total Area (acres)	Total Days	
Grading:	2,032,284	46.65	6	(from "Grading" worksheet)
Paving:	311,539	7.15	35	
Demolition:	1,197,455	27.49	458	
Building Construction:	498,120	11.44	240	
Architectural Coating	498,120	11.44	20	(per SMAQMD "Air Quality of Thresholds of Significance", 1994)

NOTE: The 'Total Days' estimate for paving is calculated by dividing the total number of acres by 0.21 acres/day, which is a factor derived from the 2005 MEANS Heavy Construction Cost Data, 19th Edition, for 'Asphaltic Concrete Pavement, Lots and Driveways - 6" stone base', which provides an estimate of square feet paved per day. There is also an estimate for 'Plain Cement Concrete Pavement', however the estimate for asphalt is used because it is more conservative. The 'Total 'Days' estimate for demolition is calculated by dividing the total number of acres by 0.02 acres/day, which is a factor also derived from the 2005 MEANS reference. This is calculated by averaging the demolition estimates from 'Building Demolition - Small Buildings, Concrete', assuming a height of 30 feet for a two-story building; from 'Building Footings and Foundations Demolition - 6" Thick, Plain Concrete'; and from 'Demolish, Remove Pavement and Curb - Concrete to 6" thick, rod reinforced'. Paving is double-weighted since projects typically involve more paving demolition. The 'Total Days' estimate for building construction is assumed to be 480 days, unless project-specific data is known.

### Total Project Emissions by Activity (lbs)

	NO <sub>x</sub>	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Grading Equipment	1,249.24	77.31	471.30	24.98	76.37	74.07	148,246
Paving	1,587.86	91.20	650.25	31.76	97.16	94.25	196,838
Demolition	43,719.17	2,591.62	17,296.25	874.38	2,643.40	2,564.10	5,089,834
Building Construction	9,455.12	751.15	4,171.75	747.92	678.97	658.60	1,071,483
Architectural Coatings	71.48	1,157.88	31.31	5.02	6.19	6.00	7,195
<b>Total Emissions (lbs):</b>	<b>56,082.85</b>	<b>4,669.17</b>	<b>22,620.85</b>	<b>1,684.07</b>	<b>3,502.09</b>	<b>3,397.02</b>	<b>6,513,596</b>

### Results: Total Project Emission Rates

	NO <sub>x</sub>	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Total Project Emissions (lbs)	56,082.85	4,669.17	22,620.85	1,684.07	3,502.09	3,397.02	6,513,596
Total Project Emissions (tons)	28.04	2.33	11.31	0.84	1.75	1.70	3,256.80

**Construction Fugitive Dust Emissions**

**Construction Fugitive Dust Emission Factors**

	<b>Emission Factor</b>	<b>Units</b>	<b>Source</b>
General Construction Activities	0.19 ton PM <sub>10</sub> /acre-month		MRI 1996; EPA 2001; EPA 2006
New Road/Pavement Construction	0.42 ton PM <sub>10</sub> /acre-month		MRI 1996; EPA 2001; EPA 2006

**PM<sub>2.5</sub> Emissions**

PM <sub>2.5</sub> Multiplier	0.10	(10% of PM <sub>10</sub> emissions assumed to be PM <sub>2.5</sub> )	EPA 2001; EPA 2006
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**Control Efficiency**

	0.50	(assume 50% control efficiency for PM <sub>10</sub> and PM <sub>2.5</sub> emissions)	EPA 2001; EPA 2006
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**Project Assumptions**

***New Roadway/Pavement Construction (0.42 ton PM<sub>10</sub>/acre-month)***

Duration of Construction Project	12 months
Area	7.2 acres

***General Construction Activities (0.19 ton PM<sub>10</sub>/acre-month)***

Duration of Construction Project	12 months
Area	39.5 acres

	<b>Project Emissions (Total tons, 2-yr. period)</b>			
	<b>PM<sub>10</sub> uncontrolled</b>	<b>PM<sub>10</sub> controlled</b>	<b>PM<sub>2.5</sub> uncontrolled</b>	<b>PM<sub>2.5</sub> controlled</b>
New Roadway Construction	36.05	18.02	3.60	1.80
General Construction Activities	90.07	45.03	4.50	2.25
<b>Total</b>	<b>126.11</b>	<b>63.06</b>	<b>8.11</b>	<b>4.05</b>

## Construction Fugitive Dust Emission Factors

### General Construction Activities Emission Factor

**0.19 ton PM<sub>10</sub>/acre-month** Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM<sub>10</sub>/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM<sub>10</sub>/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions From Construction Operations, calculated the 0.19 ton PM<sub>10</sub>/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM<sub>10</sub>/acre-month) and 75% of the average emission factor (0.11 ton PM<sub>10</sub>/acre-month). The 0.19 ton PM<sub>10</sub>/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM<sub>10</sub>/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particulate (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District as well as the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM<sub>10</sub> and PM<sub>2.5</sub> in PM nonattainment areas.

### New Road Construction Emission Factor

**0.42 ton PM<sub>10</sub>/acre-month** Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM<sub>10</sub>/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM<sub>10</sub>/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

### PM<sub>2.5</sub> Multiplier

**0.10**

PM<sub>2.5</sub> emissions are estimated by applying a particle size multiplier of 0.10 to PM<sub>10</sub> emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

### Control Efficiency for PM<sub>10</sub> and PM<sub>2.5</sub>

**0.50**

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM<sub>10</sub> and PM<sub>2.5</sub> in PM nonattainment areas (EPA 2006). Wetting controls will be applied during project construction.

### References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

## Grading Schedule

Estimate of time required to grade a specified area.

### Input Parameters

Construction area: 46.7 acres/yr (from Combustion Worksheet)  
 Qty Equipment: 14.0 (calculated based on 3 pieces of equipment for every 10 acres)

### Assumptions.

Terrain is mostly flat.

An average of 6" soil is excavated from one half of the site and backfilled to the other half of the site; no soil is hauled off-site or borrowed.

200 hp bulldozers are used for site clearing.

300 hp bulldozers are used for stripping, excavation, and backfill.

Vibratory drum rollers are used for compacting.

Stripping, Excavation, Backfill and Compaction require an average of two passes each.

Excavation and Backfill are assumed to involve only half of the site.

### Calculation of days required for one piece of equipment to grade the specified area.

Reference: Means Heavy Construction Cost Data, 19th Ed., R. S. Means, 2005.

Means Line No.	Operation	Description	Output	Units	Acres per equip-day)	equip-days per acre	Acres/yr (project- specific)	Equip-days per year
2230 200 0550	Site Clearing	Dozer & rake, medium brush	8	acre/day	8	0.13	46.65	5.83
2230 500 0300	Stripping	Topsoil & stockpiling, adverse soil	1,650	cu. yd/day	2.05	0.49	46.65	22.81
2315 432 5220	Excavation	Bulk, open site, common earth, 150' haul	800	cu. yd/day	0.99	1.01	23.33	23.52
2315 120 5220	Backfill	Structural, common earth, 150' haul	1,950	cu. yd/day	2.42	0.41	23.33	9.65
2315 310 5020	Compaction	Vibrating roller, 6" lifts, 3 passes	2,300	cu. yd/day	2.85	0.35	46.65	16.36
<b>TOTAL</b>								<b>78.18</b>

### Calculation of days required for the indicated pieces of equipment to grade the designated acreage.

(Equip)(day)/yr: 78.18  
 Qty Equipment: 14.00  
 Grading days/yr: 5.58

**Haul and Water Truck Emissions**

Emissions from hauling the raw materials for concrete and fill are estimated in this spreadsheet.

Emission Estimation Method: United States Air Force (USAF) Institute for Environment, Safety and Occupational Health Risk Analysis (IERA) Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations (Revised December 2003).

Raw Material Assumptions:

Haul trucks carry 20 cubic yards of material per trip.

Assume the distance for hauling materials is 70 miles roundtrip; almost to City of Boise, ID.

Estimated number of trips required by haul trucks = total amount of material to be brought on installation/20 cubic yards per truck

Total amount of imported/exported materials = 937,225 cubic yards  
 Number of trucks required = 46,861 heavy duty diesel haul trucks  
 Miles per trip = 70 miles

Water Transportation Assumptions:

Water trucks carry 4,000 gallons per truckload.

Approximately 38,003,709 gallons of water will be required during construction.

Approximately 1/8 inch of water would be applied to project area once per day.

The distance from the nearest water source is 0.5 miles, therefore the water truck will travel 1 mile roundtrip.

Estimated number of trips required by water trucks = total gallons of water to be brought to project site/4,000 gallons per truck

Total amount of water needed for construction = 38,003,709 gallons  
 Number of trucks required = 9,501 heavy duty diesel haul trucks  
 Miles per trip = 1 miles

**Heavy Duty Diesel Vehicle (HDDV) Average Emission Factors (grams/mile)**

	NO <sub>x</sub>	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
HDDV	6.500	4.7000	19.10	0.512	7.7	2.01	1646

Notes:

Emission factors for all pollutants except CO<sub>2</sub> are from USAF IERA 2003.

Emission factors for PM, PM<sub>10</sub>, SO<sub>x</sub> are from HDDV in Table 4-50 (USAF IERA 2003).

Emission factors for VOC, CO, and NO<sub>x</sub> are from Tables 4-41 through 4-43 for the 2010 calendar year, 2000 model year (USAF IERA 2003).

Diesel fuel produces 22.384 pounds of CO<sub>2</sub> per gallon.

It is assumed that the average HDDV has a fuel economy of 6.17 miles per gallon, Table 4-51 (USAF IERA 2003)

CO<sub>2</sub> emission factor = 22.384 lbs CO<sub>2</sub>/gallon diesel \* gallon diesel/6.17 miles \* 453.6 g/lb

**HDDV Haul and Water Truck Emissions From Construction Activities**

	NO <sub>x</sub>	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
lbs	47142.02	34087.31	138525.02	3713.34	56062.74	14577.76	#####
tons	23.571	17.044	69.263	1.857	28.031	7.289	5967.473

Example Calculation: NO<sub>x</sub> emissions (lbs) = miles per trip \* number of trips \* NO<sub>x</sub> emission factor (g/mile) \* lb/453.6 g

**Construction Commuter Emissions**

Emissions from construction workers commuting to the job site are estimated in this spreadsheet.

Emission Estimation Method: Emission factors from the South Coast Air Quality Management District (SCAQMD) EMFAC 2007 (v 2.3) Model (on-road) were used. These emission factors are available online at <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.

**Assumptions:**

Passenger vehicle emission factors for scenario year 2010 are used

The average roundtrip commute for a construction worker = 50 miles  
 Number of construction days = 240 days  
 Number of construction workers (daily) = 50 people

**Passenger Vehicle Emission Factors for Year 2010 (lbs/mile)**

NO <sub>x</sub>	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
0.00091814	0.00091399	0.00826276	0.00001077	0.00008698	0.00005478	1.09568235

Source: South Coast Air Quality Management District. EMFAC 2007 (ver 2.3) On-Road Emissions Factors. Last updated April 24, 2008. Available online: <<http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>>. Accessed 27 May 2009.

**Notes:**

The SMAQMD 2007 reference lists emission factors for reactive organic gas (ROG). For purposes of this worksheet ROG = VOC

**Construction Commuter Emissions**

	NO <sub>x</sub>	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
lbs	550.885	548.393	4957.654	6.465	52.187	32.869	657409.409
tons	0.275	0.274	2.479	0.0032	0.0261	0.0164	328.705

Example Calculation: NO<sub>x</sub> emissions (lbs) = 60 miles/day \* NO<sub>x</sub> emission factor (lb/mile) \* number of construction days \* number of workers

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Row #	State	County	Point Source Emissions (tons/yr)					Area Source Emissions (Non-Point and Mobile Sources, tons/yr)						
			CO	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC	CO	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC
1	ID	Adams Co	240	121	70.3	46.5	0	11.2	4,517	555	2,315	420	74.5	1337
2	ID	Blaine Co	0	0	0	0	0	0	21,739	2511	5,645	1140	88.1	3903
3	ID	Boise Co	0	0	0	0	0	0	8,483	905	2,637	648	81.9	3267
4	ID	Bonner Co	78.9	187	1.1	1.07	1.92	2.1	26,208	4628	13,722	2058	362	6702
5	ID	Boundary Co	369	116	109	36.9	1.26	43.8	8,622	1047	5,438	946	88.1	2250
6	ID	Camas Co	0	0	0	0	0	0	2,378	202	837	315	19.5	1284
7	ID	Cassia Co	0.38	1.3	0	0	0	193	18,398	2457	10,967	2125	144	5692
8	ID	Clearwater Co	0	0	0	0	0	0	9,147	978	3,747	678	113	2615
9	ID	Custer Co	0	0	0	0	0	0	5,416	445	3,062	477	34.2	2105
10	ID	Elmore Co	79.4	375	284	90.9	4.95	22.2	17,932	2984	7,335	1086	150	4144
11	ID	Gem Co	16	198	2.04	1.92	0.04	6.34	8,238	1421	5,063	695	82.9	2466
12	ID	Gooding Co	0	0	0	0	0	0	8,987	1258	7,963	1036	51.1	3263
13	ID	Idaho Co	0	0	0	0	0	0	22,295	1681	8,546	2164	238	6674
14	ID	Jerome Co	0	0	0	0	0	0	11,401	1873	8,365	1254	99.3	4323
15	ID	Lemhi Co	0	0	0	0	0	0	32,670	1079	5,818	2697	225	9517
16	ID	Lewis Co	0	0	0	0	0	0	5,773	644	3,017	842	62	1020
17	ID	Lincoln Co	0	0	0	0	0	0	6,590	439	3,165	772	70.5	2065
18	ID	Minidoka Co	1918	1256	236	128	249	31.7	13,890	2038	8,642	1470	124	3771
19	ID	Owyhee Co	0	0	0	0	0	0	6,662	934	6,986	958	68.2	3199
20	ID	Payette Co	0.61	0.74	1.39	0.74	0	490	12,039	1764	7,732	1004	104	3327
21	ID	Twin Falls Co	1270	1053	212	112	1018	29.9	18,961	4290	18,237	2992	252	8565
22	ID	Valley Co	0	0	0	0	0	0	13,090	1071	4,304	963	135	4331
23	ID	Washington Co	0	0	0	0	0	0	6,475	1180	3,307	548	79.1	2027
Grand Total			3,972	3,308	916	418	1,275	830	289,911	36,384	146,850	27,288	2,746	87,847

SOURCE:

<http://www.epa.gov/air/data/geosel.html>

USEPA - AirData NET Tier Report

\*Net Air pollution sources (area and point) in tons per year (2002)

Site visited on 29 March 2010.

State of Idaho Air Quality Control Region 63 (40 CFR 81.313)

**APPENDIX G**  
**CONSULTATION RECORD**  
**FOR THE**  
**THREE HISTORIC SENIOR OFFICERS' QUARTERS**



**Appendix G**  
**Consultation Record, Three Historic Senior Officers' Quarters, MHAFB**

Below is a record of consultation among the MHAFB, Idaho SHPO, and the ACHP for undertakings having an adverse effect on the Three Historic Senior Officers' Quarters (SOQ) eligible for the National Register of Historic Places.

- 27 Jul 2004 Quarterly meeting w/SHPO. Discussed the SOHs, SHPO requested a formal determination be submitted by MHAFB.
- 2 Aug 2004 Formal determination of eligibility of the three SOH submitted to SHPO
- 20 Aug 2004 SHPO concurrence received
- 1 Dec 2004 MFH Phase 8 - initiation of Section 106 consultation with SHPO
- 10 Jan 2005 SHPO replied to the initiation
- 3 Jun 2005 Submitted Capehart-Wherry Housing Historic context to SHPO per their request.
- 14 Dec 2005 Quarterly meeting w/SHPO. Discussed the SOHs, consultation timeline
- 20 Dec 2006 Draft MFH Phase 8 EA sent to SHPO for review and comment
- 30 Mar 2007 Quarterly meeting w/SHPO. Outlined SOH consultation
- 2 April 2007 Formal request for consultation with SHPO (due to change in undertaking) undertaking involved the demolition of the 3 historic homes could move forward w/out further consultation w/ Idaho SHPO
- 8 May 2007 Formal invitation to ACHP to participate in consultation (change in undertaking) undertaking involved the demolition of the 3 historic homes could move forward w/out further consultation w/ Idaho SHPO
- 23 May 2007 ACHP accepted MHAFB's invitation to consult
- 26 Jun 2007 Phone meeting w/ Idaho SHPO and ACHP discussing section 106 consultation
- 6 Jul 2007 ACHP notified MHAFB that the undertaking involved the demolition of the 3 historic homes could move forward w/out further consultation w/ Idaho SHPO
- 15 May 2009 MHAFB submitted final set of HABS Level III documentation [HABS No. ID-118-B] to the National Park Service and Library of Congress
- 26 Apr 2010 Dr. Green, HQ ACC/A7AN, states in email to Dr. Jim Wilde, AFCEE/TDN, that MHAFB had completed a and b of the Program Comment in consultation with [Idaho] SHPO
- 30 Apr 2010 MHAFB CRM met w/ SHPO to discuss change in undertaking (MFH Phase 8 to Privatization). SHPO has agreed that going through formal consultation again to mitigate the adverse effect of the privatization action is not necessary. SHPO has asked however, that they be provided an opportunity to review and comment on the privatization EA.
- 23 Jun 2011 MHAFB CRM met w/SHPO to discuss change in undertaking (MFH Phase 8 to Privatization). SHPO, again, has agreed that going through formal consultation again to mitigate the adverse effect of the privatization action is not necessary. SHPO has asked however, that they be provided an opportunity to review and comment on the privatization EA.

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