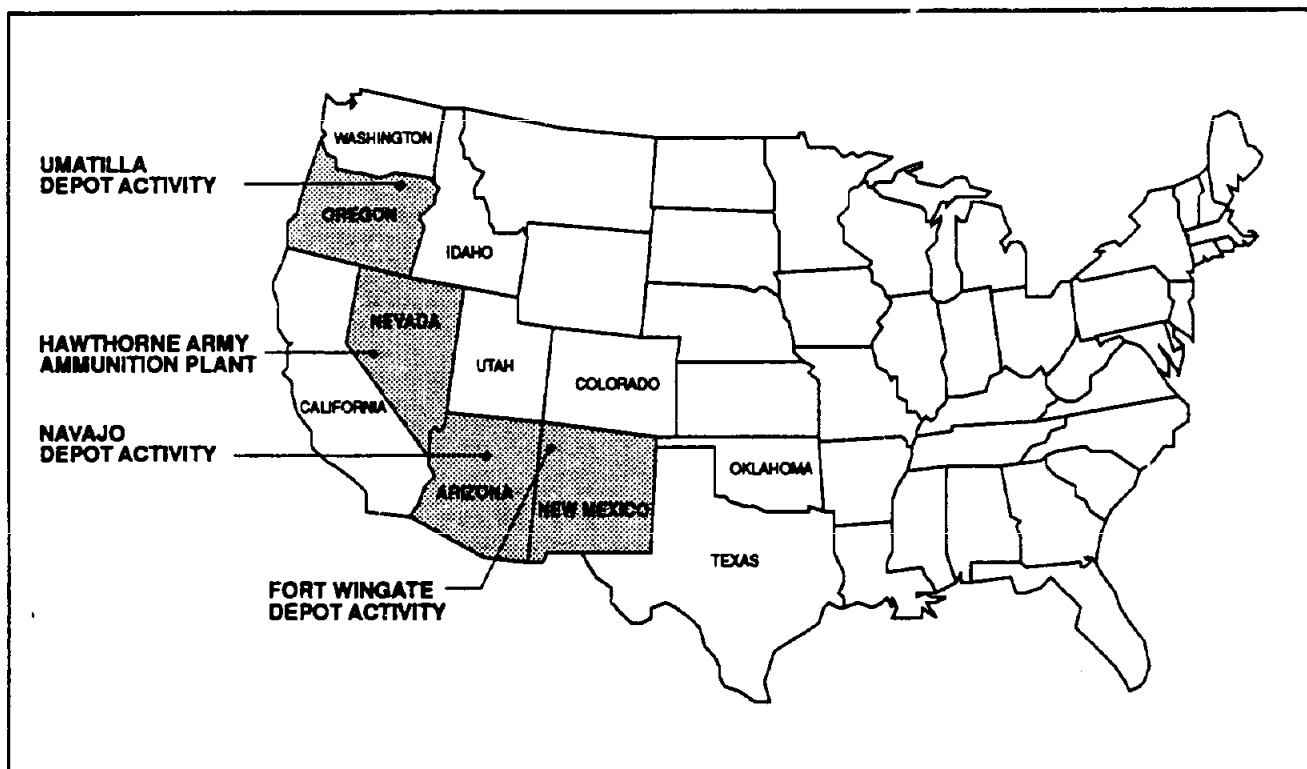


# FINAL ENVIRONMENTAL IMPACT STATEMENT

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## BASE REALIGNMENT AND CLOSURE

- FORT WINGATE DEPOT ACTIVITY
- NAVAJO DEPOT ACTIVITY
- UMATILLA DEPOT ACTIVITY
- HAWTHORNE ARMY AMMUNITION PLANT



August 1991

# Environmental Impact Statement Organization

## Document Overview

This final environmental impact statement (FEIS) addresses realignment or closure of four Army Materiel Command (AMC) installations mandated by the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526).

- Fort Wingate Depot Activity (FWDA), New Mexico,
- Navajo Depot Activity (NADA), Arizona,
- Umatilla Depot Activity (UMDA), Oregon, and
- Hawthorne Army Ammunition Plant (HWAAP), Nevada

The EXECUTIVE SUMMARY briefly describes the actions, anticipated environmental impacts, unresolved issues, and relevant Federal statutes, regulations, and guidelines.

Chapter 1 PURPOSE AND NEED FOR THE ACTION, summarizes the background of this realignment and closure action, and describes the environmental impact analysis process.

Chapter 2 ALTERNATIVES CONSIDERED, describes the base realignment and closure action proposed by the Army and briefly discusses various real property disposal alternatives appropriate for each installation. FWDA (p. 17), NADA (p. 23), UMDA (p. 29), and HWAAP (p. 36).

Chapter 3 AFFECTED ENVIRONMENT, discusses the current environmental and socioeconomic conditions without the BRAC action at each installation. FWDA (p. 44), NADA (p. 61) UMDA (p. 78), and HWAAP (p. 93).

Chapter 4 ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES, covers the potential direct environmental and indirect socioeconomic effects, unavoidable environmental impacts, irreversible irretrievable commitments of resources and proposed means of mitigating the impacts at each installation. FWDA (p. 113), NADA (p. 126), UMDA (p. 140), and HWAAP (p. 153).

Chapter 5 PUBLIC INVOLVEMENT, summarizes concerns which arose during the scoping process for each installation. FWDA (p. 159), NADA (p. 160), UMDA (p. 161), and HWAAP (p. 162).

Appendix A Comments and Responses on the Draft Environmental Impact Statement.

Appendix B Consultation and Coordination Correspondence.

Appendix C Programmatic Agreement Between the Department of the Army, the Advisory Council on Historic Preservation, and The National Conference of State Historic Preservation Officers.

An Acronyms and Abbreviations list is provided immediately following the Table of Contents.



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on recycled paper*

**FINAL ENVIRONMENTAL IMPACT STATEMENT  
BASE REALIGNMENT AND CLOSURE**

- Fort Wingate Depot Activity
- Navajo Depot Activity
- Umatilla Depot Activity
- Hawthorne Army Ammunition Plant

**AUGUST 1991**

**ERRATA**

On the cover sheet, change the following: Review Comment Deadline: September 8, 1991

To Read: Review Comment Deadline: September 23, 1991

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REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
WASHINGTON, DC 20310-0103

30 SEP 1991



RECORD OF DECISION

CLOSURE OF FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

CLOSURE OF NAVAJO DEPOT ACTIVITY, ARIZONA

REALIGNMENT OF UMATILLA DEPOT ACTIVITY, OREGON

TO

HAWTHORNE ARMY AMMUNITION PLANT, NEVADA

In my capacity as the Assistant Secretary of the Army for Installations, Logistics and Environment I have determined that closures of Fort Wingate, Navajo and the realignment of Umatilla and relocation of missions to Hawthorne will not result in any long term significant impacts to the biological, physical, or cultural environment. Therefore, in accordance with Public Law 100-526, the Army will proceed to implement the 1988 Recommendations of the Defense Secretary's Commission on Base Closures and Realignments. Specifically, the Army will-

-Cease operations at Fort Wingate and relocate the conventional ammunition mission to Hawthorne.

-Cease operations at Navajo and relocate the conventional ammunition mission to Hawthorne. Cancel the Army Materiel Command Inter Service Support Agreement with the U. S. Property and Fiscal Officer of Arizona. Continue to allow the Arizona State National Guard to use Navajo to facilitate training in the Arizona National Guard capacity as a state entity under Title 32, United States Code.

-Realign the Umatilla conventional ammunition mission to Hawthorne to the maximum extent possible by September 30, 1995. Leave a residual workforce at Umatilla beyond September 30, 1995 to support the ongoing chemical demilitarization mission.

-Continue environmental studies to assess contamination and develop a cleanup schedule for Wingate and Umatilla.

-Prepare a separate National Environmental Policy Act document to address specific reuse alternatives at Wingate and Umatilla. At Umatilla, limited reuses may be possible provided they are compatible with the ongoing chemical demilitarization mission.



In making my decision, I considered the findings of the FEIS, the transcripts of scoping meetings, public hearings, and all oral and written comments received during the public comment periods associated with the publication of the FEIS.

Section 204 (c) (2) of Public Law 100-526, the Defense Authorization Amendments and Base Closure and Realignment Act, states that, in applying the provisions of the National Environmental Policy Act, the need for closing a military installation or transferring its functions shall not be considered. This section also states that other military installations shall not have to be considered as alternatives to the installations selected for closure. Therefore, my review and decision to approve implementation was based on consideration of whether or not the Army has adequately considered the environmental effects of implementing the realignment decisions, has developed plans to avoid or minimize environmental harm and has complied or will comply with all environmental laws and regulations during implementation.

My review leads me to conclude that --

--No significant environmental (biological or physical), social, economic, or historic property impacts will result from closing Wingate, Navajo and realigning Umatilla to the maximum extent possible by September 30, 1995 and no mitigation is planned.

--Closure and realignment will not adversely affect the remediation process at Wingate and Umatilla. Ongoing Remedial Investigation/Feasibility Studies will address environmental contamination and alternative methods of cleanup. The public will have an opportunity to comment on this study prior to implementation of the cleanup decision.

--No significant environmental, social or economic impacts will result from the transfer of personnel or positions and the construction of facilities at the receiving installation.

--The Army is taking no action which will preclude completion of its responsibilities under the National Historic Preservation Act. This complies with the Programmatic Agreement between the Department of Army, the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers.





In summary, I conclude that the Army has adequately assessed the impacts of closing Wingate, Navajo and realigning Umatilla, and has taken all practical measures to avoid or mitigate harmful environmental effects. The Commission's recommendation to close Wingate, Navajo and realign Umatilla and relocate missions to Hawthorne will proceed.



Susan Livingstone  
Assistant Secretary of the Army  
(Installations, Logistics and Environment)





REF. TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
FORT WORTH DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 17300  
FORT WORTH, TEXAS 76102-0300

August 16, 1991

Planning Division

TO ALL INTERESTED GOVERNMENT AGENCIES, PUBLIC GROUPS AND INDIVIDUALS:

Enclosed is a copy(s) of the Final Environmental Impact Statement (EIS) relating to the closure of Fort Wingate Depot Activity, New Mexico; Navajo Depot Activity, Arizona; and the realignment of Umatilla Depot Activity, Oregon. These installations will transfer their conventional ammunition missions to Hawthorne Army Ammunition Plant, Nevada, in accordance with the December 29, 1988, recommendations of the Secretary of Defense's Commission on Base Realignments and Closures. All actions are consistent with the Commission's Recommendations, including the eventual transfer of Navajo Depot Activity to the Arizona National Guard.

The document addresses the environmental impacts of the proposed closure in accordance with the National Environmental Policy Act (NEPA). No significant environmental (biological or physical), social, economic or historic property impacts result from the proposed closure or realignment of the above mentioned Depot Activities. Mitigation measures are found in chapter 4 of the document. This Final EIS includes and addresses comments received during the EIS scoping process, in response to the Draft EIS and at the public meeting regarding the Draft EIS (see chapter 5 and Appendixes A, B, and C).

No irrevocable action will commence until thirty days from the Final EIS filing with the Environmental Protection Agency (EPA) and publication of the Notice of Availability (NOA) in the Federal Register. Following the 30-day waiting period, on or about September 16, 1991, a Record of Decision (ROD) will be executed and a copy filed with the Army Environmental Office. The point of contact for this action is Mr. Arver Ferguson, Jr., U.S. Army Corps of Engineers, Fort Worth District (ATTN: CESWF-PL-RE), 819 Taylor Street, Fort Worth, TX 75102-0300, or by telephone at (817) 334-3246.

Sincerely,

A handwritten signature in black ink, appearing to read "William D. Brown".

William D. Brown  
Colonel, Corps of Engineers  
District Engineer

Enclosure



**FINAL  
ENVIRONMENTAL IMPACT STATEMENT  
for  
Closure of Fort Wingate Depot Activity, NM  
and Navajo Depot Activity, AZ, and  
Realignment of Umatilla Depot Activity, OR  
with Transfers to Hawthorne Army Ammunition Plant, NV**

Prepared by:  
U.S. Army Engineer District, Ft. Worth  
U.S. Army Corps of Engineers



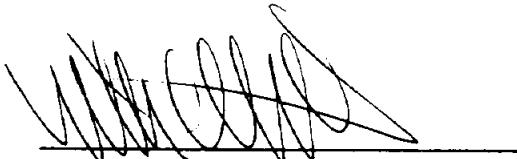
William D. Brown  
Colonel, EN  
Commanding

Reviewed by:  
U.S. Army Materiel Command



William B. McGrath  
Major General, U.S. Army  
Chief of Staff

Recommended for Approval by:  
Department of the Army  
Office of the Chief of Staff



William A. Stofft  
Major General, General Staff  
Director of Management

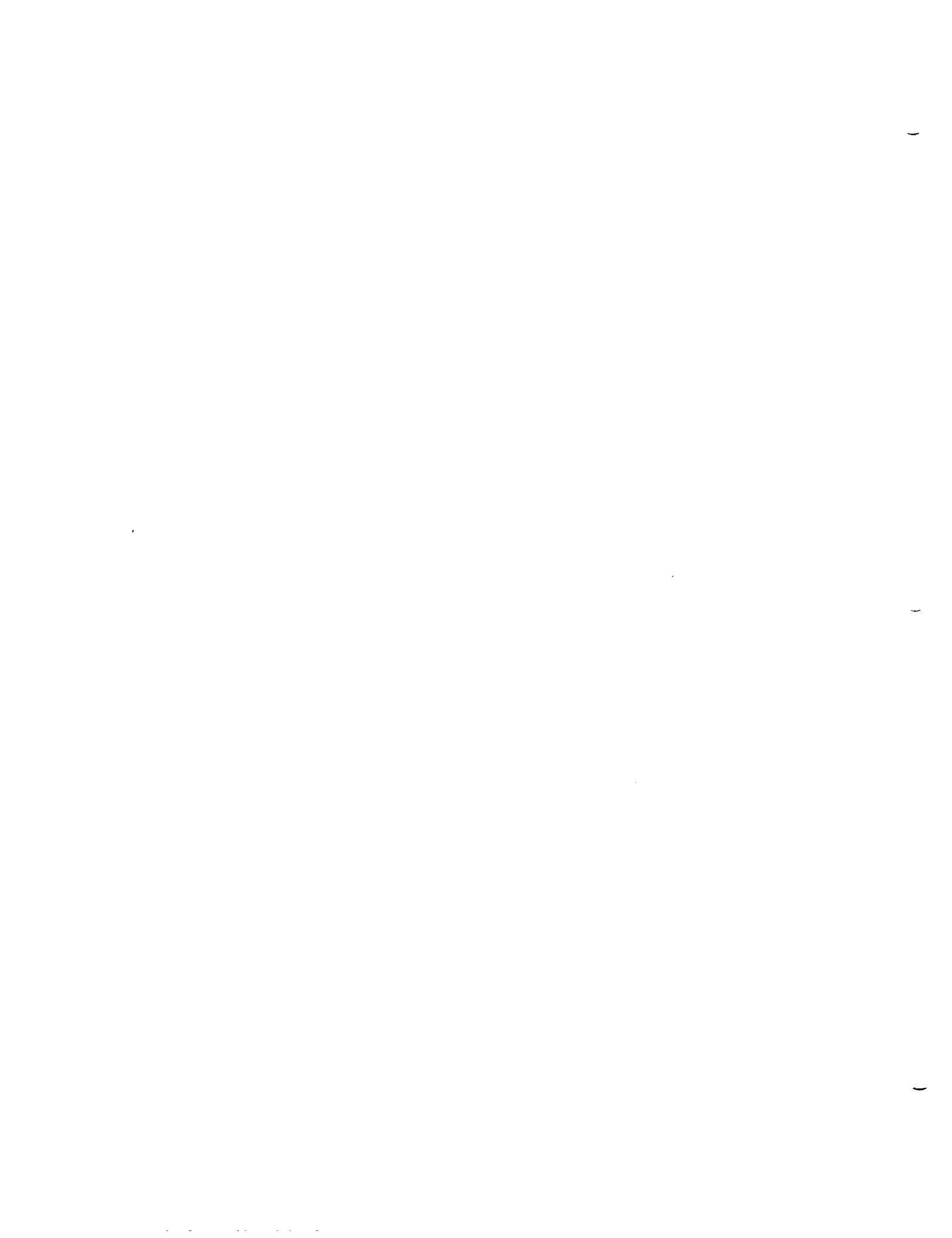
Approved by:  
Office of the Secretary of the Army



Lewis D. Walker  
Deputy Assistant Secretary of the Army  
(Environment, Safety and Occupational Health)



**Execution of all or some of the decisions analyzed in this document are subject to change based on the Defense Base Closure and Realignment Act of 1990.**





## FINAL ENVIRONMENTAL IMPACT STATEMENT

**LEAD AGENCY:** Department of the Army, U. S. Army Materiel Command (AMC).

**TITLE OF THE PROPOSED ACTION:** Closure of Fort Wingate Depot Activity, NM and Navajo Depot Activity, AZ, and Realignment of Umatilla Depot Activity, OR with Transfers to Hawthorne Army Ammunition Plant, NV.

**AFFECTED JURISDICTION:** Fort Wingate Depot Activity, McKinley County, New Mexico; Navajo Depot Activity, Coconino County, Arizona; Umatilla Depot Activity, Morrow and Umatilla Counties, Oregon; and Hawthorne Army Ammunition Plant, Mineral County, Nevada.

**PREPARED BY:** William D. Brown, Colonel, Corps of Engineers, Commander, U.S. Army Corps of Engineers, Fort Worth District; 819 Taylor Street; Fort Worth, Texas 76102-0300.

**REVIEWED BY:** William B. McGrath, Major General, General Staff, Chief of Staff, U.S. Army Materiel Command.

**RECOMMENDED APPROVAL:** William A. Stofft, Major General, General Staff, Director of Management, Office of the Chief of Staff, Department of the Army.

**APPROVED BY:** Mr. Lewis D. Walker, Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health).

**ABSTRACT:** In response to the recommendations of the Defense Secretary's Commission on Base Realignments and Closures to legislative requirements in the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526), Fort Wingate Depot Activity (FWDA); Navajo Depot Activity (NADA); Umatilla Depot Activity (UMDA); and Hawthorne Army Ammunition Plant (HWAAP) will undergo conventional ammunition mission closure and/or realignment activities. The conventional ammunition missions of FWDA, NADA, and UMDA will be assigned to HWAAP. Current plans will reduce the quantities of ammunition to be moved from the three facilities to HWAAP and various other Army ammunition facilities through current mission shipments, demilitarization, and disposal. The quantities shipped to HWAAP will be within this installation's recent historical shipment levels and no change in manpower levels are planned. Affected manpower positions at FWDA, NADA, and UMDA will be eliminated or transferred before mission closure. The closure or realignment actions at the four affected installations will result in environmental impacts ranging from minimum adverse to moderate beneficial. None of the environmental impacts are considered significant. Minimal adverse socioeconomic impacts may occur due to the loss of jobs at FWDA, NADA, and UMDA. The selection of the reuse alternative for each facility will determine the full range of impacts following closure and may require additional NEPA analysis to address potential impacts which are not fully discussed in this EIS.

**REVIEW COMMENT DEADLINE:** September 8, 1991



## EXECUTIVE SUMMARY

The action evaluated in this environmental impact statement (EIS) is the closure of Fort Wingate Depot Activity (FWDA) in New Mexico and Navajo Depot Activity (NADA) in Arizona and the realignment of Umatilla Depot Activity (UMDA) in Oregon, and Hawthorne Army Ammunition Plant in Nevada. Manpower positions, materials, and supplies (other than strategic stockpile material) from FWDA, NADA, and UMDA would be eliminated, disposed of through attrition, or transferred to various other U.S. Army Materiel Command facilities. The conventional ammunition missions of these three activities will be moved to Hawthorne Army Ammunition Plant (HWAAP) in Hawthorne, Nevada. Current plans call for reduction in quantities of ammunition to be moved through current mission shipments, demilitarization, and disposal. This means that no new stocks of ammunition are now being shipped to FWDA, NADA, or UMDA, and ammunition now in storage at these sites will be removed to the HWAAP or other ammunition storage facilities; items which are obsolete will be demilitarized at the current or a selected demilitarization facility while items which cannot be moved due to safety concerns will be demilitarized at the current facility. Both the current and selected facility will follow established procedures for demilitarization (disposal) of conventional ammunition.

Disposition of strategic stockpile material and real estate is beyond the scope of this EIS. Currently, the Army does not plan to move Defense Logistics Agency (DLA) strategic material stockpiles stored at FWDA, NADA, and UMDA as a base realignment and closure (BRAC) action. The material is to remain in place for an undetermined period of time. The U.S. Army Corps of Engineers (USACE) Real Estate Office and AMC will work with DLA to develop plans for its ultimate disposition. The Army will insure that the material is provided adequate protection after closure or realignment at these three installations.

This BRAC was recommended by the Defense Secretary's Commission on Base Realignment and Closure (the Commission), and adopted in the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526, hereinafter referred to as the Act).

The purpose of the Act, as set forth in the statute's subheading, is to "provide procedures to facilitate the closure and realignment of obsolete or unnecessary military installations." The Commission's recommendation to close a particular installation generally requires the Army to (1) relocate, to the sites identified by the Commission, all military activities specifically recommended for relocation; (2) realign, in a militarily efficient and economical manner, any remaining active Army units for which the Commission did not identify specific receiving locations; (3) abide by other directive Commission recommendations regarding the particular closure; and (4) dispose of military properties and facilities rendered excess or surplus by the closure in accordance with applicable law. As used in this document, disposal of real property means return to prior Federal agency administration or transfer, sale, or lease to other Federal, state, county or tribal agencies, or private interests.

Chapter 1 addresses the purpose and need for the BRAC actions under the Act and implementing U.S. Army plans. Chapters 2, 3, and 4 of this EIS address the alternatives considered, the affected environment, and the environmental and socioeconomic consequences of the realignment or closure. Existing (baseline) conditions are described and the potential impacts of the BRAC action are considered. More detailed information regarding the existing environment at these installations is available in supporting documentation from Mr. Arver Ferguson; U.S. Army Corps of Engineers; Fort Worth District; 819 Taylor St.; Fort Worth, TX 76102-0300.

Several Federal programs apply to the closure process (Figure ES-1). The National Environmental Policy Act (NEPA) requires assessments of environmental impacts of major Federal actions such as the realignment of missions at and closure of military installations. Provisions of the Act (Public Law 100-526) preclude the examination of alternative actions to the mandated realignments or closures. Consequently, this EIS focuses on effects of the proposed realignment or closure action. The subsequent real property disposal actions are discussed briefly to illustrate potential effects. Additional NEPA analyses will be prepared for real property disposal actions and may be needed for disposition of DLA stockpiles at FWDA, NADA, and UMDA as required to implement future reuse plans.

Installation Restoration Program (IRP) studies at FWDA, NADA, UMDA, and HWAAP were in various stages of program planning as a part of the Defense Environmental Restoration Program (DERP) before the Commission's recommendation to realign or close the facilities. This EIS addresses the realignment and closure actions and is not intended to address impacts associated with potential remediation of the sites. Hazardous materials are discussed to the extent they affect or are affected by the BRAC action. The Commission recognized that remediation requirements may affect property disposal and reuse planning.

The status of Army installations relative to compliance with hazardous/toxic materials remediation regulations is monitored by the U. S. Army Toxic and Hazardous Materials Agency (USATHAMA). These regulations include the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA), and the Resource Conservation and Recovery Act (RCRA) to the extent it deals with contaminated sites. USATHAMA identifies, and recommends remedial action to control and/or eliminate migration of existing or potential contamination resulting from past installation activities.

The Defense Economic Adjustment Program was established in 1961 to support Department of Defense (DOD) objectives by helping communities predict and resolve impacts resulting from defense program changes such as realignment actions that reduce local employment or place new demands on communities for public services. Since 1970, the DOD Office of Economic Adjustment (OEA) has operated the program for the President's Economic Adjustment Committee (EAC), which is composed of 18 Federal Departments and chaired by the Secretary of Defense. DOD coordination has been initiated at FWDA and UMDA. However, detailed reuse studies and plan development are contingent upon final disposition plans for real property at FWDA and UMDA. At the time



of this EIS only the initial DOD contacts had been made. Reuse planning is a separate ongoing action not covered in detail in this EIS.

## Major Conclusions and Findings

### Fort Wingate Depot Activity, New Mexico

FWDA is located approximately 32 miles east of the Arizona/New Mexico border in McKinley County, New Mexico. FWDA ships, receives, renovates, stores, and demilitarizes ammunition and components and stores Defense Logistics Agency (DLA) strategic stocks. In addition to the support and mission activities, FWDA provides space for three tenants: (1) the U.S. Army Information Systems Command (USAISC); (2) the U.S. Army Medical Department Activity (MEDDAC) Occupational Health Clinic; and (3) the U.S. Department of Agriculture (USDA).

The BRAC activities at FWDA will consist of the transfer of ammunition stocks and the closure of the installation. The DLA strategic material stockpile stored at the depot will not be relocated as a BRAC Action. Current plans call for reduction in quantities of ammunition through current mission shipments, demilitarization, disposal, and transfer of remaining assets. The Act mandates that closure be completed by September 30, 1995.

The closure of FWDA would reduce direct employment by 93 civilian and 2 military jobs, and would precipitate an annual \$2 million decrease in total regional wages and salaries. The numbers of personnel holding second jobs and of working dependents is expected to decrease by 55 full-time positions, and their wages and salaries will decrease by \$750 thousand. Regional sales would decrease by \$4.9 million. The total decrease in regional population is expected to be 305 persons. The socioeconomic effects of the proposed base closure actions represent about 1 percent of regional employment, population, income, or sales volume. These socioeconomic effects are not considered significant.

The equipment used for the relocated mission will be moved to other Army activities if it is needed. If the items are not needed or are unserviceable for Army or DOD missions, they will be disposed of as surplus property through the routine Defense Reutilization and Marketing Service (DRMS) process. Lands at FWDA are being considered for return to the public domain via the Bureau of Land Management (BLM) as a real property disposal alternative following the Department of Army's proposed closure action. The Army has not identified a preferred alternative for real property disposal. Possible real property reuse alternatives are identified in Section 2.1.2.2 of the EIS. The nature and extent of hazardous and toxic contamination at FWDA could have major impact on decisions regarding land reuse. The U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) has prepared an Enhanced Preliminary Assessment which describes the nature of hazardous and toxic substance contamination at FWDA. Studies to further define the extent of hazardous and toxic substance contamination and unexploded ordnance continue. Cultural and biological resource surveys on FWDA have not been completed for 100 percent of the installation.

Final land and facility disposition will determine what additional cultural and biological resource surveys are necessary. Prior to the disposal action, consultations on cultural resources will be completed, as specified in the February 5, 1990 Programmatic Agreement, with the New Mexico State Historic Preservation Officer (SHPO) and other parties regarding cultural resources and with the U.S. Fish and Wildlife Service (USFWS) and New Mexico Department of Game and Fish regarding biological resources.

Table ES-1 summarizes the environmental impacts of this closure action discussed in Section 4.1. Based on these analyses, no adverse impacts of the closure action at FWDA are considered significant. However, the impacts of anticipated real property disposal cannot be fully addressed at this time since the method of disposal has not been selected. The disposal action will require supplemental NEPA analysis.

### Navajo Depot Activity, Arizona

NADA is located in Coconino County in northern Arizona. The installation is operated by the Arizona National Guard (AZNG). Currently, the active Army mission at NADA is to operate a reserve storage depot activity providing for the shipping, receiving, care, preservation, and minor maintenance and demilitarization of assigned commodities, mainly ammunition stocks. NADA has nine tenant activities including the leased Wherry Housing Complex.

Current activities at NADA encompass more than the active Army conventional ammunition mission. Additional storage and training activities are common. For example, other branches of the Department of Defense (DOD) store and ship ammunition to and from NADA. Defense Logistics Agency (DLA) strategic and critical stockpiles are stored at the depot and will not be relocated as a BRAC Action. Non-Department of Defense mission storage contractors, personnel, equipment, and facilities may also be affected by the NADA closure. The extent of impact depends on which disposal alternative is followed.

The BRAC activities at Navajo Depot Activity will consist of the closure of the facility by September 30, 1995. Current plans call for reduction in quantities of ammunition through current mission shipments, demilitarization, disposal, and transfer of remaining assets. A net total of 124 (4 Federal and 120 AZNG) employees would leave NADA, thereby precipitating a further loss of 84 secondary jobs and decreasing wages and salaries in the region by about \$3.9 million. Regional sales are expected to decrease by \$3.7 million. The regional population would decrease by 425 persons. The socioeconomic effect of the BRAC action represents less than 1 percent of the regional employment, population, income, or sales volume. These socioeconomic effects are not considered significant.

Table ES-1. Summary of Environmental Impacts Due to Closure of Fort Wingate Depot Activity, New Mexico.<sup>1</sup>

Issues	Impact of Closure Action <sup>2</sup>	Impact Range of Real Property Disposition Alternatives <sup>3</sup>
Climate, geographic setting and geology	No impact	No impact
Biological environment	Minimum Adverse to Moderate Beneficial	Moderate to Substantial Adverse
Land and airspace use	Minimum Adverse to Moderate Beneficial	Substantial Adverse to Minimum Beneficial
Air quality	No impact to Minimum Beneficial	Minimum Adverse to Minimum Beneficial
Water resources	Minimum Beneficial	Minimum Adverse
Noise	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse
Cultural resources	Minimum to Moderate Adverse	Substantial Adverse to Substantial Beneficial
Native American concerns	No impact	Unidentified
Wastewater disposal	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse
Solid waste disposal	Minimum Beneficial	Minimum Adverse
Hazardous waste disposal	Minimum Adverse to Minimum Beneficial	No impact to Substantial Adverse
Energy usage	Minimum Beneficial	Moderate Adverse
Aesthetic quality	No impact	Minimum Adverse to Moderate Beneficial
Socioeconomics	Minimum Adverse	Minimum Beneficial
Transportation	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse

<sup>1</sup> No adverse impacts of the closure action at FWDA are considered significant. However, the impacts of real property disposal cannot be fully addressed at this time and will require additional NEPA analysis.

<sup>2</sup> Potentially adverse short term impacts occur during the closure process while potentially beneficial long term impacts occur following conventional ammunition mission closure.

<sup>3</sup> While the Army has no preferred alternative at this time, fourteen potential real property disposition alternatives are suggested in Section 2.1.2.2. Appropriate potential reuse alternatives and the associated impacts will be the subject of subsequent NEPA analysis and documentation.



In 1942, Public Land Order (PLO) 59 reserved approximately 28,400 acres of public lands within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. In 1950, PLO 661 amended PLO 59 to substitute the Department of the Army for the War Department. PLO 59 contains a reversionary clause that stipulates restoration of NADA lands to National Forest status when they are no longer needed for military purposes. The 28,400 acres of land described in PLO 59 comprise the bulk of NADA. The Arizona National Guard (AZNG) assumed operational control of the Depot from the Army on June 1, 1982.

The Commission report states "it anticipates its eventual transfer to the Arizona National Guard." This EIS describes the following potential disposal alternatives: (1) continuation and modification of the license under which NADA is operated by the AZNG (the preferred alternative), (2) relinquishment of Army rights to the land at NADA and return of the land to the USFS, and (3) joint management of NADA by the USFS and the AZNG. The nature and extent of hazardous and toxic contamination at NADA could have major impact on decisions regarding land reuse. The USATHAMA Enhanced Preliminary Assessment describes the nature of hazardous and toxic substance contamination at NADA. Studies to further define the extent of hazardous and toxic substance contamination and unexploded ordnance continue. Prior to the disposal action, consultations on cultural resources will be completed, as specified in the February 5, 1990 Programmatic Agreement, with the Arizona SHPO and other parties regarding cultural resources, and with the USFWS and Arizona Department of Game and Fish regarding biological resources.

Table ES-2 summarizes the environmental impacts of this closure action discussed in Section 4.2. Based upon these analyses, no adverse impacts of the closure action at NADA are considered significant. The AZNG mission is a continuation of use for military purposes as specified in PLO 59. If, in the future, the military purpose is discontinued at NADA, the lands subject to PLO 59 will be returned to the USFS following disposition of hazardous materials at NADA in compliance with NEPA and other applicable laws.

#### Umatilla Depot Activity, Oregon

The UMDA is located in Umatilla and Morrow counties in northeastern Oregon. UMDA stores, preserves, and performs minor maintenance on conventional and chemical ammunition. UMDA also stores strategic materials for the DLA and reserve equipment withdrawn from normal service. Army tenants include the Health Services Command and Information Systems Command. Part of UMDA is used to support the Oregon National Guard. The Department of the Navy uses UMDA in connection with the operation of its bombing range near Boardman, Oregon. The U.S. Postal Service also is a tenant. There is an Oregon State Department of Fish and Wildlife pronghorn wildlife management unit at UMDA.

Table ES-2. Summary of Environmental Impacts Due to Closure of Navajo Depot Activity, Arizona.<sup>1</sup>

Issues	Impact of Closure Action <sup>2</sup>	Impact Range of Real Property Disposition Alternatives <sup>3</sup>
Climate, geographic setting, and geology	No impact	No impact
Biological environment	No impact	No impact to Minimum Beneficial
Land and airspace use	No impact	Minimum Adverse to Minimum Beneficial
Air quality	No impact to Minimum Beneficial	No impact to Minimum Beneficial
Water resources	No impact	Minimum Beneficial
Noise	Minimum Adverse to Minimum Beneficial	Minimum Beneficial
Cultural resources	No impact	Minimum Adverse
Native American concerns	No impact	No impact
Wastewater disposal	Minimum Beneficial	Minimum adverse
Solid waste disposal	No impact	No impact
Hazardous waste disposal	Minimum Adverse	No impact
Energy usage	Minimum Beneficial	Minimum Beneficial
Aesthetic quality	No impact	No impact
Socioeconomics	Minimum Adverse	Minimum Adverse
Transportation	No impact	No impact

<sup>1</sup> No adverse impacts of the closure action at NADA are considered significant. However, the impacts of real property disposal cannot be fully addressed at this time and will require additional NEPA analysis.

<sup>2</sup> Potentially adverse short term impacts occur during the closure process while potentially beneficial long term impacts occur following conventional ammunition mission closure.

<sup>3</sup> The Army's preferred property disposition alternative is to continue the license with the AZNG. Two other potential real property disposal alternatives are suggested in Section 2.2.2.2. These two potential reuse alternatives and the associated impacts will be the subject of subsequent NEPA analysis and documentation should NADA no longer be used for military purposes.

The BRAC action at UMDA will be a base realignment. The conventional ammunition mission will be transferred to HWAAP. Current plans call for reduction in quantities of ammunition to be moved through current mission shipments, demilitarization, disposal and transfer of remaining assets. UMDA will remain open to accommodate the chemical demilitarization (CHEM DEMIL) mission. This mission is not a part of the BRAC action. CHEM DEMIL prevented closure of UMDA because the Army cannot begin on-site destruction of chemical munitions until 1996 with an expected completion date of 1999, which falls outside of the Commission's allowed time frame for completing closures (Department of Defense, 1988).

The realignment will result in the loss of 168 civilian and no military positions at UMDA. Regional sales will decrease by \$6.7 million; regional employment will decrease by 225 full-time jobs; and, regional personal income will decrease by \$4.8 million. The regional population would decrease by 468 persons. The socioeconomic effect of the BRAC action represents less than 1 percent of the regional employment, population, income, or sales volume. Local staffing and economic declines within the period 1991 to 2000 expected as a direct result of the realignment almost certainly will be offset by construction and operations hiring associated with the CHEM DEMIL and IRP missions.

The equipment used for the relocated mission will be moved to other Army activities if it is needed. If the items are unneeded or unserviceable for Army or DOD missions, they will be surplused through the routine DRMS process. DLA's strategic materials and supplies will remain. All real estate associated with the realigned mission but necessary to support the CHEM DEMIL mission will be retained. Other possible alternative uses are discussed in Section 2.3.2.2 of the EIS. Staff will be reduced to support only UMDA's retained mission of static storage of chemical ammunition until the CHEM DEMIL can begin. The Commission has recommended that UMDA be closed when the CHEM DEMIL mission is completed, but the CHEM DEMIL is not part of this EIS effort. Separate NEPA analysis is being prepared for the CHEM DEMIL mission.

UMDA is on the Environmental Protection Agency's National Priorities List (NPL) which lists the sites in need of hazardous waste cleanup by priority. UMDA was placed on the NPL due to the confirmed groundwater contamination and other forms of pollution. Remediation is scheduled for 1993 through 1995. Defense Environmental Restoration Program (DERP) remediation activities are not part of the BRAC action but will be coordinated with the BRAC actions in order to mitigate potential impacts.

The USATHAMA has prepared an Enhanced Preliminary Assessment which describes the nature of hazardous and toxic substance contamination at UMDA. Studies to further define the extent of hazardous and toxic substance contamination and unexploded ordnance continue. Prior to disposal of real property not required for the CHEM DEMIL mission, consultations on cultural resources will be completed, as specified in the February 5, 1990 Programmatic Agreement (Appendix B), with the Oregon SHPO and other parties regarding cultural resources, and with the USFWS and Oregon Department of Game and Fish regarding biological resources.

Table ES-3 summarizes the environmental impacts of the realignment action discussed in Section 4.3. Based upon these analyses, no adverse impacts of the realignment action at UMDA are considered significant. However, the impacts of anticipated real property disposal cannot be fully addressed at this time since definitive disposal alternatives have not been identified. The disposal action will require supplemental NEPA analysis.

### **Hawthorne Army Ammunition Plant, Nevada**

Hawthorne Army Ammunition Plant (HWAAP) is located in Mineral County on Nevada's western border. HWAAP is a government-owned, contractor-operated (GOCO) facility whose mission as an ammunition storage and transfer depot is to store, produce, assemble, test, and demilitarize ammunition. HWAAP also provides tenant support to U.S. Army Information Systems Command; the Naval Undersea Warfare Engineering Station, Keyport Detachment, and the Naval Strike Warfare Center, Fallon Detachment.

The realignment activities at HWAAP will consist of the receipt of serviceable conventional ammunition stocks from base realignment or closure operations. The existing annual volume of ammunition being moved in and out of HWAAP will be maintained. The realignment operations will include a series of improvements to the truck inspection facilities. The improvements will consist of a new access road, a new shipping and documentation processing building, and a new graveled truck parking lot, which will be constructed a greater distance from the public road than the existing lot. The new lot will also include security fencing and lightning protection. No changes in the existing mission or work force levels are planned as a part of the BRAC action, thus the only socioeconomic impacts will be short term and associated with improvement of the truck inspection facilities.

The ongoing Installation Restoration Program (IRP) at HWAAP will not be affected by the BRAC action since unserviceable ammunition will not be shipped to the installation for demilitarization.

Consultations with the Nevada SHPO regarding cultural resources and with USFWS regarding biological resources have been completed for HWAAP. An archaeological survey and a biological assessment have been completed for the area of potential impact. No cultural resources, or sensitive, threatened or endangered species were located.

Table ES-4 summarizes the environmental impacts of the realignment action discussed in Section 4.4. Based upon these analyses, no adverse impacts of the realignment action at HWAAP are considered significant.

### **Special Installation Agreements or Commitments to Other Organizations**

Each installation undergoing closure or realignment has cooperative agreements with local, county, state, and Federal agencies. These agreements are described in Chapter 3 and include fire protection, emergency response, water and sewer treatment, and wildlife management. Support agreements or commitments are also in effect with various agencies and tenant activities.

Table ES-3. Summary of Environmental Impacts Due to Realignment of Umatilla Depot Activity, Oregon.<sup>1</sup>

Issues	Impact of Realignment Action <sup>2</sup>	Impact Range of Real Property Disposition Alternatives <sup>3</sup>
Climate, geographic setting and geology	No impact	No impact
Biological environment	No impact	No impact
Land and airspace use	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse
Air quality	No impact to Minimum Beneficial	No impact to Minimum Beneficial
Water resources	No impact	Moderate to Substantial Adverse
Noise	No impact to Minimum Beneficial	No impact
Cultural resources	No impact	No impact
Native American concerns	No impact	No impact
Wastewater disposal	No impact	Moderate Adverse
Solid waste disposal	No impact	Moderate Adverse
Hazardous waste disposal	Minimum Adverse to Minimum Beneficial	No impact
Energy usage	Moderate Beneficial	Minimum Adverse
Aesthetic quality	No impact	No impact
Socioeconomics	Minimum Adverse	Minimum Beneficial
Transportation	No impact	No impact

<sup>1</sup> No adverse impacts of the closure action at UMDA are considered significant. However, the impacts of real property disposal cannot be fully addressed at this time and will require additional NEPA analysis.

<sup>2</sup> Potentially adverse short term impacts occur during the closure process while potentially beneficial long term impacts occur following conventional ammunition mission closure.

<sup>3</sup> The Army prefers to retain all real property. However, local development of potential real property disposal alternatives following the BRAC action and remediation plans is suggested in Section 2.3.2.2. Appropriate potential reuse alternatives and the associated impacts will be the subject of subsequent NEPA analysis and documentation.

Table ES-4. Summary of Environmental Impacts Due to Realignment of Hawthorne Army Ammunition Plant, Nevada.<sup>1</sup>

Issues	Impact of the Realignment Action
Climate, geographic setting, and geology	No impact
Biological environment	Minimum Adverse
Land and airspace use	No impact
Air quality	No impact
Water resources	No impact
Noise	No impact
Cultural resources	No impact
Native American concerns	No impact
Wastewater disposal	No impact
Solid waste disposal	No impact
Hazardous waste disposal	No impact
Energy usage	No impact
Aesthetic quality	No impact
Socioeconomics	Minimum Beneficial
Transportation	No impact

<sup>1</sup> No adverse impacts of the realignment action at HWAAP are considered significant.

The special installation agreements and commitments to other organizations at FWDA and NADA would require modification depending upon the ultimate disposition of real property at these installations. Until that time, no effects are expected on the current agreements or commitments to other organizations by the closure of the conventional

ammunition mission at FWDA and NADA. No impacts on agreements or commitments to other organizations at UMDA and HWAAP are expected.

### **Controversial Issues**

There are no known controversial environmental issues pertaining to the realignment or closure of the conventional ammunition missions at FWDA, NADA, UMDA, or HWAAP. Although disposition of installation lands is beyond the scope of this EIS, potential real property disposition alternatives at FWDA and NADA are considered controversial based on input during the scoping process.

### **Unresolved Issues**

There are no known unresolved environmental issues pertaining to the realignment or closure of the conventional ammunition missions at FWDA, NADA, UMDA, or HWAAP. However, potential real property disposition at FWDA and UMDA is considered unresolved. The owner's access to one parcel of private property adjacent to NADA is an unresolved issue.

### **Mitigation**

Army actions to avoid or minimize potentially adverse impacts resulting from the preferred and other implementation alternatives as identified and described in Chapter 4 of the EIS for FWDA (Section 4.1.18), NADA (Section 4.2.18), UMDA (Section 4.3.18), and HWAAP (Section 4.4.18) will be based upon the following:

- **Biological Environment**
  - An intensive threatened and endangered species survey of FWDA before real property disposal.
  - An intensive threatened and endangered species survey of NADA, before return of the land to USFS administration should this real property disposal alternative be selected.
- **Cultural Resources**
  - Implementation of the Programmatic Agreement among the U.S. Army, the Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers (February, 1990) for each installation.
  - Implementation of the Memorandum of Agreement between the U.S. Army and New Mexico State Historic Preservation Officer for closure of FWDA.
  - Implementation of the Memorandum of Agreement between the U.S. Army and the Arizona State Historic Preservation Officer for closure of NADA.

- The ongoing Installation Restoration Program, while independent of this BRAC action, will include measures which mitigate the effects of the proposed action upon the following resource areas at each installation.
  - Land use
  - Water quality
  - Soil contamination

### **Relationship of the Proposed Action to Environmental Requirements**

Compliance with the following relevant Federal environmental statutes, executive orders, regulations, and guidelines is ongoing and consistent with the status of the BRAC action relating to the conventional ammunition mission and real property disposition at FWDA, NADA, UMDA, and HWAAP at the time of this EIS. Ongoing compliance means that some installation actions pertaining to these requirements remain to be met before implementation of the closure or realignment action is fully implemented or property disposal is complete.

- National Environmental Policy Act (NEPA).
- Provisions of Public Law 100-526, the Defense Authorization Amendments and Base Closure and Realignment Act, which relate to NEPA.
- Regulations of the President's Council on Environmental Quality (CEQ). These regulations contain the procedural requirements for implementation of NEPA.
- Endangered Species Act.
- Archaeological Resources Protection Act of 1979.
- National Historic Preservation Act, and related acts such as the Historic Sites, Buildings, and Antiquities Act, and the Archaeological and Historic Preservation Act.
- American Indian Religious Freedom Act (AIRFA) of 1978.
- Federal Water Pollution Control Act, as amended by the Clean Water Act.
- Resource Conservation and Recovery Act (RCRA) of 1976.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).
- Toxic Substance Control Act (TSCA).
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).
- Executive Order 12372; "Intergovernmental Review of Federal Programs."
- Fish and Wildlife Coordination Act.
- Executive Order 11990, "Protection of Wetlands."
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## ACRONYMS

AADV	Average Annual Daily Volume (of traffic)
ACEC	Areas of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Material
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
AEHA	Army Environmental Hygiene Agency
AFB	Air Force Base
AIRFA	American Indian Religious Freedom Act
AMC	Army Materiel Command
AMCCOM	Armament, Munitions, and Chemical Command
AR	Army Regulation
AREE	Areas Recommended For Environmental Evaluation
ASLD	Arizona State Land Department
AVSCOM	Aviation Systems Command
AZNG	Arizona National Guard
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
BTU	British Thermal Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Controlled Firing Area
CFR	Code of Federal Regulations
CG	Phosgene
CHEM DEMIL	Chemical demilitarization, or detoxification of nerve agents and other poisons and destruction of the weapons containing them; synonymous with the Chemical Stockpile Disposal Program (CSDP)
CK	Cyanogen Chloride
COSIS	Care of Supplies in Storage
CPR	Cardiopulmonary Resuscitation
DA	Department of Army
dBA	Decibel - "A" weighted
dBC	Decibel - "C" weighted
DDN	Defense Data Network
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DESCOM	Depot System Command
DIS	Defense Investigative Service

DLA	Defense Logistics Agency
DOD	Department of Defense
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing Office
DRMS	Defense Reutilization and Marketing Service
EA	Environmental Assessment
EAC	Economic Adjustment Committee
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
EMT	Emergency Medical Technician
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
FD	Fire Department
FR	Federal Register
FWDA	Fort Wingate Depot Activity
FY	Fiscal Year
GB	A Nerve Agent
GOCO	Government Owned Contractor Operated
gpm	Gallons per million
GSA	General Services Administration
HAZMAT	Hazardous Material
HMTA	Hazardous Materials Transportation Act
HE	High Explosive
HSC	Health Services Command
HWAAP	Hawthorne Army Ammunition Plant
ICC	Interstate Commerce Commission
ICUZ	Installation Compatible Use Zone
IRP	Installation Restoration Program
ISSA	Inter-Service Support Agreement
KVA	Kilovolt Ampere
KWH	Kilowatt Hour
MBTU	Million British Thermal Unit
MCL	Maximum Containment Level
MEDDAC	U.S. Army Medical Department Activity
MGD	Million gallons per day
MOA	Memorandum of Agreement
MRO	Material Release Order
MSL	Mean Sea Level
MTMC	Military Traffic Management Command

NAAQS	National Ambient Air Quality Standard
NADA	Navajo Depot Activity
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NHPA	National Historic Preservation Act
NIR	Navajo Indian Reservation
NMDGF	New Mexico Department of Game and Fish
NMEID	New Mexico Environmental Improvement Division
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NSWC	Naval Strike Warfare Center
NUWES	Naval Undersea Warfare Engineering Station
OB/OD	Open Burning/Open Detonation
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
OEA	Office of Economic Adjustment
ONHDB	Oregon Natural Heritage Data Base
ORV	Off-Road Vehicle
PA	Programmatic Agreement
PA/SI	Preliminary Assessment/Site Inspection
PCB	Polychlorinated biphenyl
PCP	Pentachlorophenol
PL	Public Law
PSD	Prevention of Significant Deterioration
PWP	Plasticized White Phosphorus
RCRA	Resource Conservation and Recovery Act
RFPD	Rural Fire Protection District
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SEA	Socioeconomic Effects Analysis
SHPO	State Historic Preservation Officer
SOP	Standing Operating Procedure
SPTC	Southern Pacific Transportation Company
STP	Sewage Treatment Plant
SWMU	Solid Waste Management Unit
T&E	Threatened & Endangered Species
TEAD	Tooele Army Depot

TECOM	Test and Evaluation Command
TNT	Trinitrotoluene
TSCA	Toxic Substances Control Act
TSP	Total Suspended Particulates
UECA	Umatilla Electric Cooperative Association
UMDA	Umatilla Depot Activity
USAF	U.S. Air Force
USACE	U.S. Army Corps of Engineers
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
USAEHA	U.S. Army Environmental Hygiene Agency
USAISC	U.S. Army Information Systems Command
USC	United States Code
USDA	U.S. Department of Agriculture
USDASCS	U.S. Department of Agriculture Soil Conservation Service
USDI	U.S. Department of Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPFO	U.S. Property and Fiscal Officer
USPHS	U.S. Public Health Service
UST	Underground Storage Tank
VX	A Nerve Agent
WADF	Western Area Demilitarization Facility
WATS	Wide Area Telephone System
WETS	Weekend Training Site
WP	White Phosphorus
WSA	Wilderness Study Area
WSMR	White Sands Missile Range

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## Chapter 1

### PURPOSE OF AND NEED FOR THE ACTION

#### 1.1 PURPOSE

Recommendations of the Defense Secretary's Commission on Base Realignments and Closures (the Commission) were adopted in the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526, hereinafter referred to as the Act) at the following four Army Materiel Command (AMC) installations assigned conventional ammunition storage missions:

- Fort Wingate Depot Activity (FWDA), New Mexico
- Navajo Depot Activity (NADA), Arizona
- Umatilla Depot Activity (UMDA), Oregon
- Hawthorne Army Ammunition Plant (HWAAP), Nevada

The action evaluated in this environmental impact statement (EIS) is the related closure of Fort Wingate Depot Activity and Navajo Depot Activity, and the realignment of Umatilla Depot Activity and Hawthorne Army Ammunition Plant. Manpower positions, materials, and supplies from FWDA, NADA, and UMDA would be eliminated, disposed of through attrition, or transferred to various other U.S. Army Materiel Command facilities. The conventional ammunition missions of these three activities will be moved to Hawthorne Army Ammunition Plant in Hawthorne, Nevada. Current plans call for reduction in quantities of ammunition to be moved through current mission shipments, demilitarization, and disposal. This means that no new stocks of ammunition are now being shipped to FWDA, NADA, or UMDA, and ammunition now in storage at these sites will be removed to the HWAAP or other ammunition storage facilities; items which either cannot be moved due to safety concerns or which are obsolete will be demilitarized at the current or selected facilities following established procedures for demilitarization (disposal) of conventional ammunition.

The locations of these installations are shown on Figure 1-1. FWDA, NADA, UMDA, and HWAAP are among a number of Army installations assigned similar missions of receiving, storing, issuing, and disposing of conventional ammunition as a part of the Army logistical support system. The purpose of the proposed transfer of the missions at FWDA, NADA, and UMDA to HWAAP is to improve the cost effectiveness of ammunition logistical support to the Army.

#### 1.2 NEED

The Commission was chartered on May 3, 1988, to recommend military installations within the United States, its commonwealths, territories, and possessions for realignment and

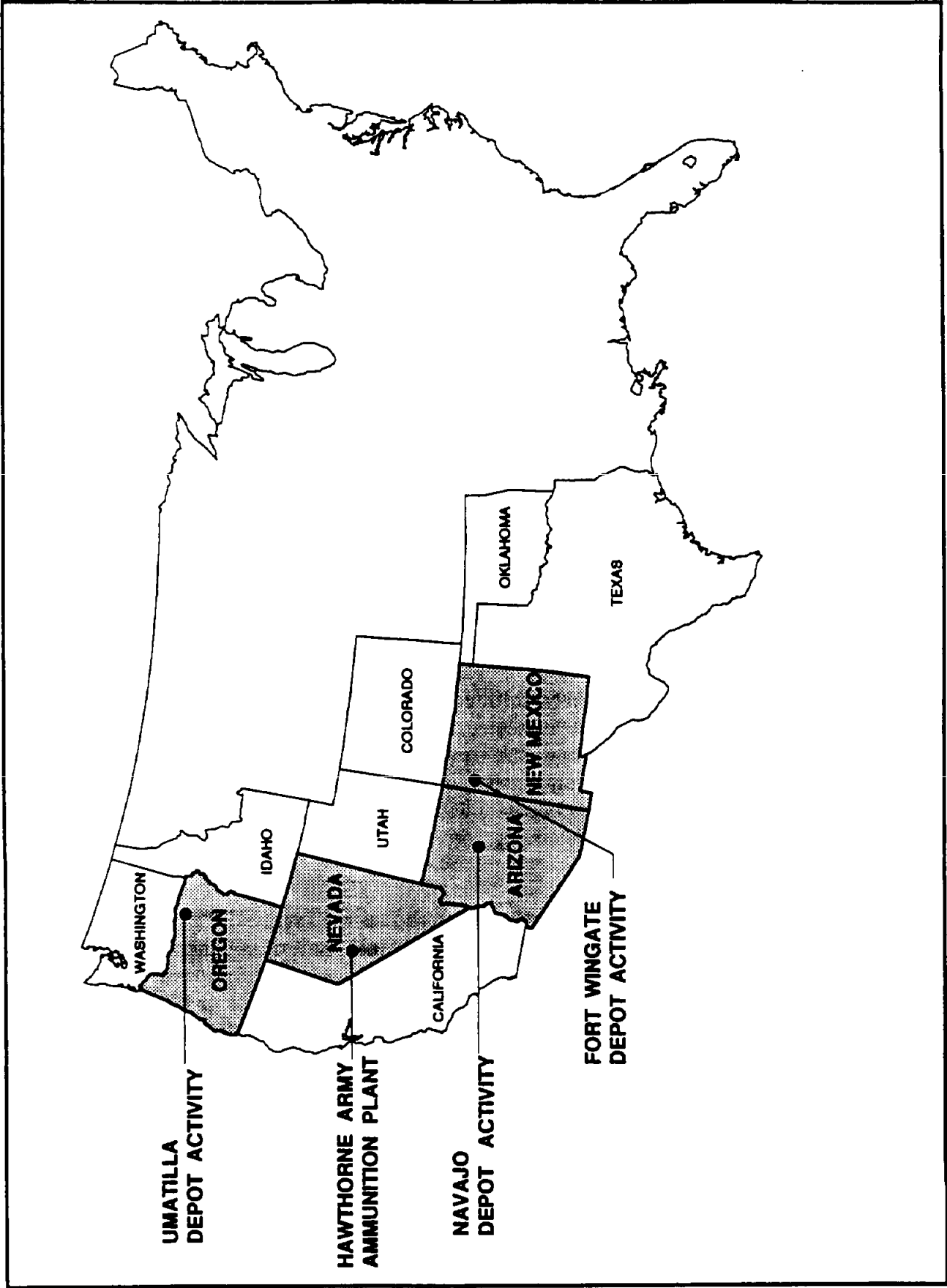


Figure 1-1. Base Realignment and Closure Locations. Fort Wingate Depot Activity, Navajo Depot Activity, Umatilla Depot Activity, and Hawthorne Army Ammunition Plant.

closure. In December 1988, the Commission recommended 86 military installations be closed completely, 5 to be partially closed, and 54 to increase or decrease (realignment) as units and activities are relocated. FWDA, NADA, and UMDA were among these installations recommended for realignment and closure. HWAAP was recommended as the receiving installation for these missions. The Commission anticipated annual savings of \$5.2 million at FWDA, \$3.1 million at NADA, and \$6.3 million at UMDA. Through the Act, Congress directed the Secretary of Defense to initiate closure by September, 1991 and close or realign by September 30, 1995 all military installations recommended for such action by the Commission in its December 1988 report. The savings anticipated by the Commission are largely from the reduction or elimination of manpower positions. This legislation constitutes agreement between the legislative and executive branches that improvement in the military basing structure could be a means of realizing savings in the defense budget without impairing the ability of the armed forces to carry out their missions.

### 1.3 DESCRIPTION OF THE NEPA PROCESS

The Act requires the implementing actions to conform to the provisions of the National Environmental Policy Act (NEPA) (42 *United States Code* [USC] 4321, et seq.), as implemented by the President's Council on Environmental Quality (CEQ) regulations (40 *Code of Federal Regulations* [CFR] Parts 1500-1508). This document has been prepared in fulfillment of those regulations. In addition, this document also follows Army Regulations (AR) 200-2 (32 CFR Part 651), which provides policy and procedures for implementing both NEPA and CEQ regulations within the Army system. The following discussion briefly outlines this process.

The first step in the preparation of an Environmental Impact Statement (EIS) is the publication in the *Federal Register* (FR) of the Notice of Intent (NOI), the NOI describes the proposed action, invites the public to participate in the scoping process, and lists the name and address of the person to be contacted for further information. Subsequently, public meetings are held in the communities which may be impacted by the proposed action. These meetings inform the public about the proposed action, and solicit public input concerning the issues to be addressed in the EIS.

Following the scoping process, the Draft Environmental Impact Statement (DEIS) is prepared. Upon completion, a notice of its availability is published in the FR, and copies are circulated to other government agencies and interested members of the public. A minimum of 45 days must be allowed for public comment on the DEIS. Public meetings soliciting comments may be held during this period. All comments received must be considered and responded to in the Final Environmental Statement (FEIS).

The final step in the NEPA process is the preparation and publication of the Record of Decision (ROD). The ROD identifies the alternatives that were considered, states the decision made, discusses all factors considered in making the decision, and describes how those factors entered into the final decision.

## **1.4 BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL IMPACT ANALYSIS PROCESS**

Within the legislation (P.L. 100-526, Section 204(c)), Congress exempted the Department of Defense (DOD) from certain statutory provisions. According to the Act, the Secretary of Defense shall not have to consider in the National Environmental Policy Act of 1969 (NEPA) documentation, "1) the need for closing or realigning a military installation which has been selected for closure or realignment by the commission, 2) the need for transferring functions to another military installation which has been selected as the receiving installation, or 3) alternative military installations to those selected." NEPA applies, however, to all other actions 1) "during the process of the closing or realigning of a military installation after such military installation has been selected for closure or realignment but before the installation is closed or realigned and the functions relocated" and 2) "during the process of the relocating of functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated."

The alternatives presented in this EIS are limited to the no action alternative required under NEPA and those alternative methods to effect realignment or closure of the active Army conventional ammunition storage missions at FWDA, NADA, and UMDA. "Close" as it relates to these missions means to discontinue operations in preparation for transfer to HWAAP. Portions of the conventional ammunition stocks will be transferred from FWDA, NADA, and UMDA to HWAAP ("realignment") and other locations as necessary to meet current operational requirements.

Subsequent potential real property disposal (reuse) actions are discussed briefly. As used in this document, real property disposal means transfer, sale, or lease to other Federal, state, county or Native American tribal agencies, or private interests. The Army will prepare separate NEPA analyses to address real property disposition alternatives as appropriate for each installation. Land use changes by the acquiring agency or private interest may require separate NEPA analyses.

This document includes information and analyses gathered from previous reports and coordination with various agencies and other appropriate sources listed in Chapter 8 (References). No new field investigations were conducted in support of this EIS except at HWAAP where a cultural resource inventory and biological assessment were conducted on a potentially disturbed project site. In addition to this EIS, supplemental information on the affected environment is available for persons interested in the actions at FWDA, NADA, UMDA, and HWAAP, respectively. These supplements and studies provide more detailed descriptions of the existing conditions of resources (physical, biological, cultural, socioeconomic, noise, transportation, aesthetic, recreation, hazardous and toxic materials, and utilities).

The analyses, findings, and discussions of socioeconomic conditions contained in this EIS are based upon the Economic Impact Forecast System (EIFS) methodology. The methodology and results of the analyses are presented in the Socioeconomic Effects Analysis

(SEA) Reports prepared by the U.S. Army Corps of Engineers' Institute for Water Resources (Robinson, et. al., 1990).

The descriptions of the affected environment in Chapter 3 are derived from these and other more detailed documents identified in Chapter 8 (References). The supporting detailed descriptions of the affected environment, the SEA reports and transcripts of the public scoping meetings are available upon request for individual installation materials from Mr. Arver Ferguson; U.S. Army Corps of Engineers; Fort Worth District; 819 Taylor St.; Fort Worth, TX 75102-0300.

## 1.5 SPECIAL CONSIDERATIONS

### 1.5.1 BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL RESTORATION STRATEGY

This FEIS addresses closure of FWDA and NADA, and realignment of UMDA and HWAAP; it does not address impacts associated with potential remediation activities at these installations. Hazardous waste and contaminated sites are discussed to the extent that they affect or are affected by this action. The Commission's report recognized that the need for remediation at some sites may affect property disposal and reuse planning.

Potential alternatives for reuse of the real property after realignment or closure will be coordinated with the on-going Defense Environmental Restoration Program (DERP). This program is implemented at each installation through the Installation Restoration Program (IRP). The U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) is responsible for this program. Studies at FWDA, NADA, UMDA, and HWAAP are in various stages of program planning and implementation. The IRP is divided into three major phases which correspond to the procedures established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA): (1) Preliminary Assessment/Site Inspection (PA/SI), (2) Remedial Investigation/Feasibility Study (RI/FS), and (3) Remedial Action. These phases are not discrete and some overlap of tasks within the phases may occur in practice.

- Enhanced Preliminary Assessment

The preliminary assessment involves a record search, examination of installation files, interviews with key current and former employees, and an examination of terrain and facilities. Enhanced preliminary assessments prepared for FWDA, NADA, and UMDA were published in March and April, 1990. Installation Assessments were prepared before the passage of CERCLA and are similar to preliminary assessments. An Installation Assessment was prepared for HWAAP in 1977 and supplemented by a survey and assessment final report in 1981. The second stage of the PA/SI process, the SI, expands the investigations for sites identified in the appropriate preliminary assessment as requiring further action.

- Remedial Investigation/Feasibility Study

If the Enhanced Preliminary Assessment indicates the potential for contaminated sites which preclude the release of the property, a Remedial Investigation/Feasibility Study (RI/FS) is initiated. The RI/FS phase, conducted by USATHAMA, determines the nature and extent of the threat presented by a release and evaluates proposed remedies. An endangerment assessment is prepared which has three components: (1) a contamination assessment, (2) consideration of Federal or state remediation standards and environmental protection requirements, and (3) a public health evaluation including an exposure assessment, toxicity analysis, and risk characterization. The RI/FS phase is scheduled from Fiscal Year (FY)92 through FY94 at FWDA. It is underway at UMDA and scheduled to be completed in FY93. This phase is not scheduled for NADA or HWAAP at this time although local planning and studies are proceeding. The FS provides for full consideration of environmental issues and alternatives, and an opportunity for the public to participate in evaluating environmental factors before a final decision is made, and is intended to comply with the National Environmental Policy Act (NEPA). Concerns relative to contamination of the sites, not covered in this EIS, would be addressed in the FS. The IRP process includes public involvement supported through news releases, fact sheet distribution, an information repository, and public meetings. This opportunity for public involvement is separate and in addition to that associated with this EIS.

Following the installation RI/FS report is the development of the Proposed Plan. This document provides a brief analysis of remedial alternatives, identifies the preferred alternatives and reasons for selection, and provides public information on how to participate in the remedy selection process. The timing of remedial action planning depends upon the results of the earlier investigations. A Record of Decision (ROD) is prepared from the Proposed Plan. The duration of this phase could range from a few months to two years. Following the ROD action to implement the remedy is carried out through the Remedial Action phase.

- Remedial Action

In those cases where the RI/FS phase indicates that remediation is required prior to release of property, a Remedial Action Plan is prepared, and remedial action undertaken. The execution of the remedial action is generally carried out by the appropriate U.S. Army Corps of Engineers (USACE) Division or District. Remedial action is scheduled to begin at FWDA during FY94, UMDA in FY93, and is not currently scheduled for NADA or HWAAP although some local planning is proceeding.

- Statement of Condition

At the completion of the remedial action phase, the implementing organization will issue to USATHAMA a report which verifies and certifies the remedial action process. This report will be included in the Statement of Condition package which will permit the ultimate release of the property.

## 1.5.2 CULTURAL RESOURCE EVALUATIONS

A Programmatic Agreement was executed on February 5, 1990, between the Department of the Army, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. The agreement stipulates that Section 110 and Section 106 responsibilities under the National Historic Preservation Act (NHPA) will be completed by the Army prior to initiation of construction activities or disposal of lands. The agreement recognizes that in many cases, compliance with the Programmatic Agreement will not be completed until after the ROD has been filed. In such instances the Army will stipulate in the ROD that ". . .the NHPA has not yet been complied with and that no action will be taken which would foreclose completion of the Army's responsibilities under the NHPA. . .". a copy of the Programmatic Agreement is provided in Appendix C.

In brief, the steps to be followed by the Army in meeting its responsibilities under this agreement include:

- Identification and Evaluation

The Army will consult with appropriate State Historic Preservation Officers (SHPOs) in a good faith effort to identify historic properties located on installations affected by BRAC. When existing information is inadequate, the Army will undertake field surveys to develop such information. All identified properties will be evaluated for eligibility for inclusion on the National Register of Historic Places (NRHP).

- Determinations of Effect

The Army will determine the effects of proposed BRAC actions on historic properties. When a determination of adverse effect is made, the Army will develop plans to avoid, minimize, or mitigate such an effect.

- Treatment and Management

In those instances where the affected property will remain under Army control, treatment and management plans will be developed; for disposal properties, the Army will work with local reuse committees, SHPOs, and other interested parties to ensure compatible reuse plans and/or develop mitigation plans.

## 1.5.3 GENERAL REAL PROPERTY DISPOSITION PROCESS

Pursuant to BRAC, the closure and realignment must be initiated no later than September 30, 1991, and completed no later than September 30, 1995.

The general process to be followed in determining the final transfer and/or sale of real property is described below.

1. Headquarters, USACE will offer the real estate to DOD and other Federal agencies for continued Federal use. Steps in this process include:
  - a. DOD agencies have 20 calendar days to express interest in the real property with an additional 20 calendar days to express a firm requirement. Per Section 204(a) (3) of the Public Law 100-526, property may be transferred to another DOD department or instrumentality without reimbursement. However, the Secretary shall give priority to any department that agrees to pay fair market value on the basis of the use of the real property on December 31, 1988.
  - b. Title V of the Stewart B. McKinney Homeless Assistance Act (42 USC 11411) sets out a process by which unutilized or underutilized Federal real properties may be made available to the homeless. Concurrent with the Federal screening, information about such properties is sent to the U.S. Department of Housing and Urban Development for that agency to determine whether the real property is suitable for facilities to assist the homeless. The Army will meet all its responsibilities pursuant to the McKinney Act.
  - c. The Office of Chief of Engineers (OCE), USACE, will then offer the real property to other Federal agencies. Each agency must inform OCE if there is a tentative or firm requirement for the property within 30 calendar days.
  - d. If a tentative requirement exists, agencies have an additional 30 calendar days to advise OCE if there is a firm requirement.
  - e. Within 30 calendar days after advice to OCE of a firm requirement, the agency shall furnish OCE a request for transfer of the real property.
2. If there is no Federal interest, the Army will declare the real property excess. It can then be made available for various public benefit purposes. Notices will be sent to the State single point of contact, the Governor, and county and local officials for their information.

Concurrently with the 30-day Federal agency use screening period, Federal agencies that sponsor public benefit disposals may recommend to the disposing agency that the highest and best use of the property is a public benefit purpose. However, the real property may not be transferred for public benefit purposes until such time as it is determined that no other Federal agency has a requirement for it. A decision is discretionary, and will be considered on a case-by-case basis.

3. If there is no Federal sponsor for a public benefit discount, the real property can be sold to the state or local government through a negotiated disposal at fair market value.



4. If a negotiated disposal resulting from state or local government does not occur, the real property can then be made available to the private sector under a competitive bid process. The fair market value of the real property must be obtained.

## 1.6 SCOPING ISSUES

At the beginning of the Environmental Impact Statement (EIS) process the U.S. Army Corps of Engineers conducted public scoping sessions in the communities that would be most affected by the proposed action at FWDA, NADA, UMDA, and HWAAP.

The purpose of the scoping meetings was to receive input and comments from interested parties about issues they believe should be considered and addressed in the EIS. The meetings began with an overview of the Corps' involvement in the environmental documentation for the proposed action, a description of the recommendations by the Defense Secretary's Commission on Base Realignment and Closures (BRAC), and a discussion of the purpose, procedure and schedule of the EIS process. The meetings were then opened to receive comments and suggestions from the participants on issues they believed should be addressed in this document. Transcripts of the meetings are on file at Fort Worth District, U.S. Army Corps of Engineers.

The specific issues and major concerns raised at the scoping meetings are presented in Chapter 5 of this document. Issues and concerns relevant to the proposed mission closure or realignment action are addressed in this FEIS; however, some of the issues raised, such as potential remediation, real property disposition, and reuse of installation property, are beyond the scope of this FEIS and are discussed only in general terms. These concerns which relate to real property disposition and reuse will be discussed in separate NEPA documentation. Partial closure of FWDA and NADA and subsequent disposal of any excess property, although authorized by BRAC, are not discussed in this document. Hazardous materials are discussed in this document only to the extent that they affect or are affected by closure or realignment.

## Chapter 2

### ALTERNATIVES CONSIDERED

Chapter 2 describes the No Action alternative and discusses various alternative methods of implementing the realignment and closure action at Fort Wingate Depot Activity (FWDA), New Mexico, Navajo Depot Activity (NADA), Arizona, Umatilla Depot Activity (UMDA), Oregon, and Hawthorne Army Ammunition Plant (HWAAP), Nevada. Installation specific alternatives are described in each section for FWDA, NADA, UMDA and HWAAP as follows:

- "No Action" Alternative
- Proposed Action
  - Preferred implementation alternative
    - Ammunition shipments
    - Ammunition disposal
    - Real property reuse

Other potential real property reuse alternatives which have been identified are listed or briefly discussed.

This chapter introduction discusses elements of the Army conventional ammunition and general supply support system within which each installation operates, the alternatives considered as they relate to the system, characteristics of alternatives common to each installation, and mitigation measures nominated for incorporation into the alternatives considered.

- Conventional Ammunition and General Supply System

FWDA, NADA, UMDA, and HWAAP are among the Army installations assigned similar missions of receiving, storing, issuing, and disposing of conventional ammunition and some strategic stockpile material as a part of the Army logistical support system. In addition to the ammunition related missions, the Defense Logistics Agency (DLA) stores strategic material at FWDA, NADA, and UMDA. The Army does not plan to move these DLA strategic material stockpiles as a base realignment and closure (BRAC) action. The material is to remain in place for an undetermined period of time. The U.S. Army Corps of Engineers (USACE) Real Estate Office and Army Materiel Command (AMC) will work with DLA to develop plans for its ultimate disposition. The Army will insure that the material is provided adequate protection after closure or realignment at these three installations.

Logistical operations for ammunition support of Army-wide requirements begin with procurement of ammunition from manufacturing facilities. The amount of ammunition

procured is based upon the Army's training and war-time contingency stock requirements. The ammunition is moved from the manufacturer to storage and distribution facilities such as FWDA, NADA, UMDA, and HWAAP. Various amounts of ammunition are shipped from stocks on hand at each storage activity to meet routine training needs at Army sites world-wide as training activities are planned, funded, and implemented. Also, ammunition is shipped to reposition contingency stocks to the most appropriate locations as mission changes occur throughout the Army.

- Conventional Ammunition Transportation

Ammunition is transported in accordance with Army regulations (AR 55-355 Defense Traffic Management Regulation and AR 55-38 Reporting of Transportation Discrepancies and Shipments) which reflect Department of Defense (DOD) and other Federal agencies such as the Department of Transportation (DOT) requirements governing transportation of hazardous materials. Locally, the Army implements these regulations through installation standing operating procedures (SOPs). In recent years, the Army has increased the movement of ammunition by commercial trucks relative to that moved by rail. Both truck and rail carriers as well as military convoys operate in accordance with the administration of the Hazardous Materials Transportation Act (HMTA) of 1975 by the DOT. Agency regulations appear in Title 49, Code of Federal Regulations (49 CFR) and have been in place for many decades, administered first by the Interstate Commerce Commission and then the DOT under the authority contained in the Explosives and Other Dangerous Articles Act (since repealed). The regulations pertaining to rail and highway transport are quite similar as to acceptable articles, forbidden explosives, carrier's materials and supplies, hazardous materials incident reporting, shipping papers, loading and unloading, stowage compatibility, and the handling and placarding of cars.

The Military Traffic Management Command (MTMC) controls the transportation of ammunition shipped by DOD. Before an authorization to move ammunition to or from a DOD facility is approved, the MTMC provides the shipping facility with a list of carriers approved for the specific type of material. The Army requires the carrier to be properly licensed by the Interstate Commerce Commission (ICC) and have: (a) a good safety record, (b) a vehicle inspection program, (c) a driver training program, and (d) a minimum of \$5 million in liability insurance coverage. All commercial motor carriers transporting explosives or other hazardous material over public highways must possess a Medical Examiner Certificate issued in the past 24 months and an employee record card including the driver's photograph. In addition, carriers hauling Class A or Class B explosives must certify that the driver has successfully completed the appropriate training, is competent to haul these explosives, and understands the hazard of the material being transported. All personnel involved in the preparation and shipment of hazardous material must be similarly certified through formal training every two years. The Army also randomly monitors carriers selected to transport hazardous material to assure compliance with regulations and safety practices.

The Army provides each carrier with a 24-hour emergency response telephone number for use in the event of an emergency involving hazardous material. With this

number, the driver or crew has access to a person who can provide detailed information concerning the hazardous material in the event of an accident. Also, each driver is provided with emergency response information on how to protect self, the cargo, the vehicle, and other life and property from hazards such as fire, accident, or vehicle breakdown. The carrier is required to notify the Army by the fastest available means when the shipment is involved in an accident, incident, or is delayed en-route for a period of 12 hours or more. If an accident or incident requires a response, the Army will dispatch the area Explosive Ordnance Disposal (EOD) team to the scene to assist in reducing or eliminating any hazards.

- **Conventional Ammunition Disposal**

Some ammunition stored for long periods may no longer serve a useful purpose due to weapon system obsolescence or high maintenance costs. Individual lots of ammunition in this category are, as appropriate, selected for demilitarization. Demilitarization generally refers to rendering of a military supply item into a condition in which it cannot be used for its intended military purpose. With respect to ammunition, this usually means that the propellant and explosive charges are removed from the item, separated, and then either burned or detonated. For most explosive-filled conventional ammunition, demilitarization is accomplished by burning items such as propellants and detonating items such as high explosive shells. Unserviceable crating and packing materials that contain substantial explosive residue also are burned as a result of the demilitarization process.

Assignment of ammunition items to a centralized demilitarization account or their classification as unserviceable are not designations of the items as waste. Munitions and ordnance become waste when specifically designated as waste. Specific designation as waste include disposal of items from open detonation or other thermal treatment resulting from the demilitarization process. The point at which munitions or ordnance become waste defines the point at which Resource Conservation and Recovery Act (RCRA) hazardous waste management requirements apply. This is normally when the ammunition Transfer Record or its equivalent is signed indicating the receipt of the material at the demilitarization facility, such as an open detonation area, incinerator or other treatment facility.

Ammunition demilitarization operations are conducted in accordance with Army regulations which reflect requirements of other Federal agencies such as the Environmental Protection Agency (EPA). Relevant Federal environmental statutes, executive orders, regulations, and guidelines are listed in the executive summary of this EIS and are implemented through Army training manuals and installation SOPs. These SOPs contain detailed instructions on safety, burning or detonation requirements, and handling of materials. SOPs also include environmental requirements such as: Federal, state, and local environmental regulation and permit conditions. For example, SOPs for demilitarization contain procedures reflecting environmental permit conditions that restrict travel of dense plumes of smoke or dust to areas within installation perimeters. Air and noise pollution are also controlled by prohibiting actions when weather is unsuitable, such as during inversions or stratification, or when the wind is blowing in the direction of nearby housing. Local

weather agencies such as flight services or U.S. Weather Service stations are contacted prior to initiating demilitarization. Quantities of ammunition to be burned or detonated are likewise limited for safety and environmental reasons. Typically, open burning and open detonation result in release of air and ground pollutants. Table 2-1 identifies typical emissions and contaminants resulting from the majority of demilitarization operations. Comparisons of the expected emissions and contaminants with the most restrictive Federal or state standards for FWDA, NADA, and UMDA are provided at Tables 4-2, 4-4, and 4-6, respectively. Demilitarization SOPs also describe accountability, quality assurance, and security requirements.

- Relationship of Alternatives to the Army Supply System

The level of baseline movement and demilitarization of conventional ammunition stocks from FWDA, NADA, and UMDA to various installations including HWAAP is expected to vary in response to Army-wide ammunition support requirements. However, the amount of baseline mission activity will be within the current capability as represented by the manpower levels, facilities, and environmental permit limits of each installation. These operations will continue concurrently with activities proposed to implement the BRAC action. The BRAC program specified in the Commission report for these installations will be executed over a five-year period from FY90 through FY95. During FY90 and FY91, environmental documentation and operational planning will be completed at FWDA, NADA, UMDA, and HWAAP.

Implementation of the BRAC program may cause variation in the volume of ammunition shipment and demilitarization at these installations before mission realignment or closure in 1995. Incremental levels above the baseline support of Army requirements are described in this chapter as the proposed action and the implementation alternatives. The proposed action project descriptions (number of manpower positions, size of operations, etc.) are based upon available information at the time. Army planning to meet DOD budget changes or mission realignments beyond those reflected in the Commission's report are not addressed in this document. During FY90 and FY91, the total conventional ammunition movements or demilitarization activities will not exceed current capability levels as permitted for baseline operations.

- Characteristics of Alternatives Common to Each Installation

The No Action alternative represents the activities and environmental consequences expected to occur if the present mission and activities of the identified installation continue without being realigned or closed pursuant to the requirements of the Base Closure and Realignment Act (the Act). These on-going operations are described for the recent past (1985 through 1989), the current period (1990), and the future as anticipated without the base realignment and closure (BRAC) action (1991 through 1995). The descriptions of the No Action alternative and the Affected Environment (Chapter 3) provide the baseline for analysis of the alternatives presented in Chapter 4. Congressional action to amend the Act is required to implement the No Action alternative.

Table 2-1. Emissions and Contaminants Generated by Open Burning/Open Detonation for Common Propellants and Explosives

Emission or Detonation Contaminant	<u>Process/Material (Lbs Emission/Ton Explosive Destroyed)</u>		
	Open Burning	Open Detonation	
	Propellant <sup>1</sup>	TNT <sup>2</sup>	CompB <sup>3</sup>
Carbon Dioxide (CO <sub>2</sub> )	2174.3	1948.4	1810.4
Nitrogen (N <sub>2</sub> ) <sup>4</sup>	3928.9	4173.9	4313.3
Carbon Monoxide (CO)	426.6	589.3	195.9
Water (H <sub>2</sub> O) <sup>4</sup>	535.5	319.4	455.5
Carbon Solids	0.0	0.0	0.0
Hydrogen (H <sub>2</sub> )	16.5	28.9	13.5
Methane (CH <sub>4</sub> )	0.0	7.6	0.008
Ammonia (NH <sub>3</sub> )	0.006	0.081	0.014
Liquid Lead Compounds	0.0	0.044	0.0
Potassium Hydroxide (KHO)	0.02	0.030	0.032
Elemental Lead (Pb)	0.0	0.067	0.067
Hydrogen sulfide (H <sub>2</sub> S)	0.0	0.002	0.002
Gaseous Lead Oxide (PbO)	0.0	0.0	0.028
Sulfur Dioxide (SO <sub>2</sub> )	0.004	0.0	0.004
Nitrogen Monoxide (NO)	0.0	0.0	0.030
Solid Lead Oxides	0.0	0.0	0.042
Oxygen (O <sub>2</sub> )	0.0	0.0	135.8
Potassium Hydroxide (KHO) Solids	0.0	0.0	0.0
Hydrogen Cyanide (CNH)	0.0	0.0	0.0

Note: See Tables 4-2, 4-4, and 4-6 for the comparison of expected emissions or contaminants from demilitarization with the most restrictive Federal or state standards.

Source: U.S. Army Toxic and Hazardous Materials Agency, 1990. Characterization and Quantification of Emissions Resulting from Projected Open Burning and Open Detonation Operations, Navajo Army Depot, Bellemont, Arizona.

<sup>1</sup> From Source, Table 12; <sup>2</sup> Source, Table 11; <sup>3</sup> Source, Table 10; data are worst case; <sup>4</sup> Cannot be considered a contaminant, presented for material balance only.

The proposed action at FWDA, NADA, and UMDA and the associated implementation alternatives are described in terms of three components: ammunition shipments, ammunition disposal (demilitarization), and potential reuse of real property. Various combinations of technical procedures, quantities of materiel, and timing of activities are common to implementation of the proposed action at each activity. The Army has reviewed and approved alternative approaches to determine operationally cost effective means of implementing the transfer of the ammunition storage missions from FWDA, NADA, and UMDA to HWAAP while responding to the changing requirements for ammunition support to the Army.

The Army considered shipment of all ammunition stocks from FWDA and NADA to HWAAP and other installations in one year; from UMDA to HWAAP in 2.75 years. Although the capability exists at FWDA and NADA to ship 100 percent and at UMDA to ship 36 percent of the serviceable ammunition in a single year, funding levels and other mission requirements throughout the logistical system dictate a lower volume of shipments from these depots. This alternative was not considered viable, as HWAAP could not accommodate the increased level of receipts anticipated from these installations along with other requirements for operational support within its current capability.

Another alternative considered movement of a smaller quantity of conventional ammunition each year through closure in 1995. Known resource requirements projected for ammunition redistribution throughout the logistical system before 1995 could reduce serviceable stocks at FWDA and NADA to negligible levels by 1994. Thus, this alternative of smaller shipments was not considered appropriate.

The currently available alternative disposal methods of unserviceable ammunition considered include varying combinations of: (1) technical processes (open burning/open detonation, washout of the explosive components by dissolving the explosive in water, use of explosives as boiler supplement feed stock, or biodegradation), (2) location (disposal on site, shipment of complete ammunition rounds to another site for disposal, or disassembly of the round on site and disposal of some components on-site while other components are shipped for disposal at another site), and (3) length of the program schedule.

Open burning disposal consists of burning propellants in welded stainless steel pans which are 4 feet wide, 16 feet long, and 1 foot deep. Open detonation of explosives takes place in open pits as specified in Standing Operating Procedures in accordance with safety, noise suppression, environmental regulations and permits.

Washout facilities at FWDA, NADA, and UMDA are environmentally unsafe and would require extensive cleanup and facility renovation. Boiler supplementation, while potentially useful for disposal of pelletized high explosives and propellants, is not likely to be a proven technology in time for BRAC implementation and could only handle a fraction of the materials requiring demilitarization. Likewise, biological methods are only speculative at this point.

Open burning/open detonation is the disposal method currently in use at FWDA, NADA, and UMDA. The other alternative methods of implementing the realignment and closure action do not minimize environmental effects or meet the cost efficiency purpose of the program and are not discussed further in this document.

- **Mitigation**

The Army actions to minimize the potentially adverse impacts resulting from the preferred and other implementation alternatives as identified and described in Chapter 4 of the EIS for FWDA (Section 4.1.18), NADA (Section 4.2.18), UMDA (Section 4.3.18), and HWAAP (Section 4.4.18) will be based upon the following:

- **Biological Environment**

- An intensive threatened and endangered species survey of FWDA before real property disposal.
- An intensive threatened and endangered species survey of NADA, before return of the land to USFS administration should this real property disposal alternative be selected.

- **Cultural Resources**

- Implementation of the Programmatic Agreement among the U.S. Army, the Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers (February, 1990) for each installation.
  - Implementation of the Memorandum of Agreement between the U.S. Army and New Mexico State Historic Preservation Officer for closure of FWDA.
  - Implementation of the Memorandum of Agreement between the U.S. Army and the Arizona State Historic Preservation Officer for closure of NADA.
- The ongoing Installation Restoration Program, while independent of this BRAC action, will include measures which mitigate the effects of the proposed action upon the following resource areas at each installation.
    - Land use
    - Water quality
    - Soil contamination



## 2.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

Fort Wingate Depot Activity (FWDA) is located in the foothills of the Zuni Mountains, approximately 32 miles east of the Arizona/New Mexico border and 8 miles east of Gallup, McKinley County, New Mexico (Figure 2-1).

Operations at FWDA are under the direction of the Office of the Commander and are divided among the Support Division, the Mission Division, and the Quality Assurance Division. In addition to the ammunition storage activity, FWDA currently provides space for three tenants: (1) the U.S. Army Medical Department Activity (MEDDAC) Occupational Health Clinic, (2) the U.S. Army Information Systems Command (USAISC), and (3) the U.S. Department of Agriculture (USDA).

### 2.1.1 NO ACTION ALTERNATIVE

This section describes the current mission activities at FWDA. The current environmental and socioeconomic conditions at FWDA are discussed in Section 3.1.

The current mission assigned FWDA is to provide three functions as a reserve storage depot activity: (1) provide facilities for the storage of materiel, mainly, inert and explosive ammunition components, and other commodities such as Defense Logistics Agency (DLA) strategic and critical materiel; (2) ship and receive materiel, primarily by rail or truck transport; and (3) demilitarize and dispose of obsolete or deteriorated explosives and ammunition.

The level of activity associated with the ammunition supply mission varies within the capability defined by staffing and facilities. FWDA is currently authorized 2 military and 92 civilian positions. Since 1978, civilian staffing has averaged about 86, reached a peak of 104 in 1983, and has been about 82 since 1986. Direct operational support facilities include a transportation and handling network with 22 miles of rail and 150 miles of roads, seven general supply warehouses, 731 earth covered ammunition igloos, 12 above ground ammunition storage magazines, 22 ammunition workshop buildings, and an open burning and open demolition area. These staffing levels and facilities result in a current capability mix for conventional ammunition movement, storage, and demilitarization of about 28,000 tons (movement assumed without demilitarization) or 3,800 tons (demilitarization without movement). Workload capabilities are balanced by mission mix each year not to exceed the total mission capability between these two extremes.

The movement capability associated with these staffing and facility capabilities over the past five years has been about 26,000 tons of ammunition per year based upon the limited demilitarization program. However, ammunition shipments to and from FWDA are variable and contingent upon changes in the various Army missions supported by FWDA. Table 2-2 highlights recent historic movements of ammunition to and from the depot. Due

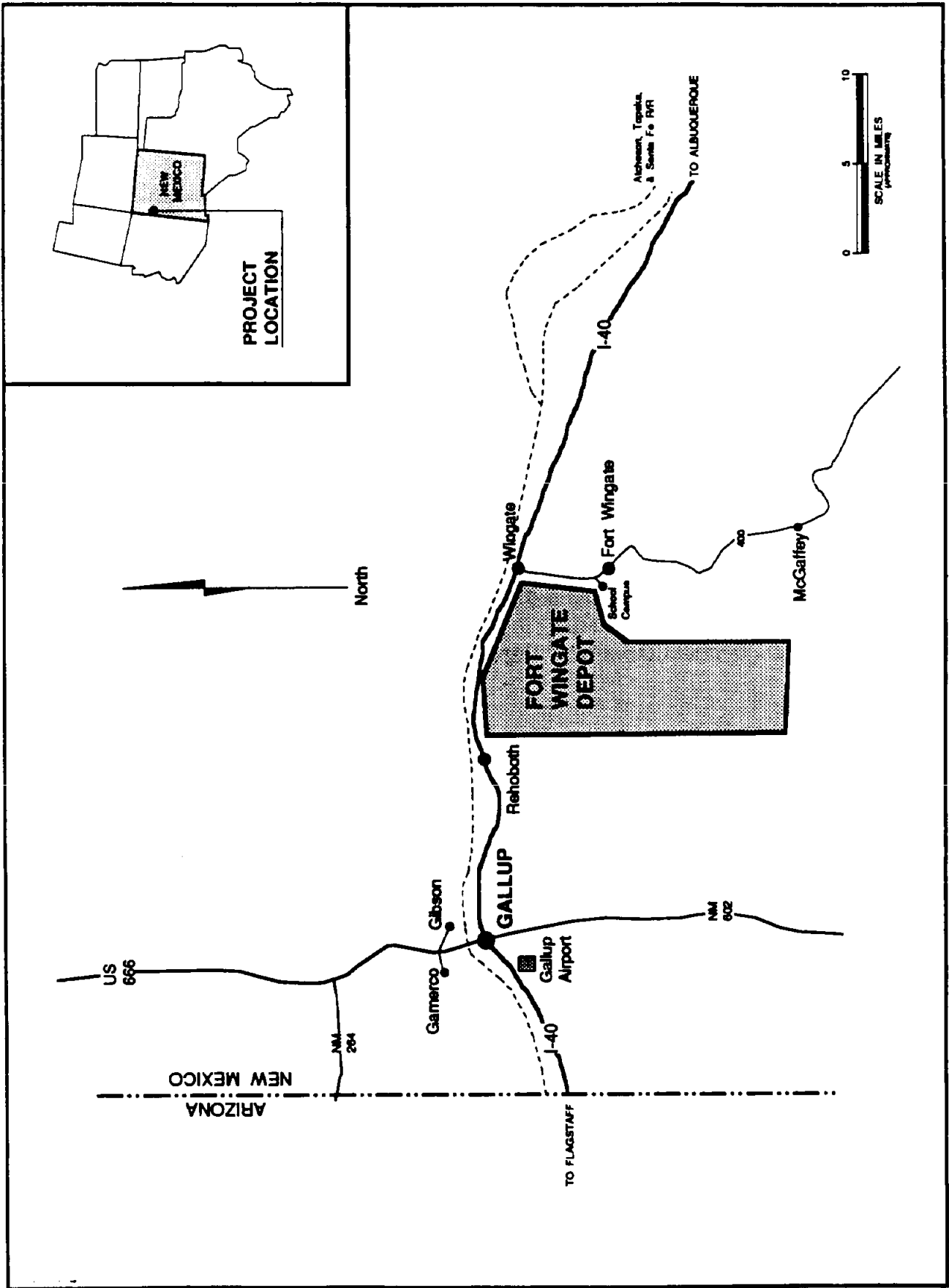


Figure 2-1. Fort Wingate Depot Activity Location.

Table 2-2. Historic Movements of Ammunition to and from FWDA.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
90	0	11	11
89	1	4	5
88	8	4	12
87	10	4	14
86	1	5	6
85	2	10	12

Source: Standard Depot System, Program Status, Depot System Command (DESCOM), September, (Applicable Fiscal Year).

to the variability of Army requirements for ammunition shipments, baseline projections of conventional ammunition movements during FY91-95 are the current capacity to process up to 26,000 tons of ammunition per year.

Transportation of explosives is strictly governed by Department of Transportation (DOT) and Army regulations cited in the introduction to this chapter. Local installation SOPs exist for ammunition transportation within FWDA, including transportation to the demilitarization activities. Before exiting FWDA, loaded transport units are inspected to assure proper loading, placarding and bracing, and to assure that the quantity of explosives, and number of authorized operators and transients is not exceeded.

The transportation routes to the destination points are determined by the carriers. Ammunition from FWDA is primarily transported to Crane Army Ammunition Plant, Indiana; Hawthorne Army Ammunition Plant, Nevada; Lexington-Blue Grass Army Depot, Kentucky; Red River Army Depot, Texas; Savanna Army Depot, Illinois; Seneca Army Depot, New York; Sierra Army Depot, California; and Tooele Army Depot, Utah. The majority of ammunition moved from FWDA in FY90 has gone by truck.

Available records for the past 12 years indicate no accidents involving commercial shipping of hazardous materials from FWDA. The FWDA fire department is currently available for emergency response at and near FWDA. While there is no active hazardous materials team at FWDA, fire department personnel could provide emergency apparatus in the event of release of hazardous materials on FWDA or surrounding area. Fire

department crews also are available to assist local federal, state or county agencies in the event of a hazardous materials spill on or near FWDA.

The ammunition disposal facilities include an open burning area and open detonation pits for demilitarization operations which are authorized by the Environmental Protection Agency (EPA) at single event levels of 5,000 pounds of explosive above ground or 10,000 pounds of explosive with earth cover. The 1988 Resource Conservation and Recovery Act (RCRA) Part B permit application filed with the EPA sought authorization for up to 2,000 tons to be disposed of annually by open burning and open detonation. However, open burning is also governed by a state permit which is renewed every six months with the New Mexico Environmental Improvement Division (NMEID) for the expected disposal quantity. The five-year open burning/open detonation (OB/OD) history for FWDA between 1985 and 1989 is 1, 580, 489, 114, and 727 tons, respectively (Standard Depot System, Program Status, DESCOM, September, Applicable Fiscal Year). Currently, FWDA has the capability to perform one above ground detonation (maximum 2,000 pounds of explosives) and one burn (1 pan maximum, 1,000 pounds of explosives) per day, four days per week. FWDA will request demilitarization limits of 2,000 tons for baseline operations during the next NMEID permit period, which is within the current RCRA Part B permit application limits and represents the current demilitarization component of the baseline mission capability.

Factors that affect detonation scheduling are wind speed, wind direction, temperature, temperature gradients, visibility, and ceiling. OB/OD operations are permitted only during daylight hours, and when wind speeds are between 4 and 15 miles per hour; wind direction confines dense clouds of smoke within the installation boundaries; ceiling exceeds 1,000 feet; and visibility exceeds 5 miles. The Quality Assurance Officer is responsible for visual surveillance for aircraft before and during detonation. The Gallup Flight Service must be notified to obtain weather and aircraft activity information at least 12 hours and again at 2 hours before scheduled detonation or burning. The area must also be searched or scanned for personnel and livestock activity. Before burning, the NMEID must also be notified.

## **2.1.2 PROPOSED ACTION**

This section describes the proposed action at FWDA. The environmental and socioeconomic consequences of the proposed action and implementation alternatives are discussed in Section 4.1.

The Act mandates closure of FWDA be initiated by September, 1991 and closed by September 30, 1995. Sufficient storage capability has been identified at other depots to accept the ammunition mission currently at FWDA. This mission was recommended to be relocated to Hawthorne Army Ammunition Plant, Nevada. Defense Logistics Agency (DLA) strategic and critical stocks of fluorspar stored at FWDA will not be relocated as a BRAC action. Reuse of the real property following closure of FWDA will require remediation of those sites regarded as environmental hazards through the ongoing DERP.

### **2.1.2.1 Preferred Implementation Alternative**

This alternative balances the movement of ammunition stocks and demilitarization of unserviceable ammunition at FWDA with respect to requirements and capabilities throughout the Army logistical system. The Army would move and dispose of ammunition in accordance with existing guidelines and capability levels at FWDA. By the end of FY92, 91 civilian and 2 military manpower positions would be eliminated and 2 civilian positions would be transferred to another Army installation. As a result, FWDA would be ready for closure by May 1992.

**Ammunition shipments.** The movement and disposal of ammunition stocks at FWDA would be accomplished to the extent practicable by balancing the ammunition support workload at depot activities throughout the Army. This requires some types of ammunition to be shipped to installations other than HWAAP. As of September 1990, about 20,000 tons of ammunition are estimated to be shipped from FWDA in the course of continuing Army support and as a direct result of closing FWDA (Table 2-3). The shipments would be scheduled along with the demilitarization program so as to remain within the current capability total limits of 28,000 tons per year. Ammunition transportation would be by truck or rail, whichever method is the most cost efficient.

**Ammunition disposal.** The Army plans to dispose of 500 tons of miscellaneous ammunition at FWDA during FY92 using current demilitarization procedures of open burning, open detonation, and surplusing to the Defense Reutilization and Marketing Office. FWDA would also renew its semi-annual permit from NMEID, as it has in the past, to accomplish this annual level.

**Real property reuse.** The Army plans to dispose of FWDA real property by the end of September, 1995. As of this FEIS, the Army has not determined a preferred alternative and no recommendations for disposal of real property are presented since baseline studies to identify suitable new development tenants are not completed. The Army's goal is to restore FWDA property to unrestricted use within the limits of the best available technology. The Army would provide caretaker services until the property is disposed of in accordance with existing real property procedures. Alternative land disposal scenarios and potential future uses for FWDA real property are not discussed in detail in this EIS but will be addressed in additional NEPA analysis as required apart from the mission closure action.

### **2.1.2.2 Other Potential Real Property Reuse Alternatives**

This section lists land disposal scenarios to include the possible preferred implementation alternative and other potential future uses for FWDA real property. These potential future uses were developed during the initial scoping process. All interested parties were provided the opportunity to suggest alternative uses such as the following:

- Return of the 6,000 woodland acres to the public domain and the Bureau of Land Management (BLM) administration.

Table 2-3. Planned Movement of Ammunition to and from FWDA<sup>1</sup>.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
95	0	0	0
94	0	0	0
93	0	0	0
92	0	0	0
91	0	20	20

Source: Standard Depot System, Ammo Lot File Summary, DESCOM, May 1990.

<sup>1</sup> Total planned movements (baseline plus BRAC-related).

- Transfer of the 6,000 woodland acres to the USDA or U.S. Forest Service (USFS).
- During the initial scoping process, Native Americans suggested conveyance of 6,000 woodland acres to a Native American tribe (e.g., Zuni, Navajo) contingent upon appropriate Congressional and other administrative actions. At the request of the Navajo tribe, representatives of the Department of Defense (DOD) and the Army met with representatives of the Navajo Tribe to discuss the tribe's interest in obtaining all of the base property. Tribal representatives were encouraged by DOD to present their preliminary economic development plan to Gallup and McKinley County officials, as joint participants in the Fort Wingate Reuse Commission.
- Sale or lease of developed acreage (excluding hazardous and toxic materials and unexploded ordnance contaminated areas) for such uses as:
  - USDA support of the Navajo Tribe food distribution program.
  - New Mexico National Guard training center.
  - Substance and alcohol abuse treatment facility.
  - Prison facility.
  - Light industrial manufacturing.
  - Gallup airport relocation and expansion site.

- Cultural resources research/curation facility.
- Interim storage of low level nuclear waste.
- U.S. Air Force flight training and portable runway installation.
- Wildlife preserve.
- Ammunition storage (compatible use).

Disposal of those sites identified as potentially contaminated (USATHAMA, March 1990) would be deferred until any environmental restoration actions, associated with the Base Closure Process, have been completed. The disposal actions are subject to additional environmental impact analysis.

## **2.2 NAVAJO DEPOT ACTIVITY, ARIZONA**

Navajo Depot Activity (NADA) is located in Coconino County, Arizona, 12 miles west of Flagstaff and 17 miles east of Williams (Figure 2-2). Operations at NADA are under the direction of the Office of the Commander and provided by the Supply, Ammunition, and Transportation Division and the Administrative/Services Division. NADA has nine tenant activities: (1) the Wherry Housing Complex, (2) the U.S. Post Office, (3) the USFS Fire Tower, (4) the Luke Air Force Base Post Exchange (seasonal), (5) the U.S. Army Information Systems Command, (6) the Defense Mapping Agency, (7) the 157th Ordnance Battalion (Arizona Army National Guard (AZNG)), (8) the U.S. Air Force (USAF) Ground Wave Emergency Network Tower, and (9) the Defense Investigative Service.

### **2.2.1 NO ACTION ALTERNATIVE**

This section describes the current mission activities at NADA. The current environmental and socioeconomic conditions at NADA are discussed in Section 3.2.

The primary mission of NADA is to provide three functions as a reserve storage depot activity: (1) to provide facilities for the storage of materiel, mainly, inert and explosive ammunition components, and other commodities such as DLA strategic and critical materiel; (2) to ship and receive materiel, primarily by rail or truck transport; and (3) to demilitarize and dispose of obsolete or deteriorated explosives and ammunition. The secondary mission is to support reserve component training.

On June 1, 1982 accountability and responsibility for the real property at NADA was transferred to the United States Property and Fiscal Officer (USPFO), State of Arizona, Arizona National Guard (AZNG). At the same time, a license was granted to the State of Arizona acting by and through the Adjutant General to use and occupy NADA on behalf of the Department of the Army, subject to and in accordance with an Interservice Support Agreement (ISSA) between USPFO for Arizona and the Commander, Tooele Army Depot. Since that time, training activities have steadily increased. In 1987, the National Guard Bureau (NGB) prepared an Environmental Assessment for the construction of a 600-person

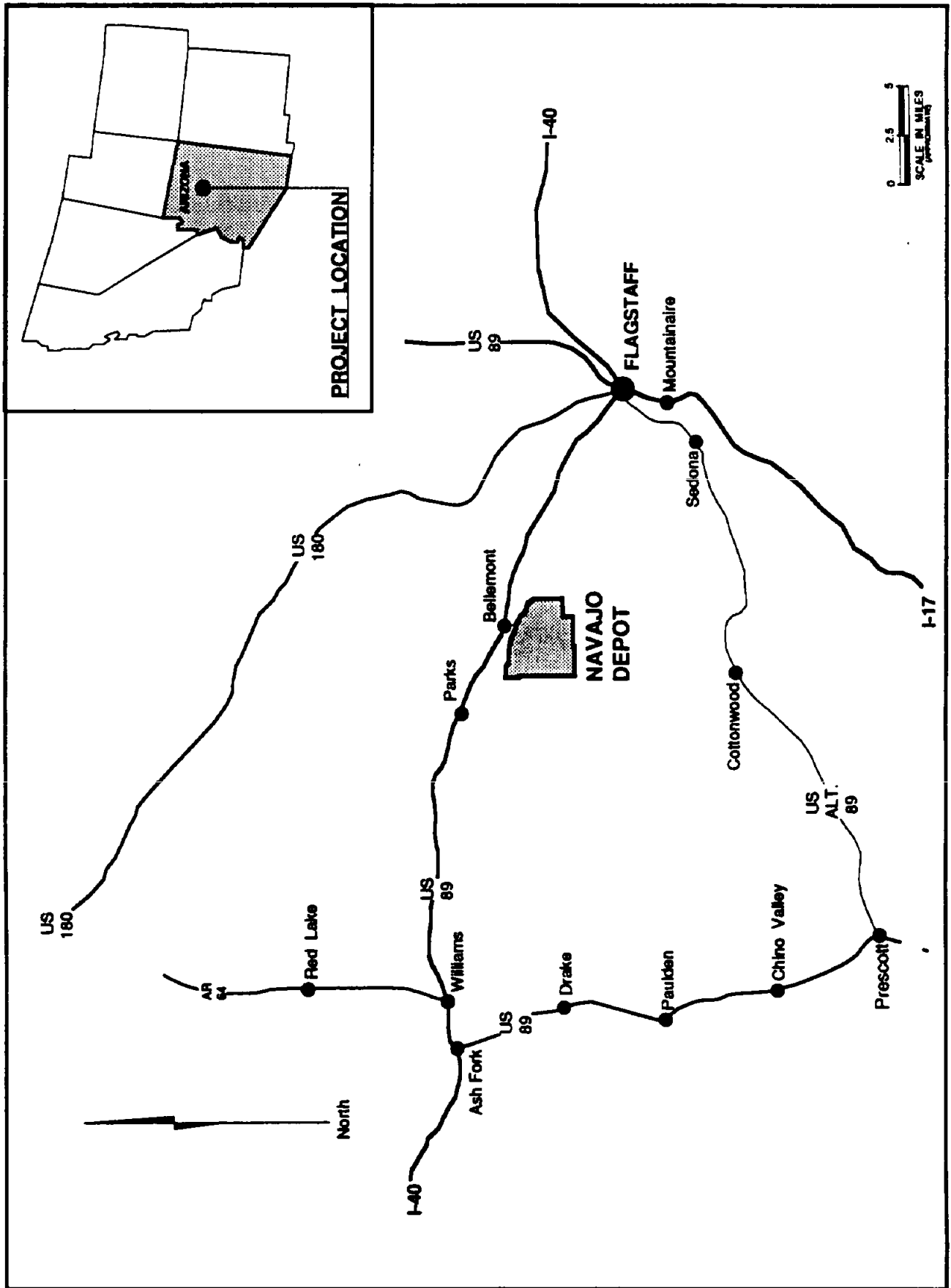


Figure 2-2. Navajo Depot Activity Location.



consolidated training facility. Subsequently, the NGB approved \$7.4 million for construction and provided funds for the design. Construction is scheduled for FY92; however a schedule change to FY91 is being considered. The Environmental Assessment is being revised to reflect a site revision. These proposed activities are not a part of the BRAC action described in this document.

The level of activity associated with the ammunition storage mission varies within the capability defined by staffing and facilities. NADA supports the current mission with 120 Arizona state employee positions and an Army Materiel Command (AMC) liaison team which is authorized 4 civilian positions. Since 1982, the staffing of these positions has averaged about 113 but has ranged up to the full authorization (120). Direct operational support facilities include a transportation and handling network with 38 miles of rail and 227 miles of roads, three general supply warehouses, 776 earth covered ammunition igloos, 12 above ground ammunition storage magazines, seven ammunition workshop buildings, and an open detonation/open burning area. These staffing levels and facilities result in a current mission mix capability for conventional ammunition movement, storage, and demilitarization of about 43,500 tons (movement assumed without demilitarization) or 8,000 tons (demilitarization without movement). Workload capabilities are balanced by mission mix each year not to exceed the total mission capability between these two extremes.

The movement capability associated with these staffing and facility capabilities over the past five years has been just over 43,500 tons of ammunition per year based upon the limited demilitarization program. However, ammunition shipments to and from NADA are variable and contingent upon changes in the various Army missions supported by NADA. Table 2-4 highlights recent historic movements of ammunition to and from the depot. Due to the variability of Army requirements for ammunition shipments, baseline projections of conventional ammunition movements during FY91-95 are the current capacity to process up to 43,500 tons of ammunition per year.

Table 2-4. Historic Movements of Ammunition to and from NADA.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
90	5	23	28
89	11	16	27
88	16	14	30
87	3	7	10
86	6	16	22
85	4	32	36

Source: Standard Depot System, Program Status, DESCOM, September (Applicable Fiscal Year).

Transportation of explosives is strictly governed by DOT and Army regulations cited in the introduction to this chapter. Local installation SOPs exist for ammunition transportation within NADA, including transportation to the demilitarization activities. Before exiting NADA, loaded transport units are inspected to assure proper loading, placarding and bracing, and to assure that the quantity of explosives, and number of authorized operators is not exceeded.

The transportation routes to the destination points are determined by the carriers. Ammunition is transported from NADA to Hawthorne Army Ammunition Plant, Nevada; Red River Army Depot, Texas; Sierra Army Depot, California; Tooele Army Depot, Utah; and Lexington-Blue Grass Army Depot, Kentucky. Ammunition moved from NADA in FY90 has been evenly distributed between truck and rail.

Available records indicate that there has been one accident involving a shipment of hazardous materials by commercial carrier. In 1989, a commercial carrier bound for NADA from Kelly Air Force Base via Yuma Proving Ground crashed and burned north of Black Canyon City, approximately 100 miles south of NADA on Interstate 17. An emergency response team was dispatched from NADA, and in conjunction with local police explosive teams and the EOD team from Fort Huachuca, the unexploded ordnance was disposed of properly.

The NADA fire department is currently available for emergency response at and near NADA. There is no active hazardous materials team at NADA. Depot fire department personnel could provide emergency breathing apparatus in the event of release of hazardous materials into the air or assist USFS, the City of Flagstaff, or Williams' fire department crews in the event of a hazardous materials or an ammunition spill on or near NADA. A contingency plan exists for highway ammunition spills which was successfully implemented in the 1989 accident. NADA has a reciprocal agreement with the City of Flagstaff through which the City would provide its hazardous materials team in the event of an emergency.

The ammunition disposal facilities include an open burning area and open detonation pits for demilitarization operations which are authorized by the EPA at single event levels of 5,000 pounds of explosive above ground or 10,000 pounds of explosive with earth cover. The Part B RCRA permit application filed with the EPA also specifies daily disposal levels (net explosive weight) up to 140,000 pounds by open detonation and up to 4,000 pounds per day by open burning. However, OB/OD is also governed by an air quality permit which is renewed annually with the Arizona Department of Environmental Quality (ADEQ) for the expected disposal quantity. Before 1990, the air quality permit did not specify quantity limits for OB/OD. However, the 1990 application specifies emission levels representing about 730 tons disposed of by open burning and 25,550 tons disposed of by open detonation. The five-year OB/OD history for NADA between FY85 and FY89 is 255, 439, 109, 231, and 17 tons, respectively (Standard Depot System, Program Status, DESCOM, September, Applicable Fiscal Year). NADA currently performs up to 14 aboveground detonations (maximum 2,000 pounds of explosive per detonation) and 1 burn (maximum 4,000 pounds of explosive) per day, up to 7 days per week. All OB/OD is performed within a one hour period with a maximum workload of 252 shifts per year.

Factors that affect detonation scheduling are wind speed, wind direction, temperature, temperature gradients, visibility, and ceiling. OB/OD operations are permitted only during daylight hours, and when wind speeds are between 3 and 15 miles per hour; wind direction confines dense clouds of smoke within the installation boundaries; ceiling exceeds 2,000 feet; and visibility of 1 mile or more.

The air traffic control tower at Pulliam airport in Flagstaff must be notified to obtain weather and aircraft activity information before scheduled detonation or burning. NADA demilitarization operations are reviewed annually by the ADEQ. NADA is performing demilitarization operations under interim status authorization, 40 CFR Part 265, pending final EPA approval of its RCRA permit.

## 2.2.2 PROPOSED ACTION

This section describes the proposed action at NADA. The environmental and socioeconomic consequences of the proposed action and implementation alternatives are discussed in Section 4.2.

The Act mandates that closure of NADA be implemented by September, 1991 and completed by September 30, 1995. The Commission also anticipated NADA's eventual transfer to the Arizona National Guard. Sufficient storage capability has been identified at other depots to accept NADA's ammunition mission. This mission was recommended to be relocated to HWAAP, Nevada. DLA strategic and critical stocks of rubber, tannin, and mercury stored at NADA will not be relocated as a BRAC action. Closure of NADA will require remediation of environmental hazards before the facility can be considered for unrestricted land use. Reuse of the real property following closure of NADA will require completion of the ongoing DERP remediation of environmental hazards.

### 2.2.2.1 Preferred Implementation Alternative

This alternative balances the movement of ammunition stocks and demilitarization of unserviceable ammunition at NADA with respect to requirements and capabilities throughout the Army logistical system. The Army would move and dispose of ammunition in accordance with existing guidelines and capability levels at NADA. There would be no DOD personnel eliminations or transfers before FY93. By the end of FY93, 4 Army civilian manpower positions would be eliminated. Termination of the mission support contract with the AZNG in FY94 would result in the reduction of NADA work force by 120 Arizona state employee positions. As a result, NADA would be ready for the ammunition support mission closure by September 30, 1995.

**Ammunition shipments.** The movement and disposal of ammunition stocks at NADA would be accomplished to the extent practicable by balancing the ammunition support workload at depot activities throughout the Army. Balancing the workload requires some types of ammunition to be shipped to installations other than HWAAP although it is the primary receiving installation. As of the end of September 1990, about 24,000 tons of

ammunition are estimated to be shipped from NADA in the course of continuing Army support and as a direct result of closing the ammunition support mission at NADA in 1995. The shipments would be scheduled along with the demilitarization program during FY91-94 so as to remain within the current shipment plus demilitarization capability limits of 44,000 tons per year (Table 2-5). Ammunition transportation would be by truck or rail, whichever method is the most cost efficient.

Table 2-5. Planned Movements of Ammunition to and from NADA<sup>1</sup>.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
95	0	0	0
94	0	0	0
93	0	0	0
92	0	0	0
91	0	24	24

Source: Standard Depot System, Ammo Lot File Summary, DESCOM; May 1990.

<sup>1</sup> Total planned movements (baseline plus BRAC-related).

**Ammunition disposal.** The Army plans to dispose of unserviceable ammunition on site to the maximum extent practicable using current demilitarization procedures of open burning and open detonation. This approach is cost efficient and precludes shipping unserviceable ammunition to an installation which may not be authorized to perform the demilitarization operations. However, some unserviceable ammunition requiring specialized disposal facilities would be transferred to installations with these facilities for subsequent demilitarization or other disposition.

Over the next four years, (FY91-94), about 18,000 tons of unserviceable ammunition are expected to be detonated and/or burned. As movement of ammunition declines, the capability for demilitarization will increase to about 8,000 tons, which although is an increase from the FY86 level of approximately 439 tons, is within the 1990 ADEQ permit limits, the RCRA permit limits, and total NADA current mission capability. An estimated

6,400 tons of ammunition would be demilitarized on NADA in FY91, 7,300 tons in FY92, 3,300 during FY93, and 1,000 in FY94.

**Real property reuse.** The Army prefers to amend the license with the State of Arizona to provide a term consistent with the expiration of the current land withdrawal and restate the primary purpose as training and support of the AZNG by the end of September 1995.

#### **2.2.2.2 Other Potential Real Property Reuse Alternatives**

This section lists alternative land disposal scenarios and potential future uses for NADA real property in addition to the preferred implementation alternative:

- Return the land to the USFS. Under this alternative, 90 percent of NADA could return to USFS administration, in accordance with the terms of the 1942 withdrawal. The remaining ten percent of the property (held in fee title) could be sold or transferred through the General Services Administration disposition procedures.
- Joint management by the AZNG and the USFS. This alternative was discussed by the AZNG and the USFS during the scoping process. This alternative would result in the AZNG remaining at the depot and continuing to operate the depot as a training site.

Disposal of contaminated sites (USATHAMA, March 1990), would be deferred to follow the IRP actions at NADA. The Army and/or AZNG as appropriate would fence and secure contaminated areas until hazardous and toxic materials remediation and unexploded ordnance disposal have been accomplished or until it is determined that these lands cannot be conveyed and are restricted from disposal action. The disposal actions are subject to additional environmental impact analysis.

### **2.3 UMATILLA DEPOT ACTIVITY, OREGON**

The Umatilla Depot Activity (UMDA) is located between Boardman and Irrigon which are about 15 miles to the west of UMDA in Morrow County and Umatilla, Hermiston, Stanfield, and Echo which are about 10 to 14 miles to the east of UMDA in Umatilla County in northeastern Oregon (Figure 2-3). Operations at UMDA are under the direction of the Office of the Commander and provided by the Mission Division, Installation Support Division, Quality Assurance Division, Surety Office, and Safety Office. UMDA also has seven tenant activities: (1) the U.S. Army Health Services Command, (2) the U.S. Army Information Systems Command, (3) the Oregon National Guard, (4) the U.S. Navy, (5) the Oregon State Department of Fish and Wildlife, (6) the U.S. Postal Service, and (7) the Defense Logistics Agency.

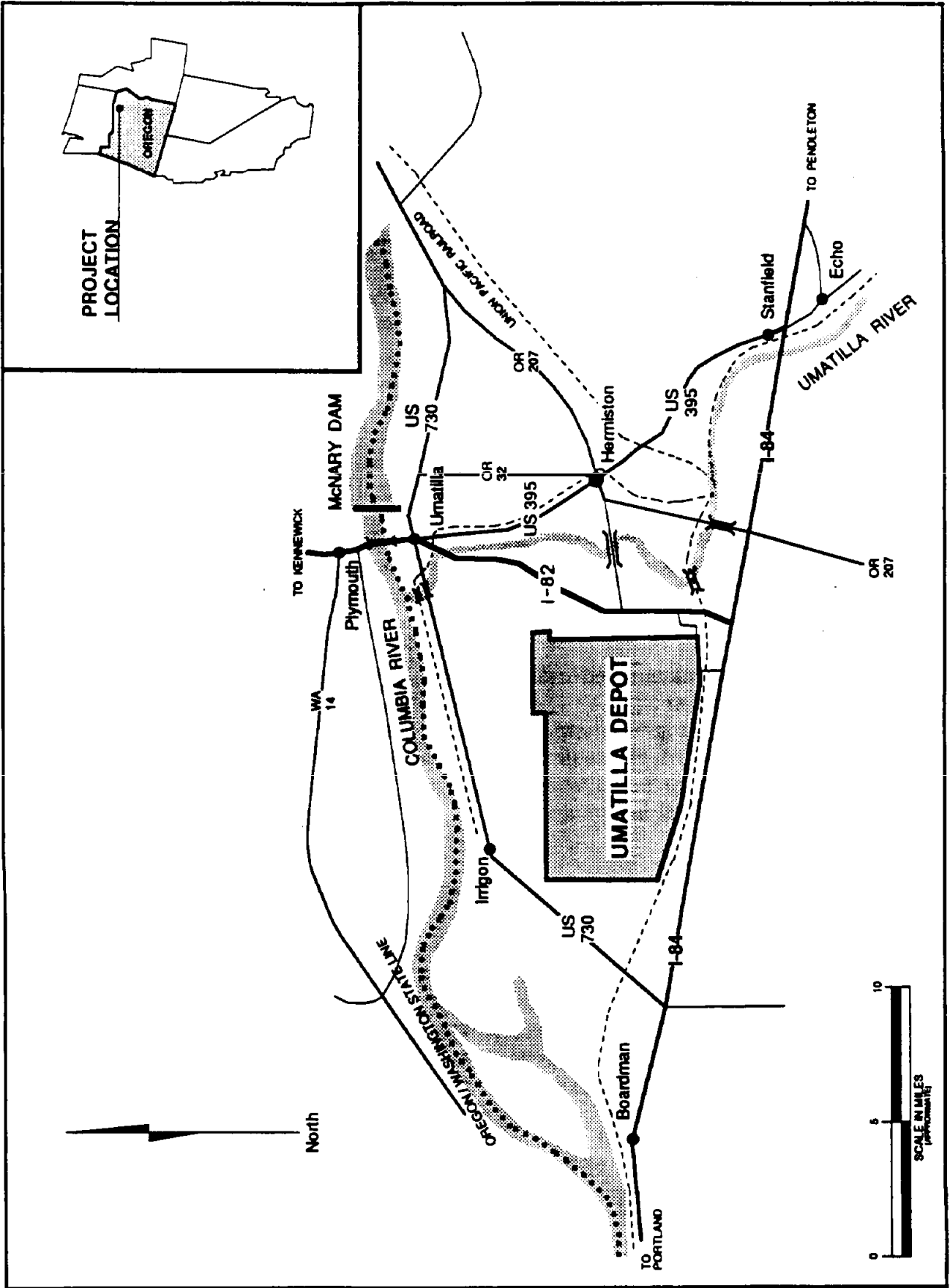


Figure 2-3. Umatilla Depot Activity Location.

### 2.3.1 NO ACTION ALTERNATIVE

This section describes the current mission activities at UMDA. The current environmental and socioeconomic conditions at UMDA are discussed in Section 3.3.

The primary mission of UMDA is to provide three functions as a reserve storage depot activity: (1) provide facilities for the storage of materiel, mainly inert, empty, and explosive conventional and chemical ammunition and component parts, and other commodities such as Defense Logistics Agency (DLA) strategic and critical materiel; (2) ship and receive materiel, primarily by rail or truck transport; and (3) demilitarize and dispose of obsolete or deteriorated explosives and conventional ammunition.

The level of activity associated with the ammunition storage mission varies within the capability defined by staffing and facilities. The installation was authorized 9 military and 243 civilian positions of which the HSC and USAISC had a combined total of 5 civilian and 6 military authorizations in support of UMDA's mission in 1989. Since 1978, civilian staffing has averaged about 258, reached a peak of 286 in 1984, and has been slightly less than 240 since 1988. Current (May 1990) strength is 224 civilian and 3 military; HSC and USAISC have a total of 6 civilian and 6 military. Direct operational support facilities include a transportation and handling network with 51 miles of rail, 194 miles of roads, and an airfield with a 3,000 foot runway, 38 general supply warehouses, 1,001 earth covered ammunition igloos, 14 above ground ammunition storage magazines, 13 ammunition workshop buildings, and a demolition and burning area. These staffing levels and facilities result in a current capability mix for conventional ammunition movement, storage, and demilitarization of about 13,000 tons (movement assumed without demilitarization) or 1,300 tons (demilitarization without movement). Workload capabilities are balanced by mission mix each year not to exceed the total mission capability between these two extremes.

The portion of these staffing and facilities dedicated to ammunition movement provides a current capability of about 13,000 tons of ammunition per year based upon the limited demilitarization program. However, ammunition shipments to and from UMDA are variable and contingent upon changes in the various Army missions supported by UMDA. Table 2-6 highlights recent historic movements of ammunition to and from the depot. Due to the variability of Army requirements for ammunition shipments, baseline projections of conventional ammunition movements during FY91-95 are the current capacity to process up to 13,000 tons per year.

Transportation of explosives is strictly governed by Department of Transportation (DOT) and Army regulations cited in the introduction to this chapter. Local installation SOPs exist for ammunition transportation within UMDA, including transportation to the demilitarization activities. Before exiting UMDA, loaded transport units are inspected to assure proper loading, placarding, and bracing, and to assure that the quantity of explosives, and number of authorized operators is not exceeded.

The transportation routes to the destination points are determined by the carriers. Ammunition is transported from UMDA to Hawthorne Army Ammunition Plant, Nevada;

Table 2-6. Historic Movements of Ammunition to and from UMDA.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
90	0	11	11
89	16	11	27
88	12	5	17
87	5	10	15
86	3	10	13
85	2	12	14

Source: Standard Depot System, Program Status, DESCOM, September, Applicable Fiscal Year.

Red River Army Depot, Texas; Sierra Army Depot, California; Tooele Army Depot, Utah; and Lexington-Blue Grass Army Depot, Kentucky. The majority of the ammunition moved from UMDA in FY90 has gone by rail.

Local emergency response policies for accidents and incidents involving transport of hazardous substances are formulated in accordance with the DOT and Army regulations cited in the introduction to this chapter. In addition to the procedures for emergencies involving the transportation of hazardous substances, a chemical accident and incident control plan for UMDA exists, and it is periodically reviewed, updated, and tested by UMDA personnel. The plan prescribes policies, responsibilities, and procedures to control a chemical accident or incident and to minimize the hazardous effects if one should occur. Items such as evacuation, hospitalization, and warning procedures are also discussed. In the period for which records exist, no accidents or incidents have occurred with transportation of either chemical or other hazardous substances. The only known accidental explosion occurred in 1944 when bombs being stacked inside a magazine detonated.

The ammunition disposal facilities for demilitarization include an open burning area and open detonation pits which are operated under interim status. The Part B RCRA permit application filed with the EPA estimates annual disposal levels up to 188 tons by open burning and 25.5 tons by detonation. However, the RCRA permit application states that the open burning/open detonation quantity limit is governed primarily by an air quality permit which is renewed annually with the Oregon Department of Environmental Quality (ODEQ) for the expected disposal quantity. This air quality permit does not specify



quantity limits for open burning/open detonation, but it prohibits burning of any material containing beryllium, restricts operations to favorable weather, and limits the quantities for a single event to that which precludes a dense smoke plume beyond the depot boundaries.

Demilitarization of ammunition at UMDA has been a continual activity since the installation was established in the early 1940's. Total quantities are available for UMDA's demilitarization program only for the past four years; open burning/detonation is used only for conventional ammunition and comprised 61 short tons in FY86, 976 tons in FY87, 621 tons in FY88, and 2,194 tons in FY89 (Standard Depot System, Program Status, DESCOM, September, Applicable Fiscal Year).

Demilitarization at UMDA is carried out under a series of permits and SOPs which are tailored to local environmental characteristics. For example, open burning takes place in 10 standard welded stainless steel trays, oriented so that burning occurs against the wind. Limits on open burning, in addition to those imposed by the air quality consideration in the ODEQ permit, are 1,000 pounds of propellant per tray, and a total of 10,000 pounds in any given burning event. Burning of unserviceable explosive contaminated packing and crating material will be in manageable piles not to exceed 7 cubic yards.

Open detonation takes place in pits approximately 4 feet deep; ammunition is covered with about 2 feet of earth. Installation SOPs limit open detonation to 100 pounds of explosive material, including material used to start the detonation, per pit. The number of pits per demilitarization event is limited by the general air contaminant discharge conditions in the permit and practical considerations only. Approximately 30 pits per 10-hour working day is the average production. An hour must elapse between each event. At present, about 125 pounds of explosive material per pit is used, and excessive noise and particulate emissions have not been noted to escape the installation boundaries. Approximately 140 to 180 days per year typically are suitable for detonation. Inert (non-energetic) materials from demilitarized ammunition include cartridge shell casings. Typically only about 16 percent of the total round weight, usually the cartridge casing, is scavenged for recycling.

The Air Contaminant Discharge Permit conditions require UMDA to report to ODEQ annually on quantities of materiel demilitarized during the reporting year. ODEQ has access to UMDA for inspections, sampling and data collecting, and reviewing and copying of air contaminant discharge records. UMDA obtains written approval from ODEQ before adding any new source of air contaminant emissions; changing existing sources so as to significantly affect air contaminant emissions; making physical changes that increase emissions; or changing permitted methods of operation, processes, fuel use, or duration of operations so as to increase emissions. UMDA also provides 24 hour notice to ODEQ before shutting down air pollution control equipment for maintenance if the shutdown could cause violation of standards. If air pollution control equipment malfunctions or other conditions occur that might cause violation of standards, UMDA is required to notify ODEQ within one hour of the occurrence or discovery of it and give notice of the nature and quantity of the increased emissions and an estimate of the expected duration of the breakdown.

## 2.3.2 PROPOSED ACTION

This section describes the proposed action at UMDA. The environmental and socioeconomic consequences of the proposed action and implementation alternatives are discussed in Section 4.3.

The Act mandates that UMDA initiate a mission realignment by September, 1991 to be completed by September 30, 1995. Sufficient storage capability has been identified at other depots to accept the ammunition mission currently at UMDA. This mission was recommended to be relocated to Hawthorne Army Ammunition Plant, Nevada. DLA strategic and critical stocks of ferrochromium and chromite ore, lead and zinc ingots, and reserve equipment withdrawn from normal service and stored at UMDA will not be relocated as a BRAC action.

The Commission did not recommend closure of UMDA because of the on-going chemical demilitarization (CHEM DEMIL) mission. This mission precluded closure because the Army cannot begin on-site destruction of chemical munitions until December, 1996 with an expected completion date which falls outside of the allowed time frame for completing closures. UMDA will be realigned to the maximum extent practical in order to facilitate closure as soon as the CHEM DEMIL mission is complete. The CHEM DEMIL mission and subsequent closure actions are beyond the scope of this EIS. Additional environmental analyses will be required for these actions. UMDA is on the National Priorities List for hazardous waste remediation which must be completed before the facility can be considered for unrestricted land use. Reuse of the real property following the realignment at UMDA will require completion of the on-going IRP remediation of environmental hazards at the appropriate sites.

### 2.3.2.1 Preferred Implementation Alternative

This alternative balances the movement of ammunition stocks and demilitarization of unserviceable ammunition at UMDA with respect to requirements and capabilities throughout the Army logistical system. The Army would move and dispose of ammunition in accordance with existing guidelines and capability levels at UMDA. There would be no personnel eliminations or transfers before the latter part of FY91. By the end of FY93, 5 civilian manpower positions would be eliminated. Another 131 civilian positions would be eliminated during FY94 and FY95 while 32 civilian positions would be transferred to other Army installations. As a result, the realignment at UMDA would be completed by September 30, 1995.

**Ammunition shipments.** The movement and disposal of ammunition stocks at UMDA would be accomplished to the extent practicable by balancing the ammunition support workload at depot activities throughout the Army. This requires some types of ammunition to be shipped to installations other than HWAAP although HWAAP is the primary receiving installation. As of the end of September 1990, about 42,000 tons of ammunition are estimated to be shipped from UMDA in the course of continuing Army support, as a direct result of transferring the conventional ammunition mission from UMDA

in 1995, and for specialized demilitarization (Table 2-7). The shipments would be scheduled so as to remain within the current shipment capability of 13,000 tons per year, when demilitarization activities are negligible. Ammunition transportation would be by truck or rail, whichever is the most cost efficient.

Table 2-7. Planned Movements of Ammunition to and from UMDA.<sup>1</sup>  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
95	0	0	0
94	0	3	3
93	0	13	13
92	0	13	13
91	0	13	13

Source: Standard Depot System, Ammo Lot File Summary, DESCOM, May 1990.

<sup>1</sup> Total Planned movements (baseline plus BRAC-related).

**Ammunition disposal.** The Army plans to dispose of unserviceable ammunition on site to the maximum extent practical using current demilitarization procedures of open burning and open detonation. This approach is cost efficient and precludes shipping unserviceable ammunition to an installation which may not be authorized to perform the demilitarization operations. However, some unserviceable ammunition requiring specialized disposal facilities would be transferred to installations with these facilities for subsequent demilitarization or other disposition.

Over the next four years (FY91-94) about 4,000 tons of unserviceable ammunition are expected to be detonated and/or burned. An estimated 600 tons of ammunition would be demilitarized on UMDA during FY91, about 70 tons during FY92, 900 tons during FY93, and 1,700 tons during FY94. This represents an OB/OD program which is within the FY89 level (2,194 tons), the RCRA permit limits and total UMDA current mission capability. As movement of ammunition declines, the capability for demilitarization will increase to 1,300 tons per year. About 1,000 tons would be demilitarized at other installations during FY91-94.

**Real property reuse.** All real property associated with the realigned missions would be retained to support CHEM DEMIL. Structures not needed for CHEM DEMIL would be minimally maintained and the staff will be reduced to the level necessary to support UMDA's mission of static storage of chemical ammunition until CHEM DEMIL begins.

### **2.3.2.2 Other Potential Real Property Reuse Alternatives**

In addition to the preferred implementation alternative (Army Maintenance of the structures), the disposition of real property not required for CHEM DEMIL at UMDA would take place after completion of the BRAC action and any subsequent site specific remediation activities. The Office of Economic Adjustment (OEA) might assist regional planners and the Army in developing a comprehensive facilities reuse plan by 1995 to address the use of these assets before the CHEM DEMIL mission and general site remediation activities are completed. The OEA also has suggested that a subcommittee of the present Regional Economic Development District might be established to assist in the plan's development and implementation. Likely components of the plan include leasing of appropriate facilities for commercial or industrial use. The disposal actions are subject to additional environmental analysis.

## **2.4 HAWTHORNE ARMY AMMUNITION PLANT, NEVADA**

Hawthorne Army Ammunition Plant (HWAAP) is located in Mineral County, Nevada, adjacent to the Town of Hawthorne, about 130 miles southeast of Reno and 30 miles east of the Nevada/California border (Figure 2-4). Operations at HWAAP are under the direction of the Office of the Commander and provided by the Administrative Office, Safety Office, Traffic Management Office, Contract Administration Division, Quality Assurance Division, and Operations Review Division. The operational mission support is provided under contract by Day and Zimmermann/Basil Corporation. HWAAP has three tenant activities: (1) the U.S. Army Information Systems Command (2) the Naval Undersea Warfare Engineering Station, and (3) the Naval Strike Warfare Center, Fallon Detachment.

### **2.4.1 NO ACTION ALTERNATIVE**

This section describes the current mission activities at HWAAP. The current environmental and socioeconomic conditions at HWAAP are discussed in Section 3.4.

The primary mission of HWAAP is two-fold, consisting of both the general industrial mission of a government owned-contractor operated (GOCO) installation and the logistical mission typical of an ammunition depot such as FWDA, NADA, or UMDA. HWAAP performs several functions: (1) provide facilities for the production, maintenance, and storage of materiel, mainly, inert and explosive ammunition components; (2) ship and receive materiel, primarily by rail or truck transport; and (3) demilitarize and dispose of

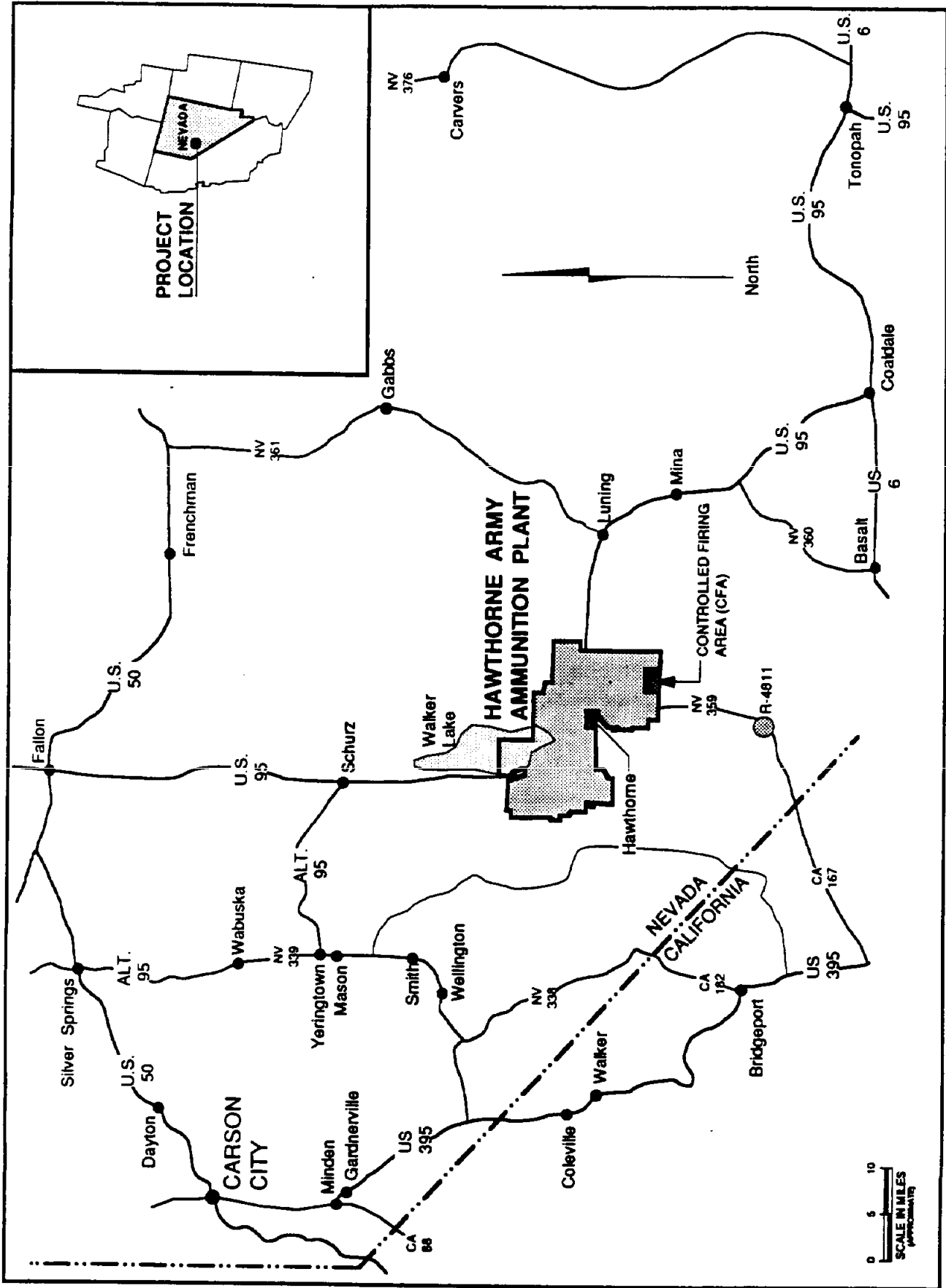


Figure 2-4. Hawthorne Army Ammunition Plant Location.

obsolete or deteriorated explosives and ammunition. At the present time, routine operations are limited mainly to storage and disposal activities. Occasionally, ammunition renovation projects are conducted. Production operations such as load, assembly, and packaging have not been performed since 1978.

The level of activity associated with the ammunition storage mission varies within the capability defined by staffing and facilities. HWAAP is currently authorized 3 military and 65 Army civilian positions. As a GOCO facility, the current mission is supported primarily by Day and Zimmermann/Basil Corporation through approximately 758 contractor and subcontractor positions. Since 1978, contractor staffing has averaged about 790, reached a peak of 963 in 1983, and has been slightly less than 790 since 1987. Direct operational support facilities include a transportation and handling network with 214 miles of rail and 418 miles of roads, 200 general supply warehouses which store inert ammunition components, 1,791 earth covered ammunition igloos, 97 above ground ammunition storage magazines, 31 ammunition production and maintenance buildings, and a demolition and burning area.

The movement capability associated with these staffing and facilities is negotiated each year with the contractor. The 1990 capability is about 81,000 tons of ammunition per year. However, ammunition shipments to and from HWAAP are variable and contingent upon changes in the various Army missions supported by HWAAP. Table 2-8 highlights recent historic movements of ammunition to and from the installation. The Army's objective is to stabilize the capability of HWAAP at the more recent levels (1987 through 1989). Due to the variability of Army requirements for ammunition shipments and the annual nature of the support contract, baseline projections of shipment requirements are considered as the 1988 capacity to process movements of up to 89,000 tons of ammunition per year.

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Table 2-8. Historic Movements of Ammunition to and from HWAAP.  
(1,000 tons)

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Fiscal Year	Receipts	Shipments	Total Movements
90	51	30	81
89	45	39	84
88	56	33	89
87	58	29	87
86	47	16	63
85	13	19	32

Source: HWAAP, 1990.

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Transportation of explosives is strictly governed by Department of Transportation (DOT) and Army regulations cited in the introduction to this chapter. Local installation SOPs exist for ammunition transportation within HWAAP, including transportation to the demilitarization activities. Before exiting HWAAP, loaded transport units are inspected to assure proper loading, placarding, and bracing, and to assure that the quantity of explosives, and number of authorized operators and transients is not exceeded. HWAAP contractor personnel inspect 100 percent of the vehicles while 15 percent are reinspected by DOD quality assurance personnel.

HWAAP received ammunition from 36 origins and shipped to 29 destinations during 1988 and 1989. The highway transportation routes within Nevada are along U.S. 95 south to Las Vegas where it joins Interstate Highway 15 providing access into Southern California and with U.S. 93 providing access to Arizona. From HWAAP, U.S. 95 proceeds north to Interstate Highway 80 which provides access to Utah to the east and Northern California to the west.

U.S. 95 has a truck capacity of about 500 trucks per hour. The routes to the destination are determined by the carrier. The only rail route used to transport ammunition is the mainline Southern Pacific north of HWAAP between Reno and Wendover and the Mina branch line from the mainline at Hazen south to HWAAP. Trains operate on this branch line to HWAAP on an intermittent, as needed basis. Historically from 1984 through 1989 movement of ammunition at HWAAP was about 75 percent by truck and 25 percent by rail. Peak movements of materials have required the processing (loading or unloading) of up to 25 rail cars at a time or as many as 45 truck loads in a day. Rail shipments generally consist generally of 5 and sometimes 10 rail cars. As such, rail shipments may occur at intervals of days or weeks. Generally, rail shipments occur once per week.

No accidents with an injury, death, or over \$50,000 in property damage involved a carrier transporting ammunition to or from HWAAP during 1984 through 1989. However, during 1988 and 1989, HWAAP ammunition carriers were involved in one minor accident each year. These two accidents with little or no property damage and no injuries represented 0.02 percent of the more than 11,400 shipments during this period.

In the event that an ammunition-related transportation accident occurs, the installation SOP is to notify the Nevada Highway Patrol, the Mineral County Sheriff's Office, and the Army operations center. If appropriate, the area would be cordoned off, and response would be by an Explosive Ordnance Disposal (EOD) team. The two EOD teams that would normally be utilized are the one at the Fallon Naval Air Station, Nevada, or the one at Sierra Army Depot in Herlong, California. There is no EOD response team at HWAAP although there are individual experts. If an incident were to involve chemicals such as hazardous wastes or hazardous materials, the county would be notified. Response would be by a hazardous materials (HAZMAT) team most likely mobilized from Carson City (Nevada) as there is no HAZMAT team in Mineral County.

The ammunition disposal facilities include incineration facilities, a burning area, and demolition pits for demilitarization operations. The Part B RCRA permit application filed

with the EPA seeks authorization for annual disposal levels up to 2,800 tons by open burning. However, open burning/open detonation and incineration are also governed by an annual air quality permit with the Nevada Division of Environmental Protection (NDEP). This permit has not been renewed for routine open burning/open detonation since 1985. Further, the permit for routine incineration was not renewed in 1989. However, NDEP permits were issued for demilitarization of unstable ammunition on a case by case basis in 1989 and 1990.

The five-year ammunition demilitarization history for HWAAP between FY85 and FY89 is 0, 0, 0.2, 0, and 1627.4 tons, respectively. In 1985, the air quality permit from the NDEP for open burning and open detonation was not renewed. The Nevada air quality permit for the rotary furnace incinerator in the Western Area Demilitarization Facility (WADF) was not renewed in 1988. Provisions were made for permitting demilitarization of unstable ammunition on a case by case basis during the following years. During 1989, seven permits were issued allowing the demilitarization of over 1,600 tons of unsafe ammunition. Open burning and open detonation occur in accordance with HWAAP standing operating procedures to assure the safety of the activity. There is no demilitarization program scheduled at HWAAP for 1990 through 1993 when improvements to the rotary furnace incinerator in the WADF are expected to be completed. Limited demilitarization of unstable ammunition is expected to continue on the case by case basis required for air quality permitting. The demilitarization program after 1993 will depend upon the capabilities and permitted level in effect at that time.

## **2.4.2 PROPOSED ACTION**

This section describes the proposed action at HWAAP. The environmental and socioeconomic consequences of the proposed action and implementation alternatives are discussed in Section 4.4.

Sufficient storage capability was identified at HWAAP and other depots to accept the conventional ammunition mission currently at FWDA, NADA, and UMDA by September 30, 1995. The Commission recommended these missions be relocated to HWAAP.

### **2.4.2.1 Preferred Implementation Alternative**

This alternative balances the movement of ammunition stocks to HWAAP with respect to requirements and capabilities throughout the Army logistical system. The Army would move and dispose of ammunition in accordance with existing guidelines and capability levels at HWAAP.

**Ammunition shipments.** The movement and disposal of ammunition stocks at HWAAP would be accomplished to the extent practicable by balancing the ammunition support workload at depot activities throughout the Army. This requires some types of ammunition to be shipped from FWDA, NADA and UMDA to installations other than HWAAP although it is the primary receiving installation. As of June 1990, 80,000-90,000



tons of ammunition are estimated to be shipped to and from HWAAP annually in the course of continuing Army support and as a direct result of transferring the conventional ammunition mission from FWDA, NADA, and UMDA in 1995 (Table 2-9).

Table 2-9. Planned Movements of Ammunition to and from HWAAP.<sup>1</sup>  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
95	56	33	89
94	56	33	89
93	56	33	89
92	56	33	89
91	56	33	89

<sup>1</sup> Projections represent the peak historical experience during FY85-89. Since ammunition receipts and shipments to and from HWAAP are dependent upon changing Army requirements, total movements expected during the FY91-95 period will be within the FY88 experience.

Source: AMCCOM, August 1990.

Movement of ammunition stocks above the peak recent (FY87 through FY89) annual level is not anticipated as a result of the BRAC actions. During FY91-FY93, HWAAP would receive ammunition shipments of approximately 900 tons from FWDA, 20,000 tons from NADA, and 8,900 tons from UMDA as a part of its normal movement schedule shown in Table 2-9. The total shipments to HWAAP for all purposes would be scheduled so as to remain within the recent capability limits of up to 89,000 tons per year. The Army intends to use truck transportation rather than rail to the maximum extent practicable due to cost efficiency. HWAAP is not expected to increase its work force as a result of these actions.

An existing truck inspection facility at HWAAP is anticipated to be upgraded through construction of 60 trailer parking pads, a 960-square-foot movement-processing building, and a new paved road connecting the public road with the parking lot. Improvements to the existing facility, (Figure 2-5), include gravel surfacing an additional 6.3 acres of parking,

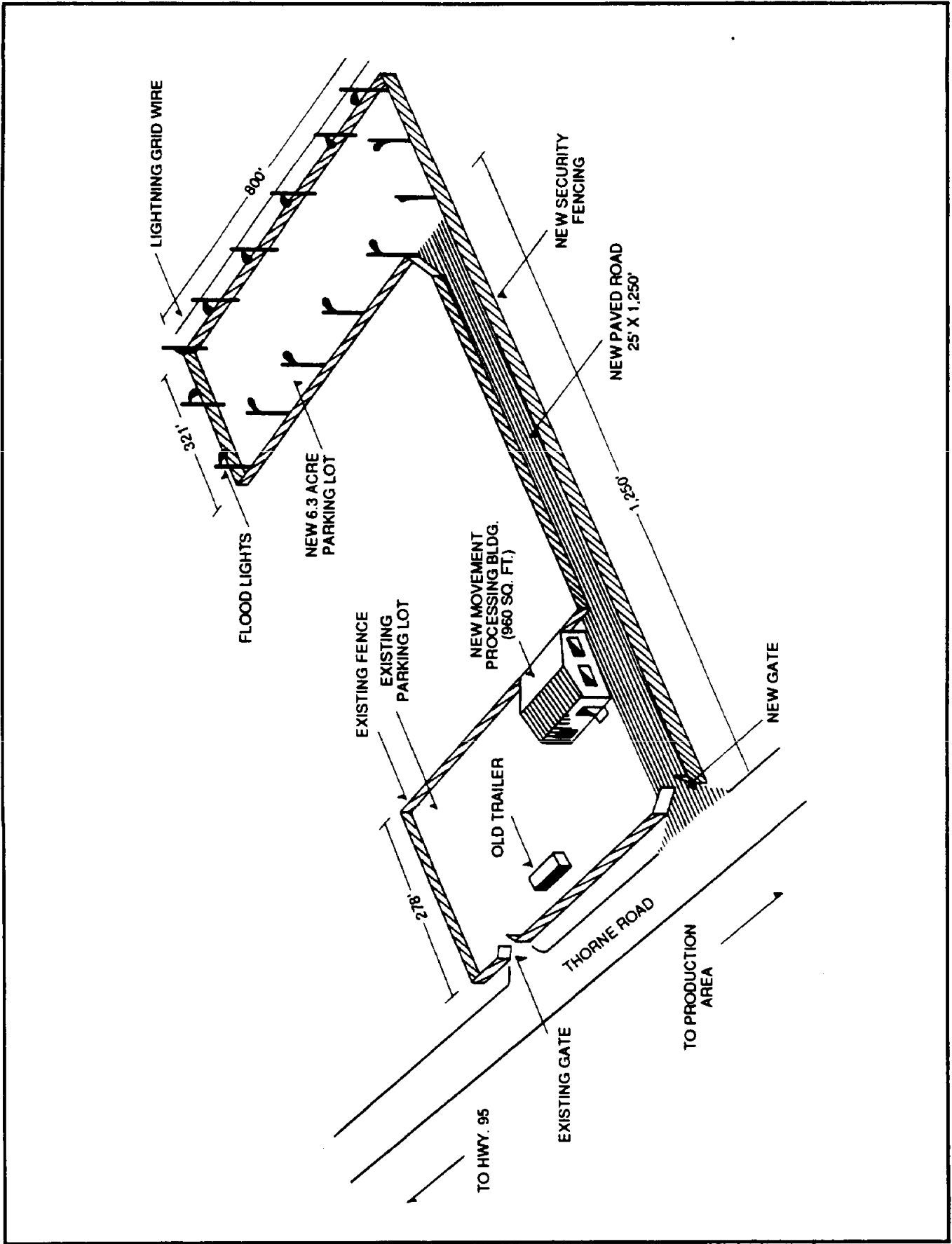


Figure 2-5. Hawthorne Army Ammunition Plant Proposed Truck Inspection Facilities.

security fencing, lighting, and lightning protection. These facilities are planned for construction during FY91. However, the timing of the construction contract award will be based upon the completion of the environmental documentation.

Ammunition disposal. The Army has no plans to ship unserviceable ammunition to HWAAP for demilitarization.

Real property reuse. All real property associated with the realigned missions will be retained at HWAAP.

#### **2.4.2.2 Other Potential Real Property Reuse Alternatives**

No land disposal scenarios are appropriate for HWAAP as the receiving installation.

## Chapter 3

### AFFECTED ENVIRONMENT

This chapter describes the baseline environmental resource setting of Fort Wingate Depot Activity (FWDA), Navajo Depot Activity (NADA), Umatilla Depot Activity (UMDA), and Hawthorne Army Ammunition Plant (HWAAP).

#### 3.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

The regional study area is defined as the geographic area within which environmental resources and socioeconomic conditions may be directly affected by the BRAC action. McKinley County, New Mexico encompasses 5,400 square miles with about 64,000 residents in 1989. This region would experience the direct effects of closure of Fort Wingate Depot Activity (FWDA). The project area is the 22,000 acres of the activity, itself.

##### 3.1.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY

The regional climate is semiarid, characterized by spring and fall droughts. Summer precipitation accounts for approximately 60 percent of the annual precipitation (11 inches per year). Winter precipitation is highly variable. Average temperatures range from a mean high of 64° F to a mean low of 36° F, with an average diurnal variation of 30° F. Extremes range from over 100° F to 0° F. Approximately 151 days are frost-free. Wind direction is generally from the southwest, averaging 9.6 miles per hour, except during the spring when the average is 12 miles per hour.

The principal drainage in the region is the Puerco River, an ephemeral, east-west flowing stream, located immediately north of the installation boundary. FWDA is bounded on the west by the Hogback, a ridge of steeply dipping sedimentary rocks; on the south by the Zuni Mountains; on the east by a small valley terminating at the base of the Zuni Mountains; and on the north by the south fork of the Puerco River. Elevations range from 6,700 feet at the northern boundary to 8,200 feet at the southern boundary.

Three principal geologic formations ranging in age from Permian to Cretaceous are exposed within FWDA and its vicinity. These are the Glorieta sandstone/San Andres limestone, the Chinle claystone, and the surface alluvium of the Puerco River valley. The subsurface strata along southwestern and western boundaries of FWDA contain a complete stratigraphic column, with exposed Cretaceous rocks overlying Jurassic, Triassic, and Permian rocks. Near the administration area to the north, the Cretaceous beds are absent and strata of Triassic age or older are present. In the southeastern corner of FWDA, Cretaceous, Jurassic, and Triassic formations are absent and Permian beds overlie Precambrian rock. Permeable sand and sandy loam clays compose the major soil types. Soil thicknesses vary from 12 inches over most of the installation to 150 feet (alluvial

accumulations) along canyon floors and in the Puerco River valley. FWDA soils are highly erodible, exhibit low fertility, and contain from 15 to 35 percent rock inclusions.

McKinley County is located within seismic zone II. Earthquake records dating from 1906 to 1983 indicate two major events within a 150-mile radius of FWDA: a level VI magnitude vibration (modified Mercalli) felt within 25 miles of FWDA in late 1976, early 1977, and a level VIII magnitude vibration (modified Mercalli) in the Socorro area in 1906.

### **3.1.2 BIOLOGICAL ENVIRONMENT**

#### **3.1.2.1 Terrestrial Ecosystems**

Three major biotic communities found within McKinley County -- Rocky Mountain (Petran) and Madrean Montane Conifer Forests; the Great Basin Conifer Woodland; and the Great Basin Desertscrub -- also occur at FWDA. The varied soil types and elevational differences within FWDA allow for considerable plant and animal species diversity. More than 100 plant and over 200 animal species are likely to occur. These are more fully described in the supporting documentation.

Common floral species include Douglas and white fir; limber, ponderosa, and piñon pines; one-seeded, Rocky Mountain, and alligator junipers; quaking aspen; Gambel oak; locust; big, bigelow, and sand sagebrushes; cliffrose; Apache plume; Mormon tea; barberry; skunkbush; four-wing saltbush; penstemons; globemallows; composites; chenopods; grasses (muhlies, bromes, fescues); and various introduced species--Russian thistle, tumble mustard, filaree, and cheatgrass brome.

Common faunal species include mule deer; fox; coyote; cottontail; black-tailed jackrabbit; tassel-eared squirrel; chipmunk; porcupine; dwarf, vagrant, and Merriam shrews; spotted, golden-mantled, and thirteen-lined ground squirrel; kangaroo rat; vole; piñon mouse; bushy-tailed woodrat; sparrow; piñon and Stellar jay; warbler; oriole; owl; broad-tailed hummingbird, pygmy nuthatch; western flycatcher; woodpecker; Gambel's quail; plateau whiptail; wandering garter snake; and prairie rattlesnake.

A cooperative plan between the U.S. Army and the U.S. Fish and Wildlife Service (USFWS) and the New Mexico Department of Game and Fish (NMDGF) provides for the stocking, management, and control of introduced game species (e.g., bison, pronghorn antelope) as well as native game and predator species.

#### **3.1.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

Aquatic habitat at FWDA is limited to the sewage treatment evaporation pond and two impoundments, Lake McFerren located in the southeastern corner of FWDA and Lake Knudsen located in the east-central portion. The main ephemeral drainages are the south fork of the Puerco River and its tributaries, Milk Ranch canyon, and Fenced-Up Horse

canyon. Parts of Lakes Knudsen and McFerren are wetland-types, as defined by the U.S. Department of the Interior (USDI) and the U.S. Army Corps of Engineers (USACE).

Lake McFerren is a small 2-acre impoundment; Lake Knudsen is a shallow, often dry, 20-acre intermittent playa lake. Both support a variety of plant life--algae, elodea, sedges, bulrushes, and cattails. Introduced crayfish limit the amount of benthic plant growth and retard eutrophication. Game fish (blue catfish, channel catfish, and rainbow trout) are stocked on a put-and-take basis. The impoundments are not suitable for reproductive fish populations because they periodically dry up or fill with silt. Periodic dredging is required to remove accumulated silt. No fish inhabit the upper reaches of the Puerco River or the drainages within FWDA due to ephemeral flow and water quality degradation caused by heavy sediment load.

### 3.1.2.3 Threatened and Endangered Species

Several Federal or state listed endangered or threatened species possibly occur within FWDA. The species and their habitat requirements are described more fully in the supporting documentation.

The bald eagle (Haliaeetus leucocephalus) is classified as a Federally Endangered species. Perching, resting, and limited lacustrine habitat is available within FWDA. The Federally Endangered peregrine falcon (Falco peregrinus) breeds regionally in cliffs within wooded/forested habitats where they can forage. The southwestern willow flycatcher (Empidonax traillii extimus), a State Endangered Group 2 and Federal Notice of Review (category 2) species, prefers riparian woodland habitats. The gray vireo (Vireo vicinior), a State Endangered Group 2 species, is generally found in open woodlands/shrublands dominated by juniper.

The southern spotted owl (Strix occidentalis lucida), a Federal category 2 candidate, prefers montane conifer forest, although it may also be found in pine-oak woodlands and wooded canyons. It breeds mainly in cliff areas. The spotted bat (Euderma maculatum), a State Endangered Group 2 and Federal category 2 candidate, has been recorded in a wide variety of habitats, from riparian and piñon-juniper woodlands to Ponderosa pine and spruce fir forests. The northern goshawk (Accipiter gentilis apache) is a Federal category 2 candidate adapted to pine forests. It nests in cliffs or large trees. The black footed ferret (Mustela nigripes), a Federally Endangered species, possibly occurs within the depot.

Zuni fleabane (Erigeron rhizomatus), a Federally Endangered species, is restricted to the Chinle shale formation in association with piñon-juniper habitat. Since it is known to occur east of FWDA at old Fort Wingate, the probability that it would occur on FWDA is high. Acoma fleabane (Erigeron Acomanis), a Federal Category 2 candidate, occurs on gypsum sandstone cliffs and canyons in association with piñon-juniper habitat. Chaco milkvetch (Astragalus micromerius), a state-sensitive species, occurs on sandstone and gypsum sandstone cliffs in association with sagebrush and piñon-juniper habitat. Zuni milkvetch (Astragalus accumbens), a localized, endemic state-sensitive species, is abundant in the Zuni Mountains. It prefers well developed sandy clay soils associated with

sedimentary outcrops within the lower piñon-juniper to ponderosa communities. The orchid, Piperia unalascensis, a proposed state endangered species is restricted to the Zuni Mountains in association with ponderosa pine and spruce-fir habitat. Wright's pincushion cactus (Mammillaria wrightii var. wrightii), a state-protected species, occurs on gravelly hills and washes between elevations 3,000 and 5,000 feet.

Grama Grass Cactus (Pediocactus papyracanthus = Toumeyia papyracantha), a state-protected and Federal category 2 candidate, occurs in valleys and open slopes between elevations 6,000 and 7,000 feet. The Pecos sunflower, Helianthus paradoxus, is a state-protected and Federal category 1 candidate species. It may be extinct in New Mexico.

### 3.13 LAND AND AIRSPACE USE

FWDA is almost entirely surrounded by Federally owned or administered lands including both national forest and Indian reservation lands. North and east of FWDA is the Navajo Indian Reservation (NIR). Development north of FWDA includes Red Rock State Park, the Zuni railroad siding (Navajo Industrial Park), El Paso natural gas fractionating plant and housing area, the small Navajo community of Church Rock, and the transportation corridors for Interstate-40, old U.S. Highway 66, and the Santa Fe railroad. The community of Fort Wingate, located immediately to the east on reservation land, was the original fort headquarters site. To the south is the largely undeveloped Cibola National Forest. The land to the west is in checkerboard ownership, with management responsibilities divided between the Bureau of Land Management, Bureau of Indian Affairs (Navajo tribal trust land), Navajo tribe (fee lands), and individual Indian allottees. Most of this land is undeveloped, except for the Sundance subdivision and coal mine, and Rehoboth Mission, which are located about 0.5 and 1.5 miles west of FWDA, respectively. The corporate limit of Gallup is located approximately 8 miles west of FWDA. Only a narrow utility corridor extends to Red Rock State Park.

McKinley County has no regulatory control over subdivision and construction on state, Federal, or reservation lands held in trust by the U.S. government. Collectively these lands comprise 83 percent of the county landbase--5 percent state-owned; 16 percent Federally-owned; and 62 percent Indian-owned. The remaining 17 percent is privately owned. County regulations, however, do apply to tribally-owned fee lands. Local control over individual Indian allotment lands has not been defined by the courts at this time. The Navajo and Zuni tribal councils and federal agencies regulate construction on reservation lands.

FWDA land use and activity areas are shown in Figure 3-1. The activities associated with each land use area are discussed in supporting documentation. FWDA real estate comprises 22,100 acres of withdrawn public-domain land. Land and building use is primarily dedicated to storage.

Approximately 5,800 acres on FWDA are forested, primarily with piñon and juniper. At higher elevations, ponderosa pine, limber pine, and Douglas fir occur. Timber management (e.g., thinning, deadfall and slash removal, and diseased tree removal) is

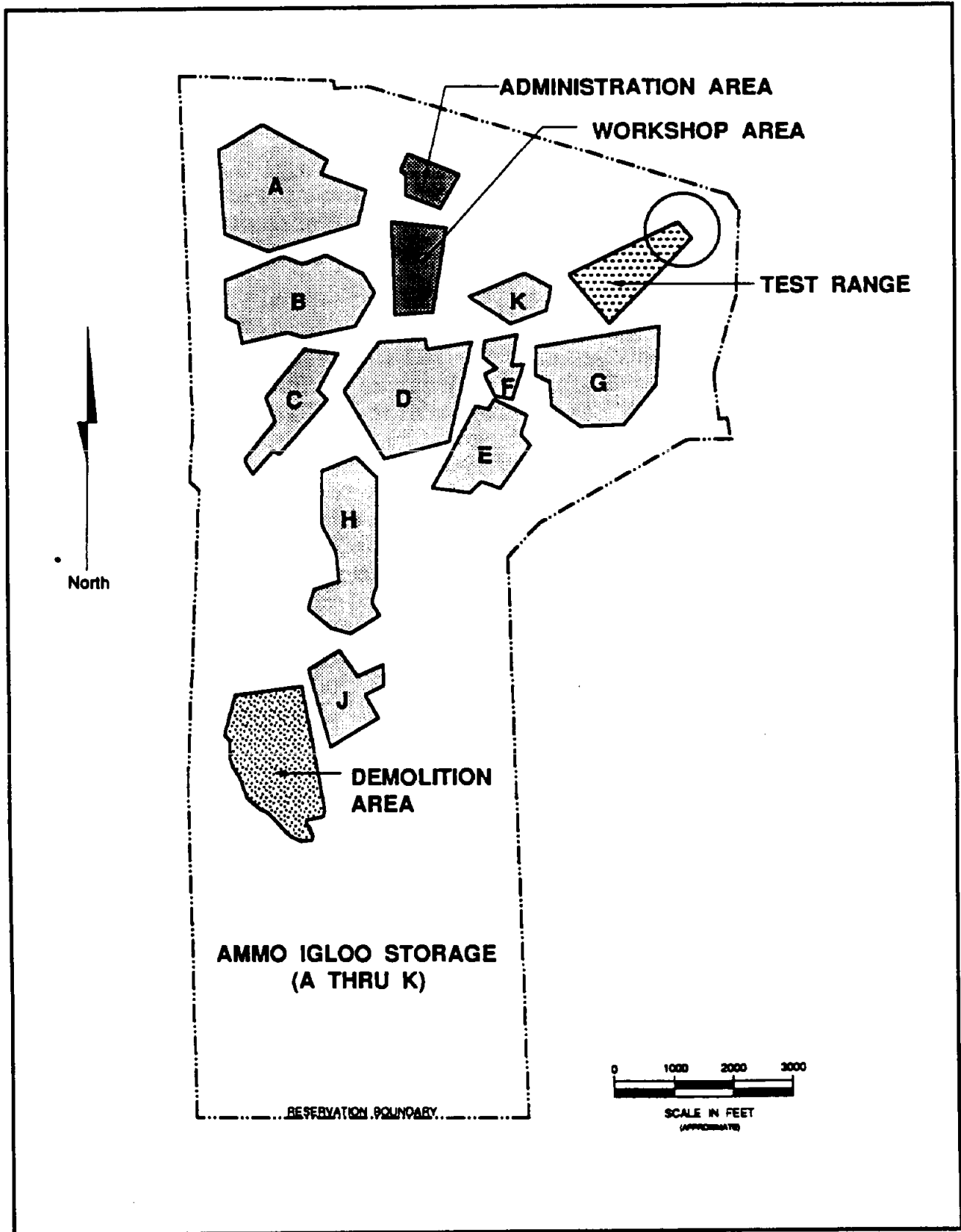


Figure 3-1. Fort Wingate Depot Activity Land Use



practiced to a limited extent. There have been no commercial timber harvests on FWDA. The forest has been impacted slightly by construction activities, fire lanes, and road and igloo maintenance. Between 1870, when Fort Wingate was established, and 1963, there were few grazing restrictions. From 1963 to 1971, a limited number of grazing leases were issued. Currently, there are no grazing leases on FWDA. The only known mineral resources on FWDA are sand and gravel, which are not mined. The potential exists for occurrence of other minerals commonly found in the region.

FWDA recreational facilities include a horse barn, tennis court, and one stocked fishing lake, Lake McFerren. Fishing on FWDA is restricted to depot personnel. The NMDGF authorizes annual public bow hunts for antelope. Hunting is generally permitted only within the buffer zone outside the fenced restricted area. Within Gallup and vicinity are city, state, and national parks. The Gallup Parks and Recreation Department operates 15 public parks with playgrounds, baseball fields, and tennis courts. The most heavily developed regional park is Red Rock State Park, located about 8 miles east of Gallup and 0.5 miles north of FWDA.

A 1973 agreement with FWDA authorizes USDA to lease two warehouses, Buildings 12 and 13, and to use the rail system part time for the Navajo Tribe food distribution program. Surplus warehoused food donated by the USDA is distributed to satellite warehouses on the Navajo Indian Reservation.

Presently, no other agencies use FWDA airspace. From 1963 to 1967, White Sands Missile Range (WSMR) used FWDA as a test-firing launch site for mid-range missiles. The Federal Aviation Administration is currently studying the feasibility of acquiring a portion of FWDA for the proposed Gallup Municipal Airport relocation and expansion project. The U.S. Air Force has also expressed interest in utilizing a portion of FWDA for touch-and-go landing training exercises and portable runway installation.

### **3.1.4 AIR QUALITY**

McKinley County is in the EPA's Four Corners Interstate air quality control region and in the state of New Mexico's Region 1 air quality control region. The Four Corners Interstate region is in attainment status for National Ambient Air Quality Standards for priority pollutants (particulate matter, sulfur oxides, nitrogen dioxide, carbon monoxide, ozone, and lead); air quality is good. In the EPA's Prevention of Significant Deterioration (PSD) program, the region is designated Class IA for particulate matter and sulfur oxides and Class III for nitrogen dioxide, carbon monoxide, and ozone. Under the state's PSD program administered by the New Mexico Environmental Improvement Division (NMEID), McKinley County is considered PSD Class II, which allows for moderate development and its associated air emissions; NMEID follows Federal standards for evaluating new pollution sources. Air quality at FWDA is also in attainment and is considered good. Discharges at FWDA that affect air quality include vehicle emissions, plant heating, and demilitarization.

Emission products resulting from open detonation of commonly used explosives in ammunition are shown on Table 2-1. Under the current permit conditions, concentrations of most pollutants at FWDA are within EPA standards. Carbon monoxide release rates within the ammunition demolition area momentarily can exceed EPA standards, but concentrations dissipate quickly with no lasting effects (see Table 4-2). The maximum plume height of combustion products of a detonation is approximately 260 feet above ground level. There are no existing data or modeling to show that there have been violations of the air quality or air toxic guidelines beyond FWDA boundaries. Gallup monitors only for total suspended particulates.

### 3.1.5 WATER RESOURCES

No permanent surface streams exist on FWDA. Two major drainage systems located within FWDA are Milk Ranch Canyon and Fenced-Up Horse Canyon. The southeastern corner of the installation is drained to the east by several small parallel washes feeding into Milk Ranch Canyon. The east-central portion of FWDA, which includes most of the magazine area, drains to the northeast into the lower reaches of Milk Ranch Canyon before emptying into the South Fork of the Puerco River. The western portion of the installation, is drained by a network of washes into Fenced-Up Horse Canyon, which flows north into the South Fork of the Puerco River. Bread Springs Wash drains the extreme southwestern corner of FWDA. All flow from Bread Springs Wash is diverted to the west side of the Hogback, and eventually empties into the Puerco River west of Gallup.

The region around Gallup, including FWDA, was declared an underground water basin in 1980 by the State of New Mexico. This action prohibits any major new groundwater withdrawals without approval of the State Engineer.

The Glorieta sandstone/San Andres limestone forms the major aquifer of the region, supplying the necessary water for FWDA through a single, deep artesian well located beneath Building 69 in the administration area. The well intercepts the aquifer at a depth of 1,350 feet. The 1970 free-flowing yield of the well was 90 gallons per minute (gpm). Currently the free-flow yield is 12 gpm, though it can be pumped at 165 gpm. The recharge area is in the southeastern corner of FWDA. Water entering the aquifer moves down-gradient to the northwest. The annual snowmelt on FWDA contributes approximately 2,300 acre-feet of groundwater per year for recharge.

Shallow, water-bearing alluvial sands, silts, and clays with lenses of gravel occur along the northern edge of FWDA. These alluvial aquifers are primarily recharged from surface runoff, but some located in the upper reaches of the installation are recharged by springs from underlying aquifers. The shallow groundwater table found in the alluvium is discontinuous and has a low yield. The average depth to water is 20 to 30 feet.

The installation has three water storage tanks--an elevated tank of 250,000-gallon capacity, a ground tank of 200,000-gallon capacity, and an underground storage tank of 100,000-gallon capacity. Water from the artesian well is pumped to the underground storage

reservoir, where it serves two separate distribution systems. One system supplies untreated water for fire fighting and irrigation. The other provides water to the treatment plant in Building 2. The water is treated and chlorinated before distribution in the potable system. In 1981 the installation was using approximately 7,800 gallons of treated water per day.

The State of New Mexico Health and Environmental Department is responsible for enforcing regulations governing public water supplies. Federal contaminant standards have been adopted by the state. In accordance with 40 CFR 141.143, the Bureau of Indian Affairs (BIA) water analysis laboratory in Gallup performs chemical, radiological, and bacteriological analyses on raw and treated water. FWDA employees take two samples per week from 14 sampling points on FWDA for these analyses. The analyses show no significant change (improvement or deterioration) in water quality from wells tapping the San Andres-Glorieta aquifer at FWDA. All pollutant parameters are within applicable standards except for iron, sulfates, and total dissolved solids, which may affect taste, but do not pose health hazards.

A high-gross alpha radiation level (18 to 20 picocuries per liter (pCi/l)) has been frequently found in the raw water since 1984. Although the precise factors contributing to this variability are unknown, it is known that natural uranium occurring in the FWDA region contributes to higher than average background gross alpha particle activity. The EPA maximum contaminant level (MCL) criteria for the gross alpha is 15 pCi/l. There are no known releases of explosive contaminants to groundwater at FWDA. However, since demilitarization activities are known to have released contaminants to the soil, there is potential for groundwater contamination.

Several activities in the administration, ammunition workshop, functional test, former sanitary landfill, and former trash burning areas are suspected of releasing contaminants (e.g., explosives, leachates, heavy metals, pesticides, waste oils, lubricants, solvents, diesel fuels) to the shallow groundwater aquifer. Likewise, there is potential for contaminant migration via surface runoff during heavy rainfall and snow melt. The evidence of release of explosive and other contaminants into the FWDA soils warrants remedial investigation.

### 3.1.6 NOISE

Neither McKinley County nor the state of New Mexico has adopted noise abatement regulations. Therefore, noise data are limited. As defined by the U.S. Army, a high noise area is an area where the sound pressure level exceeds 85 decibels (dBA), regardless of its duration, or where the peak sound pressure level exceeds 140 dBA. The Army has in place an official policy/program for noise levels known as an Installation Compatible Use Zone (ICUZ). The program provides for land use in such a manner as to preclude the placement of noise producing operations in proximity to noise-sensitive populations. It also establishes mitigation measures to ensure that noise above certain thresholds does not impact public areas. High noise areas identified on FWDA include Building 528 (renovation of ammunition); Building 5 (forklift and vehicular maintenance); Building 9 (machine shop);

Building 11 (locomotive storage and minor repair); Building T-33 (carpenter shop); and the heavy equipment yard.

Other noise-producing activities include rail and motor vehicle traffic, small-arms firing, and ammunition detonation. Noise generated from infrequent rail and motor vehicle traffic within FWDA is insignificant. There is greater noise impact from Interstate-40/old U.S. Highway 66 and the Santa Fe railroad line immediately north of the depot boundary. Ammunition detonation is conducted in the southern portion of FWDA in an isolated and topographically buffered area. Detonations can be scheduled year-round, four days per week, 1 blast per day. Computer generated noise contours indicate two concentric noise sensitive zones (Zones II; 62-70 dBC defined as intermediate impact, and III; above 70 dBC defined as highest impact) that are incompatible with residential development on or near FWDA. Zones II and III occur within a 2,300 to 1,500 meter (8,200 feet to 4,920 feet) radius of the open burning/open detonation (OB/OD area), respectively, and partially extended outside the western FWDA boundary a maximum distance of 5,500 feet east-west by 15,100 feet north-south (Zone II) and 2,200 feet east-west by 8,000 feet north-south (Zone III). No community development currently exists within this area, though there is scattered, low-density residential housing within the outermost portions of Zone II. Zone II is compatible with housing if noise reduction measures are used. The computer model predicted noise levels for ICUZ Zones II and III do not exceed 70 decibels (dBC). Zone I (less than 62 dBC) is the lowest impact zone and requires no mitigative measures for housing or other use. No field data are available to verify the accuracy of the contours or the actual noise levels within these zones.

### 3.1.7 CULTURAL RESOURCES

Prehistoric occupation of the region represents an almost complete occupational sequence, spanning the period from 10,000 B.C. to A.D. 1540. Numerous Anasazi ruins related to the Cibola Anasazi Chacoan development occur in the immediate FWDA region. Included are the nearby Chacoan outliers, Heaton Canyon Village and Fort Wingate Ruin, and their satellite communities. The Chacoan culture flourished from about A.D. 1000 until 1150. By A.D. 1200 the Chacoan heartland was largely abandoned. During the 1200s, the Zuni area southwest of FWDA experienced a dramatic population influx, presumably from the Little Colorado and Chacoan regions. At least 36 large plaza-oriented pueblos were constructed in the Zuni drainage between A.D. 1200 and 1540. The large Fenced-Up Canyon site complex (LA 16279) located on FWDA probably represents an aggregation of population from the Red Mesa - Rio Puerco area (Breternitz and Ash 1984).

Perhaps as early as the A.D. 1500s, Athabaskans (i.e., Navajos and Apaches) entered the northern Southwest. Bear Springs/FWDA is within the traditional use area of the Navajo. European presence is documented as early as 1540 when Coronado's expedition travelled to the Zuni Pueblo. Following the American annexation of the New Mexican territory in 1848, the U.S. Army reconnoitered the area seeking routes for a transcontinental railroad and sites for military outposts to protect settlers from Indian attack. Bear Springs

became an important stopping point for these expeditions and an important location for negotiating peace treaties with the Navajo.

Fort Fauntleroy (renamed Fort Lyon on September 28, 1861), was established at Bear Springs on July 22, 1860 to protect settlers enroute to California. In 1861, during the Civil War, the Fort Lyon garrison was transferred to Fort Craig near Socorro. The abandonment of Fort Lyon left much of the western territory of New Mexico and the Wingate valley undefended. In October 1862, the Army established the garrison post, Fort Wingate, at Ojo del Gallo, approximately 50 miles east of Fort Lyon and the present FWDA, to protect the eastern end of the Wingate Valley. From 1863 to 1865, Fort Wingate served as a receiving station on the Navajo's long march from Fort Defiance, Arizona to internment at Bosque Redondo near Fort Sumner in eastern New Mexico. Following the signing of the Navajo Treaty in 1868, the Navajo were returned to their former homeland on a newly created 3.5-million acre reservation. Old Fort Wingate at Ojo del Gallo was abandoned in 1868 and a new Fort Wingate was established July 22, 1868 at Bear Springs to receive the returning Navajos. The new Fort Wingate served as a temporary ration distribution center until Fort Defiance, Arizona, located at the western end of the Defiance valley, was reoccupied and established as the permanent Navajo Agency site.

In 1870 a 100-square-mile military reservation, which incorporated Fort Lyon, was carved out of the public domain and designated Fort Wingate Military Reservation. Fort Wingate was enlarged by 30 square miles in 1881. Six original fort buildings, still standing, are no longer part of FWDA.

Fort Wingate was deactivated in 1911 and placed under the supervision of a caretaker. From 1914 to 1915 Fort Wingate served as a detention center for Mexican Federalist troops and their families who fled from the Pancho Villa uprising in northern Mexico. In 1918 Fort Wingate became an ordnance depot for storing excess World War I ammunition. The original fort building complex was transferred to the BIA in 1925 for use as a boarding school. Approximately 9,000 acres of the military reservation north of the Santa Fe Railroad were transferred to U.S. Department of Interior and added to the Navajo Indian Reservation in 1928. In that same year, the depot activity shifted from dead storage of ammunition to its current mission of renovating, repacking, and shipping ammunition. In 1941 the present administration buildings and ammunition storage igloos were built. Fort Wingate was highly active during World War II. Fort Wingate was renamed Fort Wingate Army Depot in 1962 and redesignated Fort Wingate Depot Activity (FWDA) in 1971 when 4,556 acres were transferred to the USFS.

Eight archeological projects have occurred at FWDA over a 50-year period; 55 sites have been recorded, including one Archaic, two unknown, 21 Pueblo, and 31 Navajo period sites. Most sites (49) were recorded during the 1978 survey (Stucky and Smith 1978) of ammunition storage areas slated for renovation. Four sites have been excavated including portions of the large Pueblo III Fenced-Up Canyon community complex, formerly thought to be a Chacoan outlier. Of the 55 sites, one--LA 73321, an eroded low density artifact scatter--has been evaluated for significance in accordance with National Historic Preservation Act (NHPA) criteria (36 CFR Part 60.4d) and was determined to be ineligible

for inclusion to the National Register of Historic Places. The eligibility status of the remaining sites is undetermined. A 1984 historic structure examination indicated there are no standing buildings at FWDA with historical or architectural significance (Building Technology Incorporated, 1984).

### **3.1.8 NATIVE AMERICAN CONCERNS**

The Native American concerns addressed in this EIS are regional land use issues, traditional cultural values, and religious issues. Regional land use issues are of concern to both the Navajo and Zuni tribes. Perhaps as early as the 1500s, and most certainly since the 1700s, northeastern Arizona and northwestern New Mexico was the traditional homeland of the Navajo. Zuni ties to the region can be traced to at least the 14th century.

The second area of concern are traditional cultural values that have historical depth. These include various natural or landscape features or cultural sites such as hogans blessed by medicine men; burial hogans; burials; sweatlodges; ceremonial sites; and archeological sites, which may be important for reasons other than their scientific or historic value (e.g., they may contain Indian burials or sacred paraphernalia, or be considered shrines).

A third concern is the inseparability of cultural values from religious issues, which may be deeply imbedded in the belief system. For example, the gathering of plants may be of religious importance because of the role they play in traditional medicine or the conduct of rituals. Cultural landscapes may serve as places of worship or objects of veneration, or they may be associated with important events or ritual activities. Also of concern is the fact that certain religious knowledge is explicitly regarded as secret, to be shared only in prescribed ways with individuals within the native community.

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Identified sacred sites near FWDA are Church Rock, considered sacred to the Navajo; and Bear Springs and McGaffey, considered sacred to the Zuni (Van Valkenburgh, 1974; Hart, 1980; Kelley, 1984). None of the identified sacred sites is within FWDA. Given the historic use of the FWDA area by the Zunis and Navajos, various sacred sites may be present within FWDA. These might include areas traditionally used for procuring plants, ceremonial materials, or minerals; gravesites; ceremonial sites; sweathouses; homesites; or certain archeological sites.

### **3.1.9 WASTEWATER DISPOSAL**

The main FWDA sewage treatment plant consists of a bar screen, a lift station, 192,000-gallon capacity Imhoff tank, sludge beds, three stabilization ponds, and an evaporation-infiltration lagoon. The plant treats 5,600 gallons of sewage per day and has a maximum rated capacity of 120,000 gallons per day. Under conditions where the inflow rate would exceed the evaporation rate, discharge from the lagoon would be conveyed into an open drainage ditch, which drains into the South Fork of the Puerco River. However, under current facility operation, the discharge is confined to the lagoon, where it evaporates.

The State of New Mexico has not required development of a National Pollution Discharge Elimination System (NPDES) permit since the evaporation-infiltration rates exceed the inflow rate. Isolated areas of FWDA previously used two septic tanks to treat domestic wastewater. These tanks are no longer in use.

### **3.1.10 SOLID WASTE DISPOSAL**

Within McKinley County are six modified waste disposal landfills. The City of Gallup collects perishable refuse from FWDA. Since 1969 FWDA has maintained a six-acre landfill for non-hazardous, non-perishable solid waste materials (e.g., construction debris, dunnage). Currently it is designated to receive inert material which is not compacted, but is covered with six inches of compacted soil. The waste may be as much as 20 feet deep in parts of the landfill. Pesticide containers have been identified in the waste and paint cans and suspected asbestos-containing materials were observed in the active section of the landfill. It is located in the southwestern corner of the workshop area three miles from the administration complex. The former (currently abandoned) landfill and burning area was located north of the water storage tanks off the North Patrol road. Disposal activity ceased in 1968. Garbage, trash, debris, and possibly some pesticide containers were discarded there.

### **3.1.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

There is no EPA-approved hazardous waste disposal site on FWDA. The Defense Reutilization and Marketing Office (DRMO), located on Kirtland Air Force Base, Albuquerque handles off-site disposal of industrial waste and scrap material including hazardous wastes for FWDA. ELTEX Chemical of Houston, Texas is DRMO's present contractor for hazardous waste treatment and disposal; the previous contractor was TRICIL Environmental Management Company (Laidlow) of Chattanooga, Tennessee. In 1990, 75 drums (55-gallons each) of waste oil and 20,100 pounds of PCP-treated wood pallets were transported from FWDA for disposal in RCRA-permitted disposal sites.

General areas within FWDA containing potentially contaminated sites are indicated in Figure 3-2. Although FWDA does not require any emergency remedial action, areas of known or suspected releases of hazardous or potentially hazardous materials would require additional investigation or remedial action before the property can be released for unrestricted use.

The USATHAMA enhanced preliminary assessment report addresses FWDA Areas Recommended for Environmental Evaluation (AREE) in terms of the broad geographical and functional categories of administration, workshop, magazine/igloo, and OB/OD areas, and other areas and facilities. These are more fully described in the supporting documentation. The limits of the affected areas have not been determined.

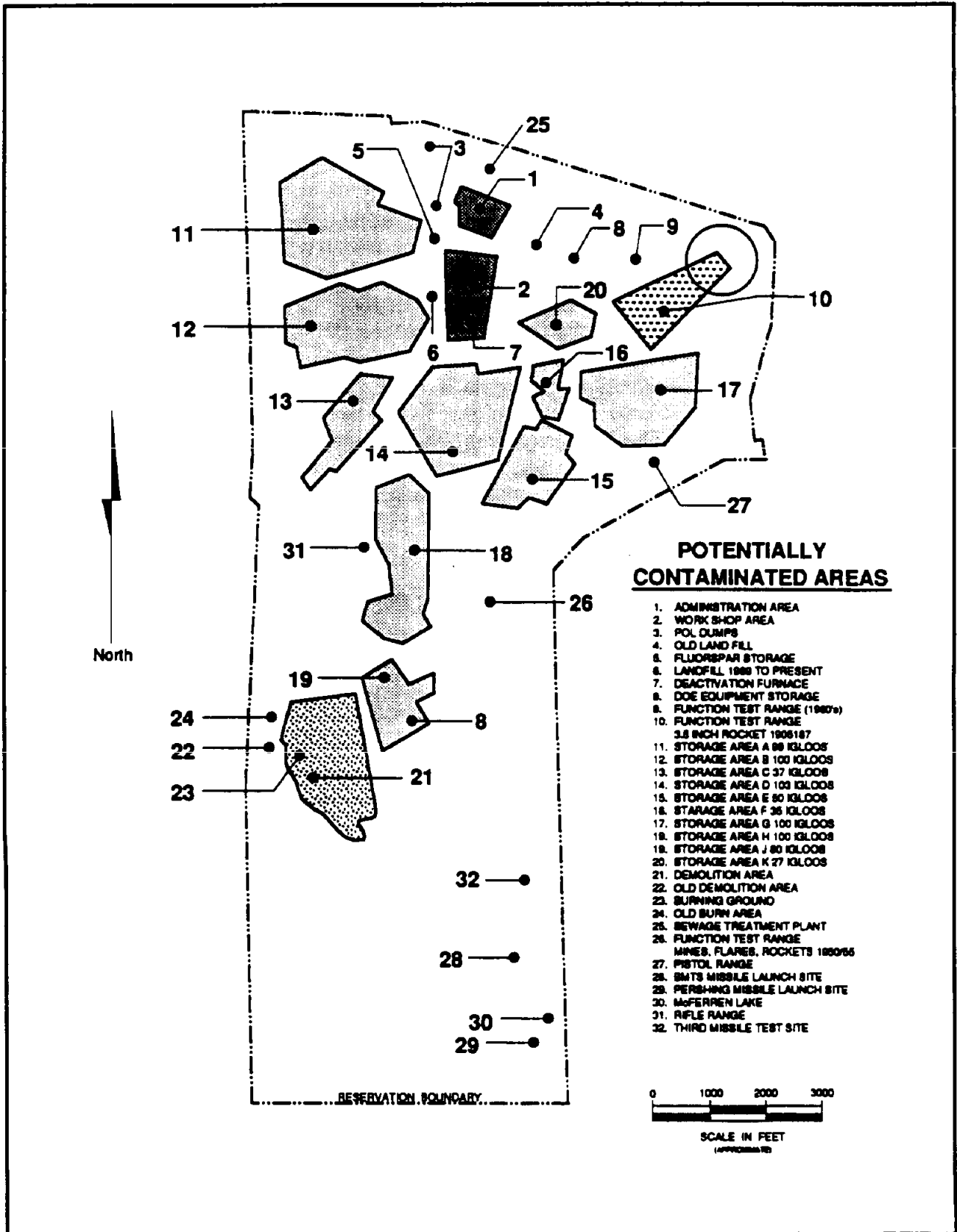


Figure 3-2. Fort Wingate Depot Activity Contaminated Areas



Suspected contaminants include grease, oils, diesel fuel, gasoline, coolants, electrolyte, propellants, detergents, solvents, paint, metal and abrasive dusts, heavy metals, explosives, explosives-contaminated dust, leachates, acids, PCBs (polychlorinated biphenyl), PCP (pentachlorophenol), asbestos, fertilizers, pesticides, septic tank/cesspool effluent, shrapnel, and unexploded ordnance. Activities producing suspected contaminants occurred over many years and some have been suspended for a long time. For example, the trinitrotoluene (TNT) washout facility was in operation from 1949 to 1967, but has since been idle. Pink water from the TNT washout was drained into three settling tanks. Water from the tanks overflowed into three leaching beds, two of which were in use until washout operations ceased in 1967. The third bed was abandoned in 1962 when the washout facility was renovated.

The present burning ground operates as a hazardous waste treatment site under the terms of a RCRA interim status permit. A RCRA Part B Permit has been submitted to the State of New Mexico, and is under review.

In a 1986 environmental compliance audit report, a Toxic Substance Control Act (TSCA) non-compliance order was issued for a leaking transformer that contained PCBs. The transformer was replaced but the PCB spill area was never sampled or cleaned up. PCB migration via the floor drain to surface water and sediments of the storm drainage system may have occurred. The PCB spill will be sampled and cleaned up as an element of the FWDA environmental restoration program. Procedures would include taking wipe samples of the floor areas where PCB transformers had been stored, determining the extent of residual contamination, cleaning up any contamination that is found, and resampling the floor after cleanup to verify the absence of PCBs. Four transformers containing PCB fluid are currently in service.

Asbestos-containing materials were used in several buildings, and for insulating exposed pipes. The nature of the asbestos used and the extent of the hazard it represents is not known. An asbestos survey was completed in July 1990. A total of 48 buildings on FWDA will require asbestos abatement. Of these, 29 are known to contain friable asbestos; 19 others contain non-friable asbestos. Eighteen buildings contain both friable and non-friable asbestos.

There are six underground and six aboveground fuel storage tanks. Three underground fuel storage tanks of approximately 12,000-gallon capacity, located at the FWDA gasoline station are currently in use, as are the smaller capacity (110- and 1,000-gallon) fuel storage tanks. Two of the tanks contain unleaded gasoline; four contain diesel fuel. The contents are inventoried daily, as of the EPA December 22, 1989 deadline. Leak testing of three underground fuel storage tanks was completed in September 1990. The three tanks and connecting lines passed the tightness test. The six aboveground tanks include two abandoned asphalt tanks, two empty diesel tanks, and two diesel tanks currently used for heating purposes.

No radon survey of buildings at FWDA has been completed. On-going surveys in the Administration Area should be completed in October, 1991.

### **3.1.12 ENERGY USAGE**

The City of Gallup Electrical Power Company maintains a single 13,800-volt three-phase overhead electrical line that enters FWDA northwest of the administration area. The line connects with the main substation, located along the northwestern perimeter of the administration area. The substation contains three 200-kilovolt ampere (KVA) single-phase transformer banks. The voltage is metered at the substation and stepped down to 5,000 or 2,400 volts for use by the FWDA distribution system. An inactive secondary substation with one 5-KVA and one 3-KVA capacity transformers is located in the workshop area. FWDA has an 85-kilowatt (KW) standby generator to provide emergency services.

The Gas Company of New Mexico supplies natural gas for heating to FWDA via a 30-inch high pressure main, which enters the installation near the main gate. The line enters a utility company-owned metering station where it is distributed to FWDA.

### **3.1.13 AESTHETIC QUALITY**

The presently developed portions of FWDA possess no notable aesthetic qualities. For the most part the built environment (e.g., buildings, storage igloos) detract from the picturesque geologic setting of FWDA. From viewpoints within the Puerco River Valley and along the transportation corridors, only the igloos in the lower portions of FWDA are visible, and they are somewhat camouflaged by native vegetation. The undeveloped areas possess scenic beauty as expressed by the colorful geologic formations and varied topography.

### **3.1.14 SOCIOECONOMICS**

#### **3.1.14.1 Demography**

The 1980 population of McKinley County and Gallup was 56,449 and 18,161, respectively, which is an increase of 30.6 and 24.4 percent, respectively since 1970. The estimated 1989 county population is approximately 63,900. Between 1980 and 1989, county population increased by 13.3 percent. The 1994 population of McKinley County is projected to be about 65,000. Native Americans, primarily from the Navajo and Zuni tribes, comprise 65.7 percent of the county's population, compared with 8.1 percent for the state. The population residing on FWDA is limited to the FWDA Commander and a Department of the Army civilian.

#### **3.1.14.2 Regional Economic Activity**

Gallup is the economic center for about 90,000 people in a 15,000 square mile trade area that includes the Pueblo of Zuni and portions of the Navajo Indian Reservation.

During the past 30 years, the traditional economic base of the county has shifted from agriculture, mining, and construction to government, retail and wholesale trade, and services.

The total 1988 civilian work force in McKinley County was 17,662. Total employment that year was 15,507 persons with an unemployment level of 12.2%, or 2,155 persons. For the past several years, employment and personal income have steadily risen. However, some sectors--particularly mining, energy development, and construction--have declined. As a result, the county unemployment rate rose from 5.4 percent in 1978 to a high of 15.5 percent in 1983. Since then the unemployment rate has steadily declined. The state and county employment statistics for the period of 1978 to 1988 are described in supporting documentation. A total of 92 civilian manpower spaces, 2 military, and 8 contract service positions are attached to FWDA. Civilian staffing has been about 82 since 1986. FWDA employment represents 0.5 percent of the county workforce.

Per capita income for McKinley County in 1985 was \$4,743, which ranks below the statewide average of \$8,814. Per capita income for Gallup at \$7,549 is slightly lower than the state average (15.4 percent) but higher than the county average (62.8 percent).

### **3.1.14.3 Housing, Schools, Health Care and Public Safety**

In McKinley County, 15,078 housing units were occupied year-round during 1980. The county persons-per-household ratio of 3.75 is higher than the 2.95 state ratio. By 1985, the number of units occupied year-round in McKinley County had increased to 17,900, lowering the persons-per-household ratio to 3.57. By comparison, the state ratio dropped to 2.80. Housing in the rural areas is generally substandard. Overcrowding, deterioration, and a lack of plumbing are commonplace. In 1980, 28 percent of homes lacked complete plumbing facilities.

Six buildings on FWDA are classified permanent living quarters. Five are brick structures built in 1941. They include one single, 3-bedroom unit located over the dispensary and two duplexes. Two units in one duplex have been converted into one dwelling for the base commander. The sixth structure built in 1942 is a single-family residence of wood frame construction with asbestos shingles and siding. Three houses are currently occupied.

Public education in McKinley County is provided by the McKinley-Gallup and Zuni School Districts. Within the county are 31 public schools--18 elementary, 5 middle, and 8 high schools. During the 1987-1988 school year, total enrollment in county public schools (kindergarten through 12th grades) was 12,404. Other schools include BIA-operated boarding schools located on the NIR within McKinley County. Since there are no schools at FWDA, students residing on the installation are transported to schools in Gallup.

Three hospitals and two nursing homes are in McKinley County. The hospitals include the 70-bed Rehoboth McKinley Christian Hospital, and the U.S. Public Health Service (USPHS)-operated 136-bed Gallup Indian Medical Center and 45-bed Zuni Comprehensive Community Health Center. The nursing homes are the 60-bed McKinley

Manor and the 100-bed Red Rock Care Center. From 1987 to 1988 there were 18 physicians and 12 dentists practicing. The FWDA clinic normally employs one civilian occupational health nurse from WSMR. The position is currently unfilled and the clinic is closed. While WSMR is attempting to recruit a new nurse, it is most likely that FWDA will not have a full-time nurse. What cannot be handled by the FWDA Fire Department, EMTs will be referred to medical resources in Gallup.

Local law enforcement is provided by the McKinley County Sheriff's Office and the Gallup Police Department. The New Mexico State Police maintains a district office east of Gallup and is responsible for state and Federal highways. All law enforcement agencies in the county use the Gallup municipal jail. Maximum capacity is currently 250 persons. The county sheriff's jurisdiction excludes the city of Gallup and the Navajo and Zuni reservations. The tribes maintain their own law enforcement operations.

Fire protection for the City of Gallup and a large part of McKinley County is provided by the City of Gallup. The city operates four fire stations. Fire protection and security on FWDA are provided by civilian employees. FWDA assists McKinley County with fire protection and emergency medical services via a mutual-aid agreement. In 1989, FWDA responded to 79 fire calls and 56 emergency medical calls.

#### **3.1.14.4 Traffic and Transportation**

Gallup, the transportation hub for McKinley County, is serviced by Interstate 40/old U.S. Highway 66 to the east and west, U.S. Highway 666 to the north, and New Mexico Highway 602 to the south. The north-south road system and interconnecting roads are not extensively developed because of the rural, sparsely populated character of the county. Within FWDA are approximately 150 miles of roads (81 paved miles; 69 gravel or dirt-surfaced miles). The primary roads (asphaltic concrete or low bituminous surface; 18 to 22 feet wide) form the arterial system of the depot and link the various activity areas and igloo clusters. Most of the roads in the primary system are in poor to fair condition.

The Santa Fe railroad carries about 40 freight and 2 Amtrak passenger trains per day through McKinley County. Railroad access to FWDA is via a "Y" intertie with the Santa Fe railroad line. The internal rail system comprises 22 miles of trackage rated at 90-pound capacity, a classification yard with 306 rail car capacity, 17 loading docks, a scale, and a locomotive garage maintenance facility.

Gallup has a fully equipped airport for light aircraft. Daily commercial flights are provided by Mesa Airlines.

#### **3.1.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

Licenses, permits, leases, and easements have been issued to a number of users, including U.S. West; Gas Company of New Mexico; City of Gallup Electrical Power

Company; Santa Fe Railroad Company; New Mexico State Highway Department; USDA; and New Mexico National Guard. FWDA maintains mutual aid agreements for emergency response (fire and medical) with the City of Gallup, McKinley County, Ciniza refinery, and AMBCO (the Gallup-based ambulance company). FWDA has a cooperative agreement with NMDGF. Cooperative agreements also are in effect for support of each of the tenant activities.

### **3.2 NAVAJO DEPOT ACTIVITY, ARIZONA**

The regional study area is defined as the geographic area within which environmental resources and socioeconomic conditions may be directly affected by the BRAC action. Coconino County, Arizona encompasses 18,600 square miles with about 94,400 residents in 1988. This region would experience the direct effects of closure of Navajo Depot Activity (NADA). The project area is the 28,300 acres of the activity.

#### **3.2.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY**

The region is semiarid, with cold winters, mild summers, and considerable daily temperature fluctuation. Annual precipitation ranges from as low as 6.0 inches in the northern desert areas to 30 inches or more on the higher peaks. Winter minimum temperatures are frequently zero or below, summer maximum temperatures are often above 80° F. Winds are usually from the south-southwest with an average speed of 7.4 miles per hour.

The topography of the region is gently to strongly sloping or rolling plains and plateaus broken by occasional cinder cones of volcanic plugs. Portions of the northern part of the county are incised by the Colorado and Little Colorado Rivers forming the Grand Canyon and its tributaries. There are no natural permanent streams or lakes. Low-lying floodplain areas within NADA fill with water during wet years. The area around NADA is mountainous with elevations ranging from 2,000 to 12,600 feet at Humphrey's Peak, the highest of the San Francisco Peaks.

Consolidated sedimentary rocks form bedrock overlain by basaltic lava flows, pyroclastic rocks and unconsolidated alluvial material. The uppermost formations consist of the Kaibab (Permian Age) and the Moenkopi (Triassic Age). The major fresh water-bearing unit of the region is the Coconino aquifer consisting of the Coconino sandstone and the Supai formation. Kaibab limestone outcrops in a wide band across the center of NADA and in Volunteer Canyon. The surface of the depot consists of volcanic rock formations and small volcanic peaks on a sedimentary platform. Minerals in Coconino County include uranium, sand and gravel, aggregate, cinders, pumice, vanadium and bentonite. Soils of the region are primarily of volcanic origin. Several soil limitations to construction exist including shallow bedrock, high shrink and swell potential, and steep slope. Due to porous site substrata, slow permeability makes the area poor for drainfields and sewage lagoons.

Coconino County is located in the Arizona seismic transition zone between the Basin and the Range Sub-Province of the Colorado Plateau. Some recorded earthquakes, including 3 of intensities between 4.5 to 5.7 magnitude on the Richter Scale, have occurred in this century. NADA is located in a seismic area, described as susceptible to moderate damage, with two faults trending northeast and one trending east-west exist on NADA. The influence of seismic activity had been minimal and there is no record of any seismic impact on the depot structures since its construction in 1942.

## 3.2.2 BIOLOGICAL ENVIRONMENT

### 3.2.2.1 Terrestrial Ecosystems

NADA is bordered by two national forests: the Kaibab on the west and the Coconino on the east. These Colorado Plateau forests contain the world's largest contiguous stand of ponderosa pine. Other habitats in the area include piñon-juniper woodlands, mixed conifer woodlands, riparian habitat, and mountain meadows. In general, piñon pine-juniper woodlands occur below 6000 feet, with ponderosa pines at middle elevations, and mixed conifer woodlands comprised of ponderosa pine, Douglas fir and white fir, with aspen stands at higher elevations (USDA, 1987). Understory species in all associations include juniper, spruce, aspen, willow, turbinella, or Gambel oak, various fir, and grasses, forbs, and herbs in open stands.

Pine and mixed conifer habitat on Volunteer Mountain include ponderosa pine, white fir, Douglas fir, and gambel oak. The south and west slopes of Volunteer Mountain also contain New Mexican locust, turbinella oak, cliffrose, buckbrush, mountain mahogany, and other shrubs. Volunteer Canyon, which traverses the southwest part of the depot, has diverse plant life including ponderosa pine and blue spruce on the north facing slopes; aspen, Douglas fir and piñon juniper are less abundant. The spruce on the depot is unique because it is located at the lower elevational range for the species (USFS, 1988); however, these spruce are heavily infested with an unidentified parasite. Plants in the canyon include wild rose, rye grass, deergrass, spike muhly, Kentucky bluegrass, rabbit brush, lupine, and currant.

Grasslands are comprised of various fescue, mountain muhly, pine dropseed, blue grama, western wheatgrass, and cheatgrass occurring with scattered rabbitbrush, legumes, forbs, and ruderal species. Earth storage magazines are planted mostly with introduced grasses like wheatgrass, perennial rye, and orchard grass. Many native forbs and grasses from adjacent areas have invaded the magazine areas and these earth covered mounds are well vegetated with both introduced and native species.

The habitats of the two national forests provide for a wide diversity of wildlife species. Elk, mule deer, and pronghorn antelopes forage throughout the forest. In general, the big game animals spend summer and fall at the higher elevations foraging in ponderosa pine and mixed conifer/aspen habitats, wintering at lower elevations such as ponderosa pine and piñon juniper woodlands. Meadows and ponderosa-mixed conifer habitat provide

vegetative diversity necessary for wildlife and are important grazing and foraging areas. Many birds, including turkey, hairy woodpecker, pygmy nuthatch, and yellow bellied sapsucker are also present (USDA, 1987a and 1987b). Predatory species present in the forest include coyotes, bobcats (from Southern Rim of the Colorado Province), black bear, and mountain lion.

Species that inhabit NADA include elk, rocky mountain mule deer, antelope, black bear, mountain lion, bobcat, coyote, grey fox, raccoon, skunk, porcupine, badger, Abert squirrel, jack rabbit, cottontail, ducks, doves, geese, turkey, and pigeons. In the fall, elk, antelope, and deer forage on Volunteer Mountain. Volunteer Canyon also provides excellent habitat and forage for a variety of species. Forage is abundant as this area has not been heavily grazed by cattle because of the steep slopes and lack of water. The canyon also serves as a corridor for elk, deer and black bear traveling between Sycamore Canyon, a secluded primitive area, and other areas.

Wildlife move freely between NADA and the national forests. While it is estimated that there are as many as 600 to 800 elk in the area, there has never been a census of the elk population foraging on NADA.

### **3.2.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

While limited areas in the Coconino Forest contain riparian habitat, much is of fairly poor quality due to livestock grazing and the historic practice of placing roads at the bottom of drainages. Riparian and aquatic areas consisting of scattered ponds and ephemeral lakes provide some breeding habitat and are important resting stops for migrating birds. Riparian areas and wetlands are key for wildlife; more species depend on this habitat entirely or spend more time in this habitat than any other (USDA, 1987). Riparian habitat indicator species are Lucy's warbler, yellow breasted chat and aquatic macroinvertebrates (USDA, 1987a and 1987). Riparian vegetation in good condition, dominated by willows, occurs in scattered locations along the Volunteer Canyon bottom.

Three small spring-fed cement reservoirs in the ammunition storage (limited access) area were originally installed as part of the NADA drinking water system but are now used for fishing and back-up water storage. Reservoirs one and two are stocked annually with rainbow trout and reservoir three is filled with catfish and bass. Fencing keeps cattle out. Little vegetation is present within the reservoirs as crayfish were introduced to control vegetation growth. The reservoirs provide resting areas for migrating birds such as ducks, geese, and great blue herons (Hack, 1989). Birds of prey, also have been observed foraging about the reservoirs (Miller and Luedker, 1989).

Atherton Lake is full much of the year, depending on precipitation and when filled provides excellent breeding habitat for mallards and wood ducks. With recent low water levels, coyote have preyed heavily on ducks breeding in the area. NADA plans to enhance the breeding habitat and lessen coyote predation by creating breeding islands to be seeded with wild rice. Tappan Springs also holds water, and fish have been introduced experimentally.

### 3.2.2.3 Threatened and Endangered Species

The list of threatened and endangered species provided by the USFWS did not indicate knowledge of any threatened, endangered, or otherwise sensitive species residing at NADA. Nevertheless, the following species are known to occur in adjacent areas.

The Southern spotted owl, (*Strix occidentalis lucida*), a Federal candidate 2 species, occurs in both national forests and may be present within Volunteer Canyon on NADA. Volunteer Canyon lies between two major habitat centers for the owls (San Francisco Peaks/Mt. Elden and Mormon Mountain/Hutch Mountain) and is considered to be an extremely valuable link between other members of the regional population (USDA, 1988). The bald eagle (*Haliaeetus leucocephalus*), a Federally listed endangered species, is known to winter in both national forests and NADA (Hack, 1989; Goodwin, 1989). Eagles are known to forage along lakes in the Coconino southeast of the NADA and have been seen about the reservoirs (Goodwin, 1989). Populations of peregrine falcons (*Falco peregrinus*), Federally listed as endangered, inhabit the Coconino National Forest south of NADA (Miller and Luedker, 1989). They are not expected at the depot because suitable habitat is not present (Rutman, 1989). The northern Goshawk (*Accipiter gentilis apache*), is a state threatened and USFWS sensitive species which prefers old growth ponderosa pine forest and nests in stands with 70 percent groundcover and is found in areas surrounding NADA (Miller and Luedker, 1989).

Pronghorn Antelope (*Antilocapra americana*), a state sensitive species is found in both national forests, traveling freely between NADA and USFS land (USDA, 1987a and 1987b). Arizona Bugbane, (*Cimicifuga arizonica*), is a Federal candidate 1 species currently found in the Kaibab west of NADA (USDA, 1987b). It is not known if the plant is present on the depot (Goodwin, 1989). The Arizona leather flower, (*Clematis hirsutissima arizonica*) is a Federal candidate 2 species found on the shaded side slopes of hills in ponderosa pine habitat. Several distinct populations are known in the Coconino National Forest and samples were collected at NADA in 1979 (Goodwin, 1989). It is unknown if the species is present on the depot at this time; no recent surveys of the area have been completed.

The Arizona cinquefoil, (*Potentilla multifoliata*), is a USFWS sensitive species which occurs only in riparian areas of southern Coconino County and adjacent parts of Yavapai County. The plant is found in riparian habitat in Volunteer Canyon (including a portion of NADA surveyed in 1980) and an area adjacent to the NADA boundary northeast of Mooney Mountain. However, it is not known if the plant is still present at NADA (USDA, 1988).

### 3.2.3 LAND AND AIRSPACE USE

The predominant land uses in Coconino County include grazing, timber operations, and recreational activities. To a lesser extent agriculture, residential, commercial, industrial and mining are located in the vicinity. These uses have been shaped by a variety of forces: physiography, land ownership, availability of water, railroad development, establishment of



Indian Reservations and the growth of tourism. The larger landholders include Indian Nations and the USFS; about 14 percent of the county's area is in private ownership. Land uses at NADA are classified as forest lands, grazing lands, and fish and wildlife management. The total area, approximately 44 square miles, is industrial, ammunition storage, and open space area. Most of the land surrounding NADA is within the national forests. Some private homes and lands are found on Rodgers Lake, southeast of NADA, and private uses such as a truck stop and a cinder pit are found to the north along I-40. One private parcel is adjacent to the southern boundary of NADA.

Land use patterns at NADA (Figure 3-3) can be broken down into three main areas; the Industrial Area (1,300 acres) for daily support activities; the Ammunition Area (14,000 acres) for storage of ammunition in igloos and magazines; and the Buffer Zone (10,000 acres) for safety and security. Part of the southern buffer zone and the OB/OD area shown by Figure 3-3 shading of approximately 4,000 acres on both sides of Volunteer Canyon were historically depicted as a demolition/burning area. However, actual OB/OD operations are only known to have taken place in the northerly portion of the area shown generally by a circle on Figure 3-3. After 1982, when operations were transferred to the AZNG, training activities increased within NADA and the Buffer Zone to accommodate year-round training of battalion sized units (400-600 personnel).

The Flagstaff City Planning Department, Coconino County Planning and Zoning Commission, and the Northern Arizona Council of Governments develop and implement land use planning policies in the vicinity of NADA. The land use and zoning guidelines for privately owned, unincorporated land area is controlled by the county. Commercial land uses are scattered throughout the county, generally located near state highways. Most major shopping centers and heavy commercial uses are located within municipalities. Industrial use is concentrated in cities and towns. The County Comprehensive Plan (November 1988) identifies Bellemont as an area for potential major industrial growth. Land surrounding NADA is zoned general or open space and conservation, except for the parcel between I-40 and the depot, and the restaurant/truck stop area to the north, which is zoned heavy commercial.

Coconino County is the center of the state lumber industry. Portions of three national forests are found in the county. These include Coconino, Kaibab, and Apache-Sitegraves National Forests. Commercial and personal use timber sales are conducted by the Hualapai Indian Reservation. The Arizona State Land Department, Forestry Division (ASLD) oversees timber management on state trust lands. The national forests oversee timber sales and management on their respective lands. The ASLD, in cooperation with the USDA, provides assistance for timber management and sales on private lands. Approximately 17,000 acres of forest land are managed by NADA in accordance with practices approved by the AMC forester. Timber cutting is allowed on NADA through an open bidding process for a thirty-year selective cutting cycle.

Livestock grazing is an important land use in the region. All public lands except those administered by the National Park Service are open for grazing. Approximately 19,000 acres of NADA are leased for grazing which results in some vegetation control in

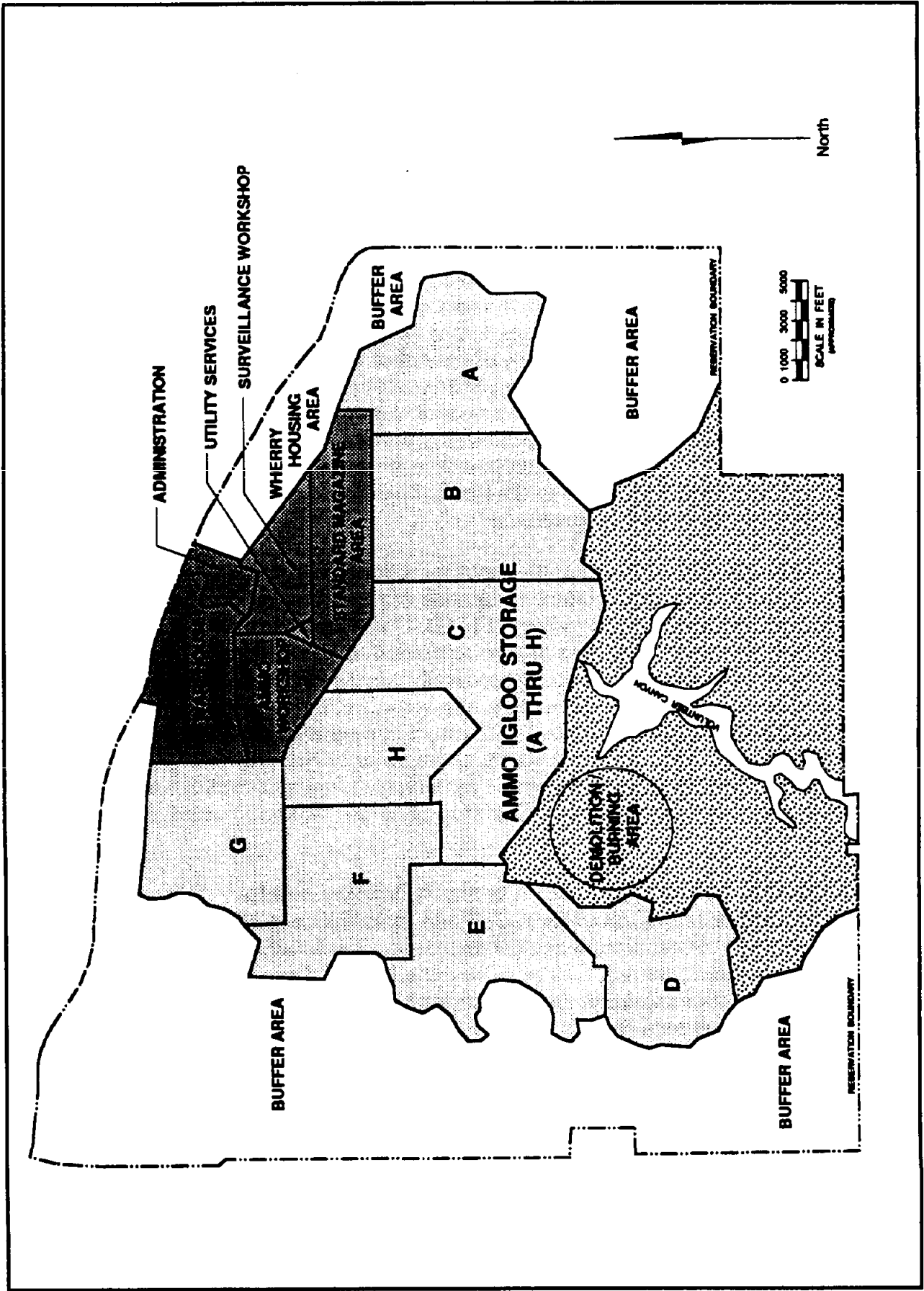


Figure 3-3. Navajo Depot Activity Land Use.

ammunition storage areas. Mining on Federal lands is permitted under the 1872 mining law. Activities on private land are unregulated, being exempt under Arizona Revised Statutes. While cinders occur on NADA, cinder mining is limited to depot use.

Demand for dispersed recreational opportunities is increasing in the region. Flagstaff is the regional center in proximity to Grand Canyon National Park and several other major tourist and recreational areas in Northern Arizona. All the land controlled by the USFS, National Park Service (NPS), BLM, and the ASLD is open space; much is used for recreation. Off-road vehicle use, particularly of 2-3 wheeled vehicles, is increasing; forests are open to off-road driving except where designated.

NADA's wildlife and fish management program allows seasonal turkey, deer, and elk hunting and fishing consistent with Army Regulation (AR) 420-74 (Development of Natural Resource Management Plans for Army Installations), pertinent Army safety and security regulations, and Arizona Game and Fish rules and regulations. The ammunition storage area and buffer zone are open for hunting by full time depot employees, NADA tenant activities, AZNG personnel, and the general public (buffer zone only). No hunting is allowed in the administration, billeting, housing, or demolition areas, pyrotechnic range, or igloo area F. NADA reservoirs provide seven acres of put and take fishing by NADA, tenant, and AZNG personnel.

Approximately 65 acres of land and 13 buildings, primarily in the old hospital area, are used by the AZNG as a Weekend Training Site (WETS) under the terms of a license originally granted on December 2, 1975. The buildings are mainly used as barracks for training throughout the year. The entire buffer zone is also used for field training and the Ammunition Storage Area is used to train a variety of service and support units and individuals. NADA provides fire protection, snow removal, water, and sewer services for a 69 unit rental housing complex (Wherry Housing) located on NADA and leased to the Bruskin Agency.

The current NADA mission does not require civil or military air service support. No military/municipal airfield agreements exist or are required to support the depot. There are no fixed-wing airfield facilities at NADA; however, there is a helipad located northwest of the National Guard administrative area. This is an unlighted helipad used primarily for daylight operations. The majority of helipad activity occurs during summer months in support of National Guard training activities.

### **3.2.4 AIR QUALITY**

Coconino County is in the EPA's Northern Arizona Intrastate air quality control region, currently in compliance with current or expected standards (attainment status) for priority pollutants under the EPA's PSD program. Air quality is considered good. The region is designated PSD Class I for particulate matter and Class III for all other priority pollutants. The Arizona Department of Environmental Quality (ADEQ) is the local enforcement agency; Coconino County also has enforcement authority over local Air

Pollution Control Regulations. The state follows Federal standards for evaluating new pollution sources. Air quality at NADA also is in attainment and is considered good. Discharges at NADA that affect air quality include vehicle emissions, plant heating, and demilitarization. Air contaminant discharge permits required for NADA sources greater than 500,000 British Thermal Units (BTU) per hour are issued by the ADEQ. ADEQ has recently become more stringent in setting permit standards for air quality OB/OD permits; permits now specify pollutants to be emitted by each quantity and configuration of ammunition to be demilitarized.

Emission products resulting from open detonation of common explosives are shown by Table 2-1. Under current permit conditions at NADA, concentrations of most pollutants are within EPA standards. Carbon monoxide emission concentrations in the ammunition demolition area momentarily can exceed EPA standards, but dissipate quickly with no lasting effects (see Table 4-4). The maximum plume height of combustion products of a detonation is approximately 260 feet above ground level. There is no existing data or modeling to show violations of air quality standards beyond NADA boundaries.

### 3.2.5 WATER RESOURCES

Coconino County has limited surface water. Users must rely on deep (1,200 feet to 1,500 feet) wells or hauled water. The Kaibab limestone underlying Coconino sandstone are a hydrologically connected deep aquifer that is a primary source of water supply for southern Coconino County. NADA's water comes from springs with a shallow perched water table from saturated alluvial deposits fed by lava beds. The initial water supply system consisted of four springs, three feeding one storage pond (reservoir 1), the fourth feeding reservoir 3, and a treatment plant/pumping station located on the north side of the ammunition workshop area. The system was recently modified to use only two springs and valves connecting the reservoirs to the treatment plant were closed. Waters of reservoir 3, though potable, are reserved for fire demand. Water storage facilities include elevated storage tanks, ground storage tanks, and open reservoirs. Several spring or runoff fed natural depressions known as tanks exist on the installation. A deep well (1,650 feet) south of the ammunition workshop area supplements the water supply during droughts such as during 1984 and 1985 when rationing was introduced for a time. NADA provides water for the Wherry Housing complex and the Arizona Department of Transportation Interstate 40 rest area.

There are numerous threats to both groundwater and surface water quality in Coconino County, particularly from improper or inadequate wastewater disposal. A 1979 study reported traces of phthalates, nitrates, and silver within EPA standards. Drinking water distribution systems comply with the Federal Safe Drinking Water Act (SDWA). Groundwater and surface water quantity and quality in the State of Arizona are regulated by the Arizona Department of Water Resources and ADEQ, respectively.

Due to the relative scarcity of water, preservation of high quality is critical. Most potentially contaminating activities occur down-gradient from springs. Migration of

contaminants into groundwater is inhibited by low precipitation, high evaporation, and impermeable clay soils, which impede percolation. Where joints and fractures occur in basalts, there is potential for seepage into lower aquifers. Four areas with a high potential for affecting water quality include the old sanitary landfill, the ammunition workshop area, and the demolition area and several solid waste dumping areas. Test wells have been set up at the landfill site to test and monitor groundwater quality. Leachate typical of landfill areas was detected, but well below hazardous levels.

At the ammunition workshop area and the demolition area, thick layers of clay form an impervious barrier to downward percolation. High concentrations of TNT were found in the soil of the demolition area, in the former TNT retention pit. Other locations in the Ammunition Workshop and Demolition areas had low concentrations of TNT in the soil. Some contaminated sediments may be transported to Volunteer Canyon with surface runoff, though so far there is no evidence of this. Potential for surface and groundwater contamination from the solid waste and debris landfill areas is considered low. Several groundwater studies have been conducted in the ammunition workshop area in recent years. The most recent one was completed by the U.S. Army Environmental Hygiene Agency (AEHA) in February, 1991. AEHA concluded that the deactivation furnace and TNT Washout Lagoon sites indicates that the sites are not threats to human health and the environment. As of yet there are no known releases of explosive contaminants to groundwater at NADA. However, since demilitarization activities are known to release these contaminants to the soil, there is potential for groundwater contamination. Monitoring must continue and mitigation measures applied as required to minimize this potential contamination.

### 3.2.6 NOISE

North central Arizona is a relatively undeveloped area without major sources of noise pollution. Approximately 80 percent of Coconino County is public land (USFS and BLM) and is largely undeveloped. With land uses such as grazing, recreation and timber, there are few noise generators or noise receptors. There are no applicable state or local noise regulations or ordinances.

Overall noise levels at NADA generally are low. Major generators of noise in the vicinity include Interstate 40 (I-40) corridor and the Santa Fe Railroad line adjacent to the northern boundary of NADA. The closest community, Flagstaff, is not within range of noise from transportation at NADA. The operations of the ammunition demolition area cause periodic noises heard by off-depot residents, but no problems have been associated with NADA demolition activities. Noise at NADA that potentially affects NADA personnel or wildlife includes activity in the demolition area, the firing range, and the various shop and maintenance areas.

USAEHA developed a noise contour map and data for NADA which has been submitted for approval to achieve full compliance with current Army Regulations. No non-compliance issues were identified during a 1986 noise survey. NADA requested an environmental noise consultation with USAEHA on June 1, 1990. Computer-generated

noise contours indicate two concentric noise sensitive zones (Zones II, intermediate impact, and III, highest impact) that are incompatible with residential development on or near NADA. Zone III, with a radius of 4500 feet, is the area where the noise level exceeds 70 dBC, Zone II with an outer radius of 8600 feet, is the area where the noise level is between 62 and 70 dBC. Zone II extends outside the southern NADA boundary a maximum of 2500 feet. No community development currently exists within this area, though there is low-density, scattered housing within the outermost portions of Zone II. This area is compatible with housing provided noise reduction measures are used. Zone I (less than 62 dBC) is the lowest impact zone and requires no mitigative measures for housing or other use. NADA is currently monitoring noise levels associated with open detonation to confirm the computer-generated contours. This noise survey, conducted with AEHA assistance, will be completed in the fall of 1991.

### 3.2.7 CULTURAL RESOURCES

The region was occupied by nomadic hunters and gatherers by at least 10,000 B.C.. By about 1 A.D., the Anasazi culture began to develop in the region. The local variant of this culture is referred to as Sinagua. The historic period in the region developed in the early nineteenth century with the arrival of early explorers and trappers. In 1851 the Sitgreaves expedition was conducted to find a wagon route to the Colorado River, and in 1853 the Whipple survey was conducted to find a route for the development of a railroad. Both of these surveys were conducted by the U.S. Army Corps of Topographical Engineers. These events were a major impetus for historic development of the area.

During World War II NADA was established as an ammunition depot. NADA was established from the purchase of privately owned lands and the transfer of forest lands from the Kaibab and Coconino National Forests. Activation of the original Navajo Ordnance Depot took place on July 1, 1942. During the latter part of the war, the facility also served as a prisoner-of-war camp for Austrian soldiers.

To date no systematic cultural resources surveys have been conducted within NADA. The few known sites include Lookout Cabin near Volunteer Spring, Old Route 66, the Overland Road, and World War II structures on the base. The Arizona SHPO has evaluated several buildings at NADA for National Register eligibility in consultation with the installation. In a letter from Arizona State Parks, dated June 10, 1991 (see Appendix A), information was provided that indicated the prehistoric Cohonina group used to occupy the NADA area as well as the Sinagua group, but essentially east and northeast of the Cohonina. This letter also mentioned the existence of the lumber industry in the area and the potential for historic homesteads.

The potential for intact prehistoric remains within the cantonment is low as a result of construction and post-World War II use of the base. However, outside the cantonment area the majority of land is undisturbed. Based on known prehistoric site densities in similar environments within the surrounding region, it is predicted that ten sites per square mile may be present. These would likely include Middle and Late Archaic Period lithic sites

and Anasazi culture Sinagua hunting camps. Habitation sites are likely to occur near water sources. Historic sites may also be present. NADA has no archaeological overview and management plans nor has it been examined for standing architecture of historical importance. The February 5, 1990 Programmatic Agreement (Appendix C) requires that a historical preservation plan be developed and implemented by 1995. NADA is coordinating with the U.S. Army Corps of Engineers to conduct Phase 1 of a Cultural Resource Management Plan to address these concerns.

### **3.2.8 NATIVE AMERICAN CONCERNS**

Several Indian reservations within the region include the Navajo and Hopi reservations to the northeast and the Kaibab, Havasupai, and Hualapai Reservations, to the northwest of the depot. Fourteen percent of county land is under Indian jurisdiction. There are no topographical features, sites, or vegetable or mineral resources at NADA that are known to be critical for the practice of traditional religion. No known treaty rights are affected by NADA. At this time, no Native American heritage concerns have been identified. Historical and archeological surveys, in coordination with the Hopi Tribe, will be implemented pursuant to the Memorandum of Agreement between the Department of the Army and the Arizona State Historic Preservation Officer, in compliance with Section 106 of the National Historic Preservation Act.

### **3.2.9 WASTEWATER DISPOSAL**

The sewage treatment plant consists of a bar screen, primary and secondary clarifiers, a rock-medium trickling filter, four evaporation lagoons and a sludge handling facility that includes a pumphouse, a heated anaerobic digester, and two sludge drying beds. The design capacity of the plant is 72,000 gallons per day. In coordination with ADEQ and the City of Flagstaff, NADA plans to use the City's landfill for sewage sludge disposal. An inactive Imhoff tank is no longer used as a wastewater treatment facility. Three inactive settling tanks (shallow, unlined ponds) were used to hold effluent from the Imhoff tank. No evidence of release to the groundwater was seen and the exposure potential is very low.

### **3.2.10 SOLID WASTE DISPOSAL**

NADA's solid wastes are disposed of at a sanitary landfill owned and operated by the City of Flagstaff. The Wherry Housing area is not served by the installation. City officials expect to continue using the current landfill for another 23 years. One four-acre sanitary landfill was in operation on NADA from the 1940s until 1966 and was located in the eastern section of the standard magazine area. The area was subsequently covered with cinders and earth. There are several construction debris waste landfills that have a total area of approximately 41 acres, the four largest covering 36 acres on the Northern edge of the warehouse area. Wastes include wood, concrete, bricks, metal pipes, metal rods, metal banding, glass, asphalt, and reinforcing material. Although most sites have soil cover, some

waste is visible at the surface of the landfills. Other disposal areas included the quarry tank in igloo area B and the 1.2-acre cinder pit No. 3 in igloo area A. These areas were used for disposal of demolished buildings, tree stumps, empty 55-gallon drums, and strapping. This practice was discontinued by the early 1970s.

### 3.2.11 HAZARDOUS WASTES AND THEIR DISPOSAL

NADA has no disposal area approved for hazardous wastes. The closest RCRA permitted hazardous waste disposal facility is near Beatty, Nevada, about 360 miles northwest of NADA. In the past, however, disposal of hazardous substances occurred at NADA. Surveys of locations described in the following discussion are expected to continue into the 1990s as a part of the Defense Environmental Restoration Program (DERP). NADA currently has no hazardous waste storage facility. The facility previously used as a deactivation furnace in Building 325 is undergoing RCRA closure.

The USATHAMA enhanced preliminary assessment report addresses NADA generally by location and activity (Figure 3-4). Thirty-four buildings or solid waste management units (SWMUs) have been identified on NADA. These are located in the administration, warehouse, ammunition workshop, igloo, and demolition areas and are more fully described in the supporting documentation.

Suspected contaminants in the administrative area include petroleum products, heavy metals, sulfuric acid, paint pigments, stoddard solvents, lead, and potential PCBs. Potential environmental contamination in the warehouse area is from petroleum products, heavy metals, sulfuric and other acids, paint pigments, stoddard solvent, double base powder, and mercury.

Demilitarization and renovation operations were conducted in all of the buildings in the ammunition workshop area until the late 1960s. In addition to potential contaminants such as those in the administrative area, primer residues, tetryl, black powder, TNT, phosphoric and chrome acid, fly ash, and pesticides are found in this area. A number of sites have been identified in the igloo area as potential contamination areas. A former chemical laboratory, was used for sampling, testing and surveillance of chemical ammunition.

The demolition area at NADA is located adjacent to the buffer zone in the southern portion of the installation next to the Kaibab and Coconino National Forests. The demolition area is currently divided into two usage areas, the first is used for the explosive destruction of high explosives (HE), and a second area is reserved for burning and subsequent burial of dunnage, shipping boxes, empty explosive containers, explosive propellant, or anything suspected of being contaminated by explosives, (propellant is burned only in pans). Each of these activities has the potential for contamination.



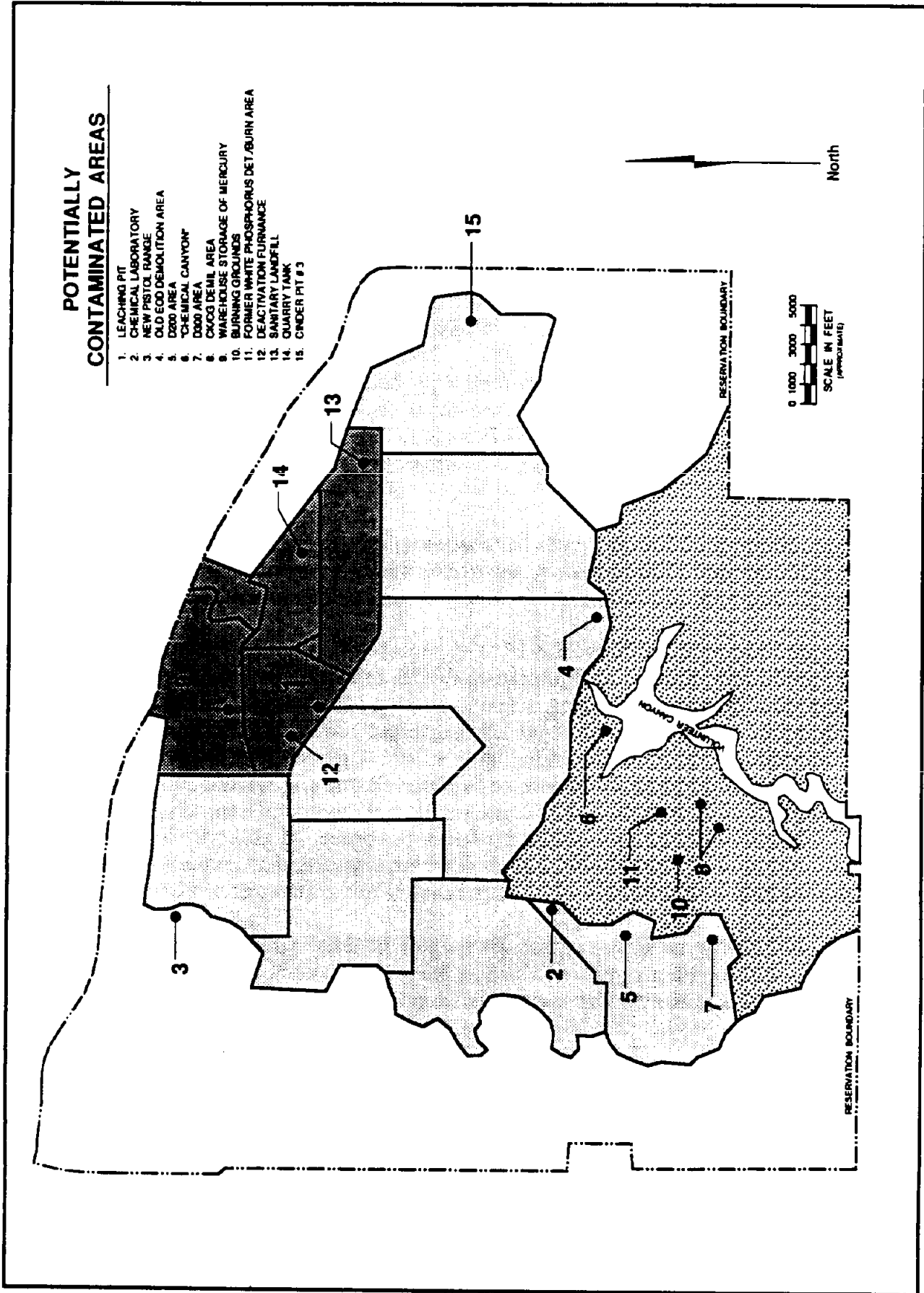


Figure 3-4. Navajo Depot Activity Contaminated Areas.

NADA submitted a permit application to EPA in October 1988 for open burning and open detonation in accordance with RCRA regulations. Currently, NADA is conducting these activities under an interim status designation. A deactivation furnace which was used for the destruction of small arms ammunition is currently undergoing RCRA closure.

The extent of groundwater contamination is not known. Potential exposure of contaminants to the groundwater exists, and was high during the previous operational period which ended in 1967 based on the results of the 1981 soil analyses (USATHAMA, 1990). Several groundwater studies have been conducted in the ammunition workshop area in recent years. The most recent one was completed by the U.S. Army Environmental Hygiene Agency (AEHA) in February, 1991. AEHA concluded that the deactivation furnace and TNT washout lagoon sites are not a threat to human health and the environment.

Building S-18 is a 10-foot by 20-foot PCB waste storage facility in operation from 1986 to 1989. Transformers suspected of containing PCBs were stored in the building. The building contains overpack drums, used PCB field kits (55 gallons), transformers, and a remote control oil switch in a container. No migration pathways are present so exposure potential is low.

A majority of NADA buildings have asbestos shingle siding. Asbestos insulation has been widely used in insulating boilers, steam line and hot water pipes. Buildings 201, 202, and 210 are targeted for demolition; boilers in Building 332 are slated for removal.

In accordance with the RCRA, NADA reported fifteen underground storage tanks in 1985. Of the fifteen, seven were regulated, five of those have been removed and replaced with two new units; the remaining eight are nonregulated and used for heating oil purposes. Additionally, there are two sites at NADA suspected of having old underground storage tanks abandoned in place. Leak testing programs have detected leaks in five of the seven regulated tanks. All five of those have been removed, the soil remediated and backfilled. Three unregulated tank systems had a plumbing leak detected. Those tanks have been emptied. The ADEQ has requested further soil borings at all sites to determine the presence or extent of contamination. A contract was awarded in September, 1990 to conduct the borings. Field work is to be completed in the summer of 1991.

A preliminary radon survey is ongoing with 69 Wherry Housing units as the initial priority among the buildings at NADA. The survey results will be used to determine the scope of a radon abatement project which is planned for FY91-FY93.

### 3.2.12 ENERGY USAGE

Electrical power is furnished to NADA by Arizona Public Service Company. This power is taken off the same power grid serving the rest of northern Arizona. Power from the grid is transformed from a primary voltage of 69,000 volts to either 4,160 or 2,400 volts for depot distribution via a Federally owned substation built in 1941. A backup generator

capable of supplying 500 Kilowatt-Hours (KWH) is available in case of need. In FY88, 925,000 KWH of electrical power were used by NADA.

Natural gas is used primarily for heating purposes at the depot. FY88 purchases from Southern Union Gas Company totaled 172,000 cubic feet. Heating oil used by the depot in FY88 totaled 23,000 gallons. The depot has a heating oil storage capacity of 31,000 gallons.

### **3.2.13 AESTHETIC QUALITY**

The buildings and storage igloos within the developed portion of NADA lack aesthetic qualities. However, the heavily forested areas are considered aesthetically pleasing.

### **3.2.14 SOCIOECONOMICS**

#### **3.2.14.1 Demography**

The population of Coconino County increased from 48,326 in 1970 to 75,008 in 1980. This change represents a 55.2 percent overall increase countywide and a 4.5 percent annual growth rate. Since 1980, the annual population increase has been approximately 3.0 percent. County population estimates as of 1988 place the population at 94,400 persons. Projections indicate an average annual growth rate of 3 percent through the 1990s. Within Coconino County, approximately seventy (70) percent of the unincorporated county population live ten (10) miles or less from Flagstaff. As of 1986, this includes Native Americans who comprise 28 percent of the county's total population. This distribution pattern is expected to continue in the foreseeable future.

The population residing on NADA is approximately 400 people. This includes individuals living in the Wherry Housing complex, the majority of whom (approximately 60 percent) work at NADA. Temporary duty personnel or transient population on NADA during National Guard exercises are not included. Periodic AZNG training elements can increase the depot population by as many as eight hundred (800) individuals during maneuvers.

#### **3.2.14.2 Regional Economic Activity**

The total 1988 non-farm work force in Coconino County was 44,525 persons. Total non-farm employment that year was 41,100 persons with an unemployment level of 7.7 percent (seasonally adjusted) or 3,425 persons. In 1988, the largest regional employment was in the service sector with 28.3 percent of the total employed labor force. NADA staffing during 1989 included the Tooele Army Depot Liaison Team; a total of five (5) full-time Federal Civil Service personnel, and 113 State of Arizona employees. NADA employment represents 0.3 percent of the county non-farm work force (1988). Total per

capita income (including Indian population) for Coconino County was \$8,032 in 1988 (Arizona Department of Economic Security).

### **3.2.14.3 Housing, Schools, Health Care, and Public Safety**

In 1988, there were approximately 33,000 occupied housing units in Coconino County. This is an increase of over 20 percent from the 1980 level of 26,241. The county persons-per-household ratio is 2.86.

Housing at NADA is concentrated at either Wherry Housing development (69 units) or in the WETS. Technically, the Wherry Housing units are part of NADA although they have been subleased to the Bruskin Agency of New Jersey. Approximately 65 units are occupied; about 75 percent of the tenants work at the depot. The WETS housing consists of three semi-permanent buildings categorized as enlisted barracks. The AZNG currently utilizes these buildings. Since they are military barracks rather than residential housing, they are excluded from the assessment.

There are eight school districts in Coconino County. Flagstaff Unified School District in Flagstaff is the largest with approximately 10,700 students, 700 teachers, 18 schools and a FY89-90 budget of 36 million dollars. There are no educational facilities at NADA. The approximately 60 school-age dependent children are transported to schools in Flagstaff.

The major medical facility serving Coconino County is the Flagstaff Medical Center. This facility has a 110-bed capacity and provides a full range of medical services, including a 24-hour emergency function with physician and ambulance coverage. Comprehensive outpatient services are available along with specialized practices in surgical, orthopedic, neurosurgical, plastic, obstetric, pediatric, and dermatological specialties. Limited services medical facilities exist in Williams, 17 miles west of NADA. Health care at NADA is limited to that provided by the facility fire department. Fire department personnel are trained in basic first aid, CPR, and EMT. An ambulance is available, and patients are transported into Flagstaff upon need. During AZNG drill weekends and summer training exercises, a small clinic operates on post to provide care.

The Coconino County Sheriffs Department has 115 officers to patrol the unincorporated areas of the county. Incorporated cities have their own police force to respond in their jurisdictions. NADA security is provided by a mixed force of 34 (2 civilian and 32 AZNG) security police on motorized patrols. Security personnel may detain individuals. Detained individuals are turned over to local law enforcement for arrest and investigation. Any incident that extends beyond the perimeter is transferred to the Arizona Department of Public Safety or other local law enforcement agencies.

Coconino County does not have a fire department for unincorporated areas. The nearest city fire department responds to fires in these areas. The City of Flagstaff Fire Department, 10 miles east of the depot, has a 26-man force in 5 stations and is equipped with 7 fire fighting trucks and one rescue squad vehicle. The City of Williams, approximately 17 miles west of the depot, has a volunteer fire department with 2 fire

fighting trucks. Both fire departments have mutual-aid agreements with the depot fire department. The USFS has significant fire fighting capability but it is dedicated to efforts within the area's national forests. NADA also has mutual-aid agreements with the Coconino and Kaibab National Forest.

The NADA Fire Department has 12 men, most of whom have been trained in first aid, CPR, and EMT. Fire department personnel are State of Arizona employees. The facility and equipment are Federally owned. Fire fighting equipment consists of three fire trucks, a jeep, and an ambulance. Due to the isolated nature of the area and the proximity of the depot to Interstate 40, fire department personnel often respond to traffic-related injuries. Mutual-aid agreements exist with the fire departments of Williams and Flagstaff as well as the Arizona Department of Public Safety and Arizona Land Department.

#### **3.2.14.4 Traffic and Transportation**

Interstates 40 (East/West) and 17 (North/South) intersect in Flagstaff and serve as the primary highway access to and from the county. Secondary U.S. Highways 180 (North/South) and 89 (NW/SW) and State Highway 64 (North/South) connect much of Coconino County to Flagstaff. A network of graded gravel and dirt roads connect the smaller towns and villages to the paved highways. Road access to Navajo Depot Activity is from Interstate 40 on the depot's north side. Entry gives connection to the facility's 75 miles of paved road and 152 miles of untreated cinder road. Road configuration is designed to provide access to outlying ammunition storage sites from the depot warehousing area located near Interstate 40.

The railroad mainline of the Atchison, Topeka, and Santa Fe Railroad passes through Flagstaff on an East/West alignment and provides freight and AMTRAK passenger service to the county. Railroad access to the depot is from the Atchison, Topeka, and Santa Fe Railroad which passes near the northern boundary of the depot. Switching facilities give access to the depots 38 miles of Federally owned rail line.

The closest airport to NADA is Pulliam Airport, located 11 miles east, services commuter airlines and general aviation aircraft. Daily commercial flights are provided by America West and Sky West. Another major airport for the area is at the Grand Canyon. Smaller municipal airports are located at Page, Williams, and Fredonia. Sky Harbor International Airport in Phoenix is the closest airport servicing most major U.S. carriers for both passenger and freight.

#### **3.2.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

In 1942, Public Land Order (PLO) 59 reserved approximately 28,400 acres of public lands within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. In 1950, PLO 661 amended PLO 59 to substitute the Department of the Army for the War Department. PLO 59 contains a reversionary clause that stipulates

restoration of NADA lands to National Forest status when they are no longer needed for military purposes. The 28,400 acres of land described in PLO 59 comprise the bulk of NADA.

NADA has cooperative agreements for fire protection and emergency responses with various local, county, state and Federal agencies. By agreement, NADA water and sewer treatment facilities are used by the Arizona Department of Transportation to maintain a nearby rest stop on Interstate 40, AZNG for Armory and WETS, and the Wherry Housing project. Support agreements or commitments are also in effect with various agencies and tenant activities for services (e.g., water, sewer, snow removal, office space, security, etc.), storage and handling of ammunition and general supplies.

### **3.3 UMATILLA DEPOT ACTIVITY, OREGON**

The regional study area is defined as the geographic area within which environmental resources and socioeconomic conditions may be directly affected by the BRAC action. Umatilla and Morrow Counties, Oregon, encompass 6,262 square miles with about 58,100 and 8,000 residents, respectively, in 1989. This region would experience the direct effects of realignment of Umatilla Depot Activity (UMDA). The project area is the approximately 19,700 acres of the activity itself.

#### **3.3.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY**

The regional climate is semiarid, characterized by low annual precipitation and maximum temperatures of about 40° F in January to over 90° F in July. Precipitation in the area is generally caused by winter cyclonic Pacific storms that have moved inland. The strong prevailing winds throughout the year are from the west and southwest. The area receives only about 10 percent of its total precipitation in the three-month period between July and September. UMDA and vicinity is one of the driest areas of the Pacific Northwest (annual precipitation about nine inches).

UMDA is within the Deschutes-Umatilla Basin, part of the Columbia Plateau, in north central Oregon, and is about three miles south of the Columbia River. The Columbia Plateau is formed on the surface of a thick sequence of igneous flood basalts. The landscape has evolved from geological events no older than early Miocene. The plateau surface in North Central Oregon rises gently southward from the Columbia River to the Blue Mountains and is marked by low terraces, shallow depressions, rounded hills, and moderately dissected stream valleys. Elevations rise from 250 feet along the Columbia River near Irrigon to over 1000 feet approximately 8 miles south of UMDA. Elevations within UMDA range from 410 feet at the northwest corner to 660 feet in the southeastern part. The most prominent physiographic feature is the northeast trending Coyote Coulee. This is a steep-sided, canyon carved into alluvium by floods of glacial melt water.

The region and UMDA are underlain by several thousand feet of relatively flat lying basaltic lavas and interbedded sedimentary units. Individual lava flows vary from about 10 ft to 100 ft in thickness and commonly extend laterally for about 1 to 12 miles. Alluvial deposits of late Pleistocene to Holocene Age are found throughout the region and on UMDA. These deposits include river sand, silt, and gravel, talus, local lake, marsh, alluvial fan, and colluvial deposits. Much of the land surface is mantled by windblown fine sand and silt reworked from glacial river and volcanic airborne sediments; soils have developed in these sediments. Mineral resources are limited to glaciofluvial sand and gravel deposits. These materials are used for road and other construction activities. There are no other known mineral deposits, including coal and oil deposits, on or in the near vicinity of UMDA. UMDA is within the State of Oregon's Seismic Risk Zone 2 where earthquakes (modified Mercalli Scale Intensity VIII to IX) may be expected to cause moderate damage.

### 3.3.2 BIOLOGICAL ENVIRONMENT

#### 3.3.2.1 Terrestrial Ecosystems

The upland vegetation of the region falls into the shrub-steppe biotic province in the Upper Sonoran Biotic zone. This environment is characterized by a variety of dry-tolerant shrubs with grassy understory on well-drained uplands and a series of woody shrubs/trees and grass/forb understory on the better-watered lowlands and along stream banks. Higher elevations with greater precipitation support growth of open Ponderosa pine forest with a variety of deciduous understory.

The aridity of the region limits the ecological niches available to upland animal species. The hot, dry summers limits food sources and causes animals to evolve adaptations to survive these conditions. The more common mammals of this region include black-tailed hare, Nuttall's cottontail, Washington ground squirrel, several species of small rodents, coyote, badger, and pronghorn antelope; representatives are found at UMDA, some in abundance. Pronghorn were introduced to UMDA in 1969 and are estimated to number between 275 and 325. The Oregon Department of Fish and Wildlife (ODFW) manages the herd; UMDA provides water under a verbal understanding with the ODFW. The pronghorn herd serves as a breeding population for restocking to other areas in Oregon and Nevada but has not been used for that purpose for the past two years. Coyotes hunt pronghorn kids, as well as livestock in the area.

Bird species found in the area and on UMDA are representative of those found in the region, with the exception of water birds, as there is no surface water at UMDA. Some of the species that are known to occur at UMDA include bald and golden eagle, long-billed curlew, peregrine falcon, and ferruginous hawks. The eagles feed on a variety of mammals at UMDA, primarily jackrabbits and mountain cottontails. Bald eagle electrocution was a problem until preventive measures were installed in the early 1980s. Many nesting pairs of long-billed curlew use the northern part of UMDA. Peregrine falcons have been sighted only occasionally in the vicinity of UMDA and probably do not utilize UMDA for hunting as their prey does not concentrate at UMDA. Ferruginous hawks have been observed at

UMDA, but despite the construction of three nest platforms for their use, no nesting has occurred to date. Swainson's hawks have been observed in the vicinity of UMDA, but no sightings at UMDA exist.

Much of the terrain is dominated by cheatgrass and with no surface water available, habitat is of relatively poor quality for wildlife. Most of UMDA is available for wildlife habitat, but pronghorn are excluded from the firing range in the northwest and from the administration and housing area.

### **3.3.2.2 Aquatic Ecosystems, Wetlands and Floodplains**

The Columbia River is about three miles north of the northern boundary of UMDA, and the Umatilla River is about one mile east of the southeastern corner of UMDA. The fish communities of both rivers include anadromous and resident species of sport and commercial importance, including salmonids. As there is no surface water at UMDA, there are no fish at UMDA.

Wetlands in the region are relatively limited in area, occurring mainly along the larger rivers and streams and on their lower floodplains. Much of the wetland area is of relatively recent origin, deriving from groundwater from irrigation canals and power pools. There are no wetlands or floodplains at UMDA. An irrigation canal passes through the extreme northwestern boundary of UMDA, but has no associated wetland habitat on UMDA.

### **3.3.2.3 Threatened and Endangered Species**

The U.S Fish and Wildlife (USFWS) service has provided a list of threatened and endangered species (May 7, 1990) and the Oregon Natural Heritage Data Base (ONHDB) provided a list of state sensitive species (March 30, 1990).

The ONHDB indicated that the long-billed curlew (Numenius americanus) is found at UMDA. The curlew is a Federal category 2 candidate species, and an Oregon sensitive species. The USFWS also listed the curlew, which has been studied at UMDA. The bald eagle (Haliaeetus leucocephalus), a species listed as threatened in Oregon, is a regularly occurring winter resident at the depot, with up to 3 or 4 birds present at any one time. The peregrine falcon (Falco peregrinus), a species listed as endangered in Oregon, has been observed near UMDA, but is not known to use UMDA habitat. The Federal candidate 2 species ferruginous hawk (Buteo regalis) has been sighted at UMDA. The Federal candidate 2 species sharp-tailed grouse (Tympanuchus phasianellus) may be present but is not confirmed at UMDA.

The USFWS lists the Thompson's sandwort (Arenaria franklinii var. thompsonii), a Federal category 2 candidate species, as a threatened and endangered species that also may be present at UMDA. Although the sandwort has not been found anywhere in Oregon since 1955, the USFWS has reported that remaining populations are "probably on private tracts, although the BLM retains scattered acreage in the area." The sandwort is described as



"endemic to lands adjacent to the Columbia River..." (USFWS, 1981). It is highly unlikely this plant now occurs at UMDA (and there is some doubt whether it ever existed there). Finally, the Federal Register (21 February 1990, page 6188) lists the plant as candidate 3B, meaning that the species is not recognized under The Endangered Species Act's definition of species. The Federal candidate 2 species Laurence's milk-vetch (Astragalus collinus var. laurentii) is found in the area, but is not documented for UMDA.

### 3.3.3 LAND AND AIRSPACE USE

The land uses in Morrow and Umatilla counties are predominantly agricultural, which includes irrigated cropland, dryland crops, pasture, and rangeland. A few scattered residential units, generally associated with agricultural uses, are on large parcels. Most of the residential units are to the northwest (around Irrigon) and to the east (between UMDA and Hermiston). Some industrial uses (associated with local agricultural industry) are located between UMDA and Hermiston.

Changes in land use surrounding UMDA can be seen graphically in historical aerial photography; a comparison of the earliest (1939) and the latest (1987) available scenes show very little agricultural or urban development in the vicinity of UMDA had taken place by 1939, and the boundaries of Hermiston then were much farther to the east. The irrigation canal along the southeast boundary of UMDA was present in 1939. However, there was considerable development of intensive agriculture on the lowlands and the floodplains of the Umatilla River. Most of UMDA and the surrounding area in 1939 appeared to comprise rangeland. Now, irrigated agriculture with its attendant higher human population density predominates. All UMDA land uses are military; Figure 3-5 is a general description of UMDA land use areas. Patterns are combined into four main areas: ammunition storage and maintenance (10,800 acres); railroad lease, buffer and restrictive use or hazard zones (4,600 acres); airfield, general warehousing and support facilities (1,500 acres); and ammunition demolition and firing range areas (2,800 acres).

Lands surrounding UMDA are within the planning and zoning jurisdiction of two counties: Morrow to the west and Umatilla to the east. The zoning designation for the area surrounding UMDA within Morrow County is exclusive farmland use (EFU) to the south, west, and north of UMDA. The restricted easement area of UMDA is zoned as a hazard zone in which no homes are allowed. Both counties require issuance of building permits or zoning permits before construction of a dwelling. Additionally, both counties protect agricultural uses and discourage residential development within agricultural areas.

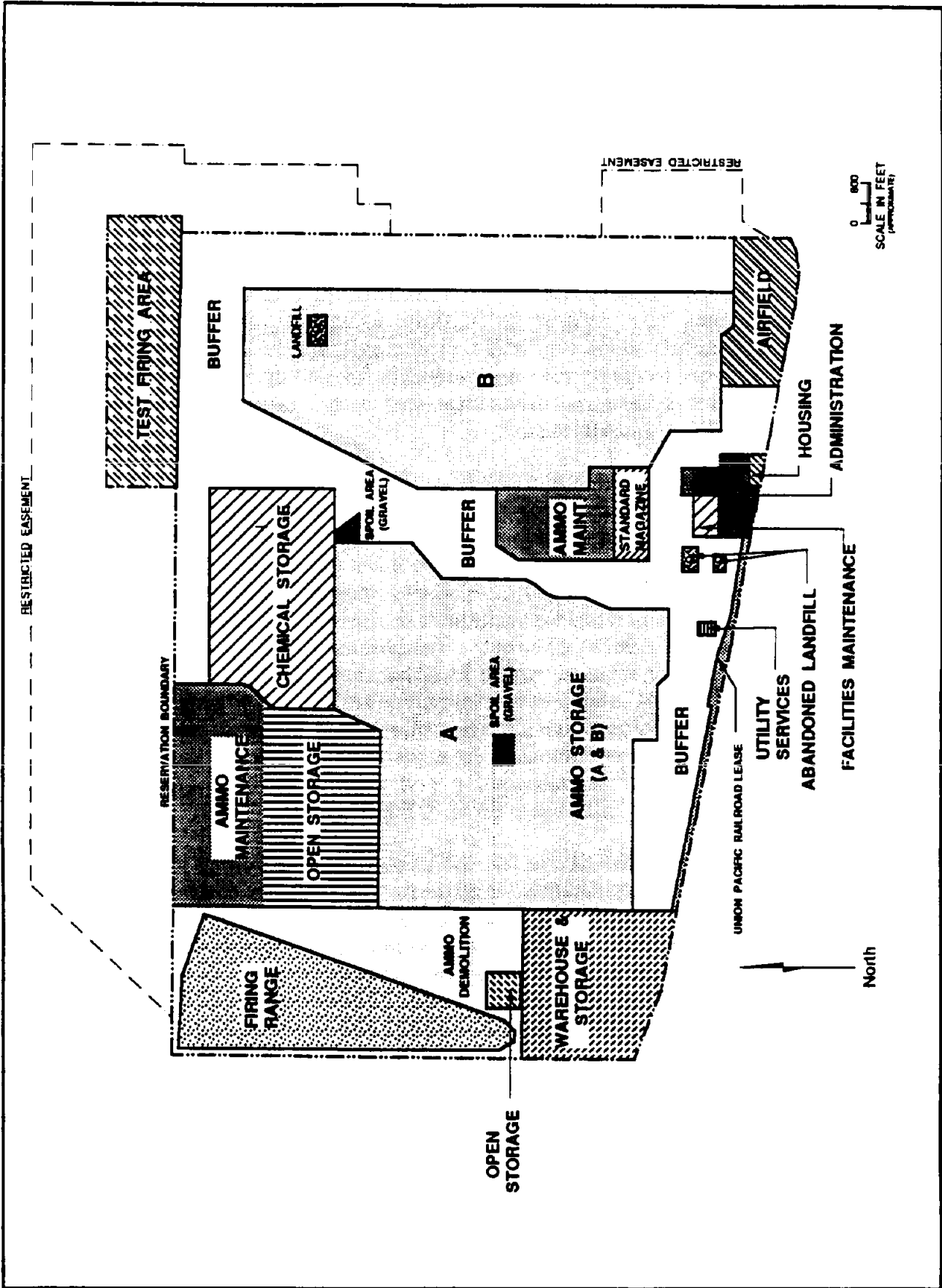


Figure 3-5. Umatilla Depot Activity Land Use.

Some forestry is practiced in the region, mainly in highlands to the south and east. Forestry and logging in the early 1980s represented the second largest element in the economy of Umatilla County. Compared with counties in southern and western Oregon, Morrow and Umatilla counties are not large forest products producers. No forestry is practiced at UMDA. Large tracts of rangeland are present in both counties; rangeland is managed by various agencies, including the BLM and Morrow and Umatilla County Soil and Water Conservation Districts. UMDA is not used as rangeland. Mining in Umatilla and Morrow counties is restricted to removal of gravels, sands, and bedrock for aggregate sources. Minor gravel quarrying activity is carried out at UMDA.

Public recreational facilities include city parks and school grounds, parts along the Columbia River at McNary Dam, and in the Umatilla National Forest and National Wildlife Refuge. Commercially, there are no officially designated wild and scenic rivers in Umatilla or Morrow Counties. UMDA itself has very limited recreational facilities and does not permit hunting on the installation.

The Department of the Navy has an agreement with UMDA for use of housing for personnel working at the Boardman Bombing Range. The U.S. Department of Energy uses warehouse 204. The U.S. Postal Service has a long-term permit to occupy buildings 102, 103, 105, 106, 109, 110, 111, and 112 through January 1995. The Defense Logistics Agency occupies part of building 42 and about 3 acres of land. The state of Oregon National Guard uses certain facilities for training and support. The state of Oregon, Department of Transportation has an easement for highways. A restricted airspace zone is present to the south and west of UMDA and provides for tactical electronic warfare training at the Navy's Boardman Bombing range.

### 3.3.4 AIR QUALITY

UMDA is within the EPA's Eastern Oregon Intrastate Air Quality Control Region, which is in attainment status for all priority air pollutants under the EPA's PSD program; air quality is considered good. The region is designated PSD Class II for particulate matter and falls within Class III for all other priority pollutants. State ambient air quality standards administered by the Oregon Department of Environmental Quality (ODEQ) are generally more stringent than Federal rules, but ODEQ applies Federal standards for criteria pollutants when evaluating new pollution sources. Current practice within the state of Oregon is to evaluate non-criteria pollutants on a case-by-case basis when reviewing permits for new air pollution sources. All of UMDA is listed as a single minor air pollution source by the ODEQ. This designation requires that all discharges be regulated under the applicable PSD emission limits. Since estimated baseline annual emissions are relatively small, it can be concluded that the air quality at UMDA is as good as that for the region in general. Discharges at UMDA that affect air quality include vehicle emissions, plant heating, and demilitarization.

Emissions from open burning and open detonation of common explosives are shown in Table 2-1. Under current permit conditions at UMDA, concentrations of most pollutants

are within National and Oregon Ambient Air Quality Standards. Carbon monoxide releases exceed the standards momentarily within the ammunition demolition area, but quickly dissipate within UMDA to negligible levels, with no lasting effects (see Table 4-6). The maximum plume height of combustion products of a detonation is approximately 260 feet above ground level. There is no existing data or modeling to show violations of air quality or air toxic standards beyond UMDA boundaries.

### 3.3.5 WATER RESOURCES

In 1976, the state of Oregon established the Ordnance Critical Groundwater area and placed a moratorium on further development of water from basalt aquifers in the area. The groundwater table beneath UMDA is largely influenced by a withdrawal and artificial recharge program regulated by the state of Oregon. Two aquifer systems are in the area: a confined aquifer system in the basalt and an overlying unconfined aquifer system. Flow contact zones and interbeds within the basalt contain the confined aquifers.

Numerous water wells and observation wells have been drilled within UMDA. Two wells tap the shallow basalt aquifers less than 450 feet below the surface; five wells tap deeper aquifers with the deepest at 710 feet below the surface. Information from these wells has confirmed the confined and unconfined aquifers beneath UMDA. Structural and erosional features as well as poorly constructed wells that penetrate underlying basalt allow the saturated part of the unconsolidated sediments locally to connect hydraulically with the uppermost basalt (confined) aquifer system. Wells tapping both the shallow and deep basalt aquifers have shown a lowering of piezometric levels and if groundwater at and near UMDA continues to be used at its present rate, eventually another source of water supply will be required. The Columbia River may prove to be an alternative source as the CHEM DEMIL facility probably will be provided with water from a pumping plant on the river.

Water quality generally is very good in the McNary Dam vicinity of the Columbia River. Irrigation water returns, agricultural animal wastes, and municipal and industrial wastes result in high nutrient concentrates, increased temperatures, suspended solids, and algal blooms on the Umatilla River. These changes are particularly evident during summer low flow periods. Groundwater quality in the alluvial deposits along the Columbia River and the mouth of the Umatilla River usually is good to excellent. The water is moderately hard to hard with dissolved solids generally less than 500 mg/l, and a temperature range of 45° F to 60° F. The gravels are highly permeable with readily available yields of water. Present supplies are moderate to large.

In the past, the water supply at UMDA has met with all local, state, and Federal water quality standards and has been acceptable for all domestic, agricultural, and industrial purposes. Production well number 1 is above the allowable nitrate contaminant level and is no longer in use at UMDA. However, this well has not yet been abandoned in accordance with ODEQ regulations. The demilitarization of conventional ammunition has resulted in contamination of ground in the ammunition demolition area, presenting possible sources of contamination of groundwater supplies in that area.

### 3.3.6 NOISE

The region is predominantly rural with a low ambient noise level. Noise concentrates in urban areas and along major transportation corridors. Overflights of aircraft associated with the Boardman Naval Bombing Range occasionally contribute to transient rises in noise levels. The state of Oregon does not consider noise a major environmental problem in the region. Overall noise levels at UMDA generally are low. The closest communities, Irrigon and Hermiston, are not within range of noise from transportation at UMDA. The operations of the ammunition demolition area cause periodic noises heard by off-depot residents, but no problems have been associated with UMDA demolition activities. Noise at UMDA that potentially affects UMDA personnel or wildlife includes activity in the demolition area, the firing range, and the various shop and maintenance areas. High local noise areas have been identified and warning signs have been posted within UMDA. Personnel working in these areas are required to wear hearing protection devices. The airfield at UMDA is inactive and is not a noise hazard.

The impulsive noise levels at UMDA from conventional ammunition demilitarization have been mapped in an Installation Compatible Use Zone analysis (ICUZ) to provide zone planning information to local governments. Three noise zones radiate from the ammunition demolition area; Zone III (above 70 dBC), the highest impact zone, extends beyond UMDA perimeters on the west and northwest. Zone III is not recommended for housing and at present includes no housing units, but commercial and industrial development is compatible with proper noise reduction construction measures. Zone II (62-70 dBC), an intermediate impact zone, extends to housing areas in Irrigon and along the interstate highway south of UMDA; 676 houses and one school are in the zone. The ICUZ recommends that new housing or other inhabited buildings in Zone II be built with noise reduction features. Zone I (less than 62 dBC) is the lowest impact zone and requires no mitigative measures for housing or other use.

### 3.3.7 CULTURAL RESOURCES

Prehistoric hunting, gathering, and fishing peoples lived in seasonal camps along the Columbia River for at least 10,000 years. Seasonally, they ranged southward to hunt and gather root foods. A major prehistoric village site at the mouth of the Umatilla River was occupied for at least 3,000 years, and was used by Cayuse and Umatilla Indians when recorded history of the area began at the time Lewis and Clark passed through in 1805-1806. From 1843 to the 1850s or 1860s, the Oregon Trail was the major access route into the area for the Euro-american immigrants who were beginning to replace the local Indian populations. A major spur road of the Trail, the Emigrant Wagon Road, cut from Pendleton north and west across the interior of the plateau region to the Columbia River. In the 1860s, immigrants and gold miners in search of the reported gold finds in the Blue Mountains streamed into the region, the Umatilla River Valley receiving many livestock ranchers and unsuccessful miners. The town of Umatilla was established in 1862-1863. Sheep herding in the area began in the 1860s. By 1901, Umatilla County was the largest wool producer in Oregon, providing raw materials for the now famous Pendleton Woolen

Mills. Cattle and horses also were raised in great numbers; their intensive grazing between 1860 and 1941 reduced the bunchgrass-covered plains to bare sand. Today, cheatgrass has replaced bunchgrass in most places.

Scattered prehistoric flaked stone tools have been found at UMDA along the west rim of Coyote Coulee, indicating prehistoric use at UMDA. There is evidence of historic use at UMDA as well. A major segment of the Emigrant Wagon Road may be preserved in the northeast corner of UMDA and there is aerial photographic evidence of this road elsewhere at UMDA. If the traces are still preserved, the segments may be eligible for the National Register of Historic Places as contributing elements to the National Historic Oregon Trail. Other historic use of UMDA lands before UMDA was constructed in 1941 was limited to livestock ranching. Probable structures (or their remains) associated with that use are evident in several places in old and recent aerial photography.

National Register sites in the vicinity of UMDA include the Wells Springs segment of the Oregon Trail, the major prehistoric village site at Umatilla (35-UM-1), and several buildings in Pendleton. The whole Oregon Trail in Oregon is on the National Register even though it is only preserved in sections. An Historic American Buildings/Historic American Engineering Record survey of UMDA was made in 1984. No highly significant (category I) or significant (category II) buildings were identified, but two minimally significant (category III) buildings were identified and were determined eligible for the National Register by the Oregon SHPO on May 20, 1988. Historic properties management of these buildings is needed. An archaeological overview and management plan for UMDA recommends inventory and management efforts for prehistoric and historic archaeological sites on land not entirely disturbed by original construction and operations.

### **3.3.8 NATIVE AMERICAN CONCERNS**

UMDA falls into the traditional 19th century territory of the Umatilla Indians, with the Cayuse Indians holding Butter Creek to the east. Both peoples made seasonal forays through the UMDA area to gather roots and hunt game animals. The Umatilla and Cayuse Indians, who signed the Walla Walla Council treaty in 1855, now reside largely on a reservation near Pendleton, Oregon. Recent treaty right activity includes a thrust to obtain co-management status for fish and wildlife on ceded lands. No known treaty rights are affected by UMDA even though it was part of a former traditional hunting range (ceded lands). There are no conspicuous topographical features, vegetable, or mineral resources at UMDA that are known to be critical for the practice of traditional Native American religion. No known traditional Indian places or village sites are at UMDA. There are no known Native American heritage concerns.

### **3.3.9 WASTEWATER DISPOSAL**

Wastewater disposal is regulated by the state of Oregon. Domestic sanitary sewage from the administration, housing, and facilities maintenance areas at UMDA is treated in

two Imhoff tanks approximately one mile west of the administration area. The system includes flow recorders, Imhoff tanks, a sludge drying bed, and a field tile percolation system. Sludge from the drying beds is buried periodically at the sanitary landfill. Eleven septic tank/drainfield systems provide treatment and disposal of domestic sewage for the remaining areas at UMDA. Domestic sewage is collected, treated, and disposed of in drainfield absorption trenches. Clogging and drainfield failures have not been a problem in the past.

### **3.3.10 SOLID WASTE DISPOSAL**

Regional solid waste disposal is in sanitary landfills. ODEQ requires solid waste permits for operation and maintenance of sanitary landfills. Permits authorize acceptance of solid wastes except for nondigested sewage sludges, septic tank pumping, oils, chemicals, liquids, hospital wastes, explosives and other hazardous materials. The excepted substances are subject to individual regulation and normally are taken to specially authorized disposal sites. Sanitary landfill permits do not allow burning. At UMDA, two closed landfills are just west of the facilities maintenance and administration areas. UMDA's active five-acre solid waste disposal area is in the northeastern portion of UMDA (site 11). It receives refuse, garbage, debris, and dunnage and operates under ODEQ solid waste disposal permit number 320.

### **3.3.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

There is no approved disposal area for hazardous waste on UMDA. The closest RCRA-permitted hazardous waste disposal area is in Arlington, Oregon, about 50 miles west of UMDA. In the past, however, disposal of hazardous substances has occurred at UMDA, including disposal of wastes in various locations as discussed in the following subsections. Extensive surveys of these locations and wastes have taken place over the past decade, and are expected to continue into the 1990s as part of the Federal effort to correct toxic and hazardous waste problems at defense installations (see Dames & Moore 1990 for summaries of findings).

UMDA has a hazardous waste storage facility in Building 203 which is in compliance with ODEQ regulations and operated under UMDA's EPA RCRA Part B application in interim status. All hazardous wastes are stored at the facility until they can be turned into the DRMO for treatment or disposal at EPA-approved sites.

Contaminated areas at UMDA (Figure 3-6) have resulted both from past operations that have been discontinued and from ongoing demilitarization and other activities. Contamination from the activities potentially can affect the environmental and local human populations through several migration routes, including direct and indirect groundwater, soil, air, fire and explosion pathways. The enhanced Preliminary Assessment (Dames & Moore,





1990) has identified potential migration pathways at each known and suspected contaminated area and has classified sites according to the potential hazards represented by areas requiring environmental evaluation. A total of about 77 sites within the contaminated areas (excluding individual buildings with asbestos, or individual underground storage tanks) has been identified through aerial photography and available information from UMDA retirees. Of these, 69 are recommended for further investigation. It should be pointed out that several of the sites have multiple loci (most notably, there are 8 septic tank systems with suspected contamination), so the total number of locations requiring further investigations is significantly higher.

A survey of 240 transformers found that 64 contained cooling oil with more than 50 parts per million of PCB contamination. All of these transformers have been properly removed and disposed of. No leakers or seepers are in service.

A limited survey to locate asbestos in 200 buildings and develop remedial plans was carried out in 1988. Asbestos-containing material (ACM) was reported in several building components in about half of the buildings inspected. Priority removal of asbestos insulation from heating pipes has been completed at around 30 to 100 buildings. Resumption is awaiting funds. A further survey for friable asbestos was completed in spring 1990.

A survey of known underground storage tanks (USTs) conducted in the summer of 1989, identified 81 tanks (19 septic; 47 heating oil and 7 fuel) and evaluated their leakage potential. An additional 14 tanks may have been removed. The ODEQ regulates 7 tanks of which 2 are active and require tightness testing. Seventeen of the tanks can be removed with DERA funding. Three tanks are considered potential leakers. Additional studies under the Remedial Investigation/Feasibility Study (RI/FS) are planned.

Radon may occur naturally at UMDA. A radon survey being conducted as part of the RI/FS is scheduled for completion in August, 1991.

### **3.3.12 ENERGY USAGE**

The region is served by a mix of private, cooperative and municipal electric utilities. UMDA is served by the Umatilla Electric Cooperative Association (UECA), which purchases most of its power from the Bonneville Power Administration and is a member of the Pacific Northwest Generating Company, a consortium of utilities that owns 10 percent of the Boardman Power Plant. As a purchaser from BPA, UECA has access to adequate power resources. Electrical usage at UMDA has averaged approximately 2.5 million kwh per year (or about 7,000 kwh per day) in recent years. At present rates of consumption UMDA represents 0.3 percent of the total kilowatt hours sold by the local cooperative. Feeder lines to UMDA have available capacity of five megawatts and the UECA is able to respond to greater demand, if required. There are auxiliary diesel generators at the installation to provide emergency generating capacity if required.

Natural gas is provided to the Umatilla County communities of Pendleton, Hermiston, Milton-Freewater, Pilot Rock, Stanfield, Athens, Umatilla, Echo, and Weston by Cascade Natural Gas Company. Natural gas is not available at UMDA and therefore the installation is heated using fuel oil. Propane is readily available throughout the area.

### **3.3.13 AESTHETIC QUALITY**

UMDA is not located in any special environmental quality zone. The entire installation is developed, and the buildings and storage igloos possess no notable aesthetic qualities.

### **3.3.14 SOCIOECONOMICS**

#### **3.3.14.1 Demography**

The population of Morrow and Umatilla counties increased from 66,400 in 1980 to 68,800 in 1989. This change represents a 3.7% increase. The cities of Hermiston and Pendleton constitute over 40 percent of Umatilla County population, with another 30 percent of county population in the small towns and rural areas adjacent to these cities. In Morrow County, 53 percent of the 1980 population total concentrated in Boardman and the adjacent rural area. The local communities within a convenient driving distance of UMDA are Boardman, Irrigon, Umatilla, Hermiston, Stanfield, and Echo. Boardman and Irrigon are in Morrow County; and Umatilla, Hermiston, Stanfield, and Echo are in Umatilla County. Published economic and demographic data for the six cities are limited because of their small populations. Total population residing on UMDA in July 1989 was 9 persons.

The 1994 population for the two counties is projected to be 69,400. Construction along the Columbia River, such as the construction of McNary Dam and the Boardman coal-fired electric generating plant, has created cyclical population booms in northern Umatilla and Morrow counties. Projects which may boost population in the future include the potential for a second generating plant at Boardman and future upgrading at area dams. For the most part, historical projections of population for Umatilla and Morrow counties underestimated growth during the last decade. However, the relatively small population base of the area, coupled with the booms created by large construction projects, make population forecasting very difficult.

#### **3.3.14.2 Regional Economic Activities**

The total 1988 civilian labor force was 33,711 persons. The unemployment rate for the two counties is 8.8%. The largest employing industrial sector in 1989 was Services which employed 17.0% of the total employed labor. UMDA employees approximately 0.8% of the total civilian employed labor force. Historical employment trends for Morrow and Umatilla counties are summarized from the supporting documentation as follows. Umatilla County had a civilian labor force approximately eight times larger than that of Morrow County in

1988, but Morrow county's labor force grew nearly two times faster between 1970 and 1988. Strongest employment growth in both counties has occurred in the areas of food processing, services, transportation, communication, utilities, and government. UMDA staffing in 1989 was 252 persons (243 civilians and 9 military) which represents 0.7% of the county employment.

Agriculture is, and will remain, the mainstay of this area's economy, both directly and through development of food processing facilities. Major problems facing agriculture in this area are competing claims to surface water supplies and the increasing cost of bringing new areas into irrigation. Retail trade in this region centers in Pendleton and Hermiston and is largely independent of agricultural income fluctuations. The major competing areas for retail sales are the Tri-Cities and Walla Walla in Washington, with durable goods purchases reaching as far as Portland, Oregon. Total personal income received by residents of Umatilla and Morrow Counties amounted to \$569 million in 1985, which is the latest year for which data are available. This total was 2.1 percent of statewide personal income. On a per capita basis, both Morrow county's 1985 income of \$8,580 and Umatilla County's income of \$8,291 were below the statewide average of \$9,925.

#### **3.3.14.3 Housing, Schools, Health Care, and Public Safety**

Housing units in 1980 in the counties of Morrow and Umatilla numbered about 26,800. Umatilla, by far the more populous of the two, had 88 percent of the total. The persons-per-household rate in both counties combined was close to the state average of 2.66. However, in Morrow County this figure was higher at 2.85, while Umatilla County had a lower figure of 2.50. In spite of the relatively high vacancy rates in these counties, measures of overcrowding were higher than the state average. Statewide only 0.9 percent of all occupied units had 1.5 or more persons per room, while Morrow County had 2.1 percent and Umatilla County had 1.2 percent. UMDA has 22 single-family housing units and one barracks building for transient officers or enlisted personnel. Most housing recently has been upgraded and all units are maintained.

Umatilla County contains 14 school districts with 25 elementary schools, five junior high schools, and 11 high schools. Morrow County has one district with nine schools, including four elementary schools, two junior high schools, and three senior high schools. There are no schools at UMDA; children of UMDA residents are served by local school districts.

Four general hospitals serve Umatilla and Morrow counties: Good Shepard in Hermiston (the closest hospital to UMDA); Pioneer Memorial in Heppner; Pendleton in Pendleton; and St. Anthony in Pendleton. Hospital personnel from area hospitals have attended the Chemical Casualty Course taught by the U.S. Army Medical Research Institute of Chemical Defense and held at UMDA. The course provides information on the treatment of chemical agent injuries. Health care for routine and emergent on-site needs at UMDA is provided by a U.S. Army Health Services Command Clinic with medical stocks in building 11. The clinic is under the direction of UMDA's medical officer.

Police services in Morrow and Umatilla counties are provided by municipal police in incorporated cities and by the county sheriff in unincorporated areas. The Oregon State Police, with 40 officers in Umatilla, is responsible for enforcing laws related to highway and highway travel. The State Police also has a criminal division with one officer in Hermiston and two in Pendleton. UMDA is a Class A security installation and is guarded by a Department of Defense security police force within the Security Branch of the Installation Support Division. Security guards are civilian employees.

Fire protection in Umatilla and Morrow counties is provided by city fire departments and rural fire protection districts (RFPDs). Fire departments and RFPDs in Umatilla County have 40 paid personnel and 172 volunteers. Fire departments and RFPDs in Morrow County have five paid personnel and 55 volunteers. Fire protection at UMDA is provided by a fire prevention section, manned by civilian employees, who operate one fire station under the authority of the facilities branch. A fire sprinkling system is installed in selected buildings. Fire reporting methods include an automatic fire alarm system at some locations, radio communication in restricted areas, and outside telephone fire box alarm stations throughout the administration, maintenance, and warehouse areas. A fire alarm system has been installed throughout UMDA. UMDA's fire protection does not create additional demands on community systems. UMDA has a reciprocal agreement with surrounding communities for lending of fire-fighting assistance as needed.

#### **3.3.14.4 Traffic and Transportation**

Barge transportation to ocean ports is available through the ports of Morrow and Umatilla. Barge traffic links the mid-Columbia River ports with deepwater ports located primarily along the lower Columbia, e.g. Portland, Vancouver, Kalama, and Longview.

Interstate Highways 82 and 84 pass through the area, connected to an extensive network of secondary track and roads. I-84 provides highway access to UMDA via an interchange at Ordnance. There are seven trucking firms in the Umatilla/Hermiston area.

Rail freight service is provided by Union Pacific (UP) and Burlington Northern, Inc., (BN) railroads. Spur lines also provide service to the Umatilla port on the Columbia River. The UP also provides direct service to UMDA and leases UMDA's classification yard. Passenger rail service is provided by AmTrak. No public transit services are provided in the Umatilla and Hermiston area.

Several local and regional airports are available for scheduled and nonscheduled air traffic. The Hermiston Municipal Airport is southeast of the city of Hermiston, approximately 12 miles from UMDA. The Pendleton Municipal Airport, about 30 miles east of UMDA also provides connections to major regional cities. The Tri-Cities Airport, located in Pasco, Washington, provides service to Los Angeles, San Francisco, Seattle-Tacoma, Portland, and several smaller western cities.

### **3.3.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

UMDA has agreements with several local fire districts and with police agencies to cover contingencies. In addition, management of UMDA lands for wildlife is covered by a verbal agreement with the ODFW. Support commitments have also been made with each of the tenant activities.

## **3.4 HAWTHORNE ARMY AMMUNITION PLANT, NEVADA**

The regional study area is defined as the geographic area within which environmental resources and socioeconomic conditions may be directly affected by the BRAC action. HWAAP is located in Mineral County, on Nevada's western border, approximately 100 miles south of Lake Tahoe. Mineral County, Nevada encompasses 3,700 square miles with about 7,400 residents in 1989. This region would experience the direct effects of realignment of HWAAP. The project area is the 141,400 acres of the plant, itself.

### **3.4.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY**

The Hawthorne region is located in the basin and range province of the Intermountain West. The region is semi-arid, with an average temperature of 54.1°F (rarely exceeding 100°F or 0°F), and an average annual rainfall of 6.4 inches. Wind speeds average 6 mph, with gusts reaching an average maximum of 57 mph. Winds tend to be from the north and west-northwest. The mountain areas receive more precipitation and are occasionally topped with snow during six months of the year.

The topography of the region is alternating north-south trending mountain ranges with intervening valleys. HWAAP contains a valley floor roughly bounded by Walker Lake on the north, the Excelsior Mountains and Whiskey Flats to the south, the Wassuk Mountains on the west, and the Gillis Range on the east. The valley is located on a high plateau 4,300 feet above sea level, and enjoys typical high desert climate. Mt. Grant (11,200 feet elevation), the third highest peak in Nevada, is within the reservation boundary.

The geology of the region contains small quantities of Precambrian or lower Paleozoic Mica schists and quaternary alluvial deposits. The major Mesozoic rock types are cretaceous granites. The Cenozoic sequence is dominated by tertiary volcanics and quaternary alluvium. The volcanic rocks are tertiary in age and typically occur in the highlands while the sedimentary rocks occur typically in the valleys as alluvial fans and lake deposits and are of quaternary age (BLM, 1984). The potential mineral development within HWAAP is considered to be low. Some small deposits of tungsten, gold, and porphyry molybdenum may occur. A shallow geothermal resource exists in the region. Areas of bedrock within and near HWAAP are chiefly of igneous origin. Soils within HWAAP fall into two broad categories: alluvial fan piedmont types or those associated with low and upper mountain ranges.

HWAAP lies within a broad zone of potentially large earthquakes. Earthquakes of large magnitude (exceed seven on the Richter scale) have occurred within a 100-mile radius of HWAAP within the last 50 years. The potential exists that future earthquakes of equivalent or greater magnitude can occur. While HWAAP has experienced seismic activity along faults located in the foothills along the edge of the installation, no structural damage to facilities has occurred.

### **3.4.2 BIOLOGICAL ENVIRONMENT**

#### **3.4.2.1 Terrestrial Ecosystems**

The Mineral County region occurs in the Great Basin desert scrub biographic province. The region is noted for cold winters, hot summers and limited precipitation (Brown, 1982). Elevations range from approximately 4,000 feet to 11,239 feet for Mount Grant. Lower elevations within the region (up to approximately 4,500 feet) are best described as a mixed desert shrub community.

Plant species aggregations undergo an elevational transition as one moves up from the valley floor to a lower sagebrush community and then to a piñon-juniper-community from approximately 6,000 feet to 8,000 feet. The dominant species are the scrub conifers. Many typical species from the lower sagebrush community grow in the openings between the trees except where the dominant species form pure stands. Above the piñon-juniper dominated community an upper sagebrush community can be found, ranging in elevation from approximately 8,000 feet to the upper reaches of the mountain peaks. HWAAP contains the following three main vegetative communities: mixed desert shrub, sagebrush, and piñon-juniper.

Numerous wildlife species occur within the region as well as on HWAAP. Big game species include mule deer, antelope, mountain lion, and bighorn sheep. Upland game species include sage grouse, mountain and valley quail, chukar, mourning dove, cottontail rabbit, and white-tailed jackrabbit. Fur bearers include beaver, muskrat, mink, river otter, gray and kit fox, bobcat, striped and spotted skunk, raccoon, short-tailed and long-tailed weasel, and badger. A variety of waterfowl occur in association with rivers and wetlands and Walker Lake. The distribution, abundance, and diversity of wildlife species are influenced by available drinking water and vegetation zones, particularly riparian habitat (BLM, 1984).

#### **3.4.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

Walker Lake is the only lake in Walker Valley; part of the lake falls within the HWAAP boundary. The lake provides habitat for a variety of fish species, including the Lahontan Cutthroat trout. A wetland habitat exists due to the lake's presence. The habitat functions as the focal point of an interrelated ecosystem providing a nesting and forage site for many species of birds including migratory aquatic birds (BLM, 1984). These species, in

turn, may become prey to both migrant or resident raptor species or ground-dwelling predators.

### 3.4.2.3 Threatened and Endangered Species

Contacts with both the USFWS and the Nature Conservancy of Nevada resulted in information concerning threatened and endangered or candidate species in both the Mineral County region and the HWAAP area. The USFWS listed the species Oncorhynchus Clarki Henshawi (Lahontan Cutthroat trout) as a threatened species, as well as the plant candidate species Oryctes Nevadensis (family Solanaceae). The latter has been collected in the region and may occur within HWAAP. Species listed by the Nature Conservancy consisted of one plant candidate species, Oryctes Nevadensis and plants on the watch list (species not considered as threatened, endangered, or candidate but worthy of monitoring on an unofficial basis), those species include; Arabis bodiensis, Astragalus Johannis-Howellii, Opuntia pulchella, and Penstemon rubicandas.

The Lahontan Cutthroat trout is found in Walker Lake, part of which falls within the HWAAP boundary. The species is maintained by an artificial breeding and stocking program. Other threatened and endangered species observed in the region include the peregrine falcon, bald eagle, brown pelican, the swainson's hawk, the white faced ibis and the American white pelican, all of which are listed as category 2 candidate species. All of these birds have been observed in the Walker Lake vicinity and may occur at HWAAP as a function of migratory or feeding habits although none are known to inhabit the installation. The last known siting of a peregrine falcon is thought to have been in the 1940s. The bald eagle, swainson's hawk, and white faced ibis are considered winter residents of the Walker Lake area. The white pelican nests at Pyramid Lake but uses Walker Lake on fishing runs.

### 3.4.3 LAND AND AIRSPACE USE

Almost 80 percent of Mineral County is Federally owned. The Bureau of Land Management (BLM) controls 1,682,000 acres and the Forest Service manages an additional 273,800 acres for a total of 1,956,000 acres. HWAAP occupies an area of 147,400 acres. The remaining 20 percent of the county (774,000 acres) is privately held. Major regional land use activities include grazing; on both Federal and private land, mining, forestry, hunting, and recreational activities.

The HWAAP complex (Figure 3-7) covers 236 square miles of land and consists of 3,125 structures, of which 1,888 are explosive storage magazines having a total capacity of over 600,000 tons. HWAAP also has a conventional ammunition disposal range of approximately 740 acres, 25 miles southwest of Hawthorne off state Highway 359 where up to 4,000 pounds of explosives can be remotely detonated.

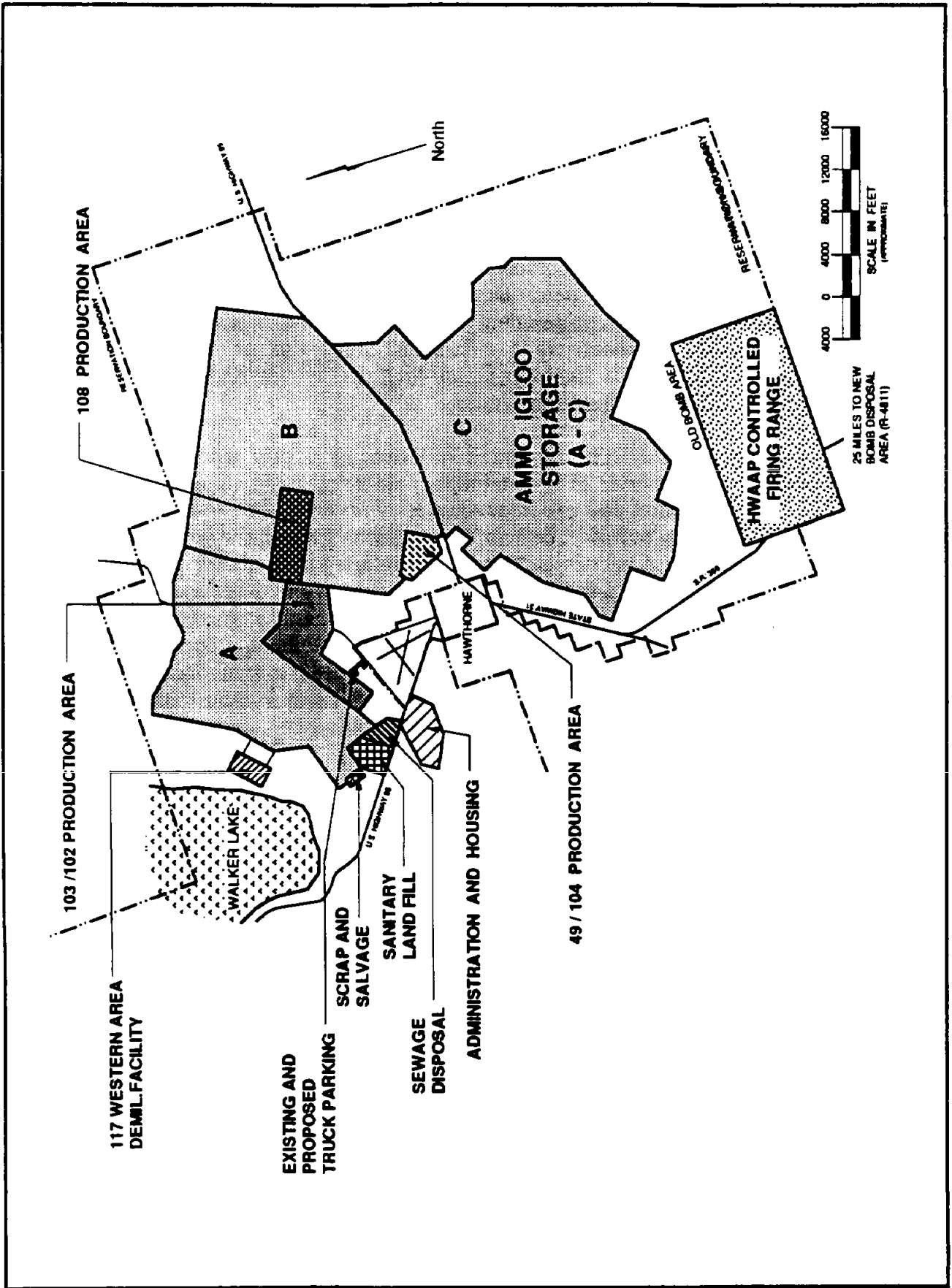


Figure 3-7. Hawthorne Army Ammunition Plant Land Use.



Land use within the county can be divided into basic land use categories that include residential, commercial, industrial, manufacturing, agriculture, grazing, recreation, U.S. Forest/Recreation, watershed, and open range. The urbanized areas such as Hawthorne, Mina, and Luning can be further subdivided according to habitation or commercial uses (Day and Zimmerman, 1981). Mineral County has adopted a zoning ordinance, a land division ordinance and a building code as forms of land use control. Expansion of the town of Hawthorne is very limited because it is surrounded on three sides by HWAAP.

Some limited firewood and Christmas tree cutting occurs in the western portion of Mineral County in the Wassuk Range. However, no forestry activities occur on HWAAP. Cattle and sheep grazing occurs in the northern portion of Mineral County on the Walker River Indian Reservation and the east and west of HWAAP land managed by the BLM and private land owners. Mining in Mineral County occurs near the town of Hawthorne and near the town of Luning. Gold and silver are the two metals of greatest economic interest. There is no mining activity on HWAAP.

The major forms of recreation in the area include hunting, off-road vehicle (ORV) use, hiking, camping, boating, fishing, horseback riding, and picnicking. Hunting near HWAAP occurs in the fall primarily in the mountainous areas within the Wassuk Range and Gillis Mountain. Species hunted are primarily mule deer, upland game birds, and some small game. ORV use along with boating, fishing, swimming, camping, and picnicking occurs widely within the Walker Lake Recreation area. Fishing in Walker Lake is rated as good with trout being the main attraction for fishermen. The BLM maintains three recreation areas on the west shore of Walker Lake. Authorized use of HWAAP land for hunting, fishing, and sightseeing is permitted and these activities have been monitored during the period 1984 through 1988. During this period, an annual average of approximately 700 persons fished on HWAAP; about 700 persons used the area for sightseeing; and over 200 persons hunted on HWAAP. An annual average of about 1,600 persons used HWAAP for outdoor recreational purposes.

Control of HWAAP is maintained by the Armament, Munitions and Chemical Command (AMCCOM) which is responsible for the plans, installation, operation, and equipment of the plant. Use of the lands and facilities at HWAAP by non-U.S. Army entities are administered under Inter-Service Support Agreements. The ISSA specifies the terms of use, provides for the various types of support to be provided by the HWAAP contractor (such as power, water, security, and maintenance), and establishes mechanisms by which the Army will receive compensation from users.

There are two aeronautical airspace areas contained either within or overlying HWAAP which include the Hawthorne Mortar Range Controlled Firing Area and a segment of Military Training Route IR 275.

#### 3.4.4 AIR QUALITY

The HWAAP is located in the Carson Desert Air Quality Control Region. The air quality in the region is generally good and either in attainment of or unclassified with respect to the National Ambient Air Quality Standards, with the exception of total suspended particulate (TSP). However, TSP standards are being replaced with PM<sub>10</sub> (particulate matter of 10 micrometers diameter or less) standards. The area is considered likely to continue to be in attainment under the new PM<sub>10</sub> standards (Woodward-Clyde, 1989). HWAAP currently has 43 air quality permits which cover such sources as boilers, incinerators, flashing chambers, aggregate crushing/conveying, and fire training exercises. Case by case permitting of the demilitarization program at HWAAP limits particulate releases to those which dissipate quickly with no lasting effects.

#### 3.4.5 WATER RESOURCES

Hydrogeologic conditions in the southern Walker Lake basin are typical of those in many of the valleys in Nevada. The basin is bounded by high mountains and the valley itself is filled with alluvial material to depths of more than 1,000 feet. Groundwater recharge occurs from precipitation on the surrounding mountains. Most of the recharge is believed to occur from along the Wassuk Range. Under natural conditions, groundwater flow is generally from the mountain ranges toward the north-south axis of the valley and then northwestward toward Walker Lake along the valley axis. The most recent hydrologic study of the Hawthorne area was done in 1974, and this study showed that the natural flow pattern has been altered by groundwater pumpage in the vicinity of HWAAP and the town of Hawthorne. Groundwater is available at various depths (location dependent) in the underlying alluvial material. Groundwater is found in the numerous zones of sand and gravel. There are two sources of water: shallow surface water and a much deeper groundwater. These two sources of water are separated by a significant layer of impermeable clay (Van Denburgh, et al., 1980). Depth to groundwater in the 8 HWAAP wells ranges from 49 feet to 480 feet, based on the recorded depths to water level. The groundwater level has been declining for many years.

Surface water from the 43,000 acre Wassuk Mountain watershed is the primary source of water for HWAAP. Surface waters are interconnected to Black Beauty Reservoir. HWAAP withdraws approximately one million gallons of water per day from the reservoir. Historic use has diminished from a high of 1.83 mgd in 1972 to approximately 0.87 mgd during 1989. The decline is a function of the reduction of housing units at the plant. HWAAP augments its surface water sources by the utilization of water from eight wells throughout the installation.

Groundwater quality is highly variable in the vicinity of HWAAP and the town of Hawthorne. Generally, it is of poor quality. The total dissolved solids level is high, and there are concentrations of sulfate and fluoride that exceed health standards. Recently, the town developed two new wells to increase its reliable supply of good quality water. Walker Lake is not used for water supply as it is highly saline and unsuitable for domestic,

irrigation, or industrial uses. Natural ground-water quality is strongly influenced by geothermal conditions to the north-west of Hawthorne and HWAAP.

Study of potentially contaminated groundwater at HWAAP was begun in 1976 by the U.S. Geological Survey (USGS). From that time through 1981, a total of 37 shallow ground water monitoring and sampling wells were drilled by the USGS and the USATHAMA. The most widespread contaminant found was total nitrogen, which ranged in concentration from 40 to 130 mg/l. The dominant nitrogen species was nitrate for which the National Interim Drinking Water Standard is 10 mg/l as nitrogen. TNT was the only hazardous compound detected. The maximum concentration measured was 430 parts per billion. The Army's proposed drinking water standard for TNT is 44 parts per billion. The migration rate of the TNT was found to be significantly less than that of the nitrogen contamination. The highest concentrations of TNT were found adjacent to disposal pits previously used for demilitarization and production operations. These concentrations decreased to essentially zero at 3,200 feet down-gradient.

For all contaminants, the greatest concentrations were detected in the area of shallow surface water (approximately 20 feet or less) at the northerly portion of the study area. Further to the south, where the water table approaches a depth of 100 feet or more, lower concentrations of both nitrogen and TNT were detected. The USGS concluded that the contaminants may be stored in the sediments overlying the water table, thus reducing the probability of surface contamination being able to reach deeper groundwater sources used for human consumption. Based on the available data, USATHAMA concluded there was no current health or safety problem created by the observed contamination in the ground water. Active ground water monitoring and studies continue as a part of the on going installation environmental program.

### 3.4.6 NOISE

A study conducted by Woodward-Clyde (1989) relative to military overflights, derived baseline sound levels in the town of Hawthorne and in more quiet outlying areas. The study showed the existing noise environment to be typical of a rural, desert area. Around Walker Lake, outside of Hawthorne, noise levels averaged 44-46 dBA. The existing noise levels in Hawthorne averaged 51-56 dBA. This would be expected, given the increased human activity in Hawthorne versus the Walker Lake area. Currently, development of an ICUZ analysis is in process for HWAAP.

Major sources of noise at HWAAP are the mortar firing range, the pistol range, and the demilitarization of ammunition. Noise levels vary by the activity. For example, before halting demilitarization by incineration in 1988 HWAAP disposed of cartridges in the Western Area Demilitarization Facility (WADF) rotary furnaces. Routine disposal of ammunition by open burning or open detonation also has been halted at HWAAP although periodic disposal may occur. However, noise effects have been estimated (U.S. Department of Energy, 1989) assuming disposal through burying charges of 68 boxes containing up to 180 20-mm cartridges per box at a depth of 6 to 8 feet with 1,100 pounds of TNT as a detonator

and no more than 6 charges per day. These assumptions generate a 65 dBC contour at about 7,413 feet from the disposal area at Restricted Area R-4811 shown on Figure 2-4. No residential development would be affected within the Zone II (62-70 dBC) area around this open detonation site. Due to the spatial arrangement of noise-producing activities within the boundaries of HWAAP such as open burning or detonation areas and the WADF rotary furnaces, the levels of sound emanating from the facility are not likely to be detectable by the general public. Sound levels for high intensity sources such as demilitarization are diminished to less than 65 dBC at the plant perimeter.

### 3.4.7 CULTURAL RESOURCES

The western Great Basin has been the scene of human activity for at least the past 10,000 years. Evidence of utilization of the area during the time preceding historical records consists of sequential assemblages of artifacts that represent either different cultures, or cultural adaptations to the region and its changing environment. The Walker Lake Paiute are thought to have entered their ethnographic territory during the proto-historic period as a part of the large Numic expansion into the Great Basin. Traditionally referred to as the Agaidika (Trout Eaters), this Northern Paiute band pursued a subsistence-settlement strategy based on seasonal occupation around Walker Lake and the Wassuk Range uplands. In fact, this latter area figures prominently in their cosmology. The first firmly documented Anglo-European penetration into the HWAAP region was by Jedediah Smith in 1827. Even this early contact with the native populations was typified by conflict--a pattern that intensified throughout the mid-1800s. Consequently, Anglo-European activities during the historic period primarily involved development associated with mining, ranching, transportation routes, and communication facilities. Along with the establishment of the Hawthorne Naval Reservation (now HWAAP) in 1926, these types of activities continue to constitute the major forms of development in the region today.

An archaeological overview and management plan has been completed for HWAAP (Cleland, et al., 1987). To date only a small portion of the installation has been systematically examined for prehistoric and ethnographic period cultural resources. In total, some 14 previous surveys, covering approximately 1,900 acres, have recorded some 88 archaeological sites. Consultations with the Nevada State Historic Preservation Officer's (SHPO) staff indicates that virtually none of the known archaeological resources have been evaluated as to eligibility for inclusion in the National Register of Historic Places. Recently, the installation submitted a draft thematic National Register of Historic Places nomination to the Nevada SHPO for review and comment. The nomination is considered provisional, and does not encompass any resources in the area of the proposed ammunition and receiving facility.

### 3.4.8 NATIVE AMERICAN CONCERNS

Present Native American concerns focus on lands of the Walker River Indian Reservation which is located in portions of Churchill, Lyon, and Mineral counties. The

reservation (established in 1871) is situated adjacent to HWAAP on 323,300 acres. The Walker River Paiute Tribe is the governing body of the reservation. There are no known Native American heritage concerns for the area affected by the realignment action.

### **3.4.9 WASTEWATER DISPOSAL**

The wastewater treatment for the town of Hawthorne is provided by that entity's own sewage treatment facility, which is on plant property. This system, which has a current capacity of approximately 400,000 gallons per day, has been in use since 1930. It has recently been upgraded to include lined lagoons, air injection, and rapid filtration systems. HWAAP utilizes a separate, government-owned sewage treatment plant, which is supplemented by a number of septic tank systems for outlying locations. The WADF has an integral wastewater treatment facility.

### **3.4.10 SOLID WASTE DISPOSAL**

Waste disposal for the town is at a landfill three to four miles south of the town of Hawthorne. The remaining life expectancy is estimated at approximately 10 years at current use rates. The BLM has been petitioned for more land for development of additional capacity. Within HWAAP, non-hazardous solid wastes are disposed of onsite at either the sanitary or industrial landfills. The sanitary landfill operation is a trench-type with one trench open at any point in time. The 53 acre site is fenced and has water for fire protection. The industrial landfill portion has specific sites for burial of asbestos, treated wood, and construction debris. These landfill areas have received satisfactory ratings following four inspections during 1988 and 1989 by the Nevada Department of Health Services.

### **3.4.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

Operations within the region that generate hazardous wastes are governed under Federal, state and local regulations. Those entities must dispose of their hazardous wastes in accordance with these regulations or risk the penalties involved with non-compliance. Current activities at HWAAP are governed under a RCRA Part A interim status permit. A RCRA Part B permit application has been submitted to the state of Nevada for approval. The application addresses all hazardous waste management at HWAAP and contains specific procedures for waste management operations. Container storage buildings are used to temporarily store hazardous waste generated by base maintenance and ammunition renovation activities. The wastes are disposed of by shipping to an EPA-approved offsite treatment, storage, or disposal facility.

In the event of an emergency response situation, the Part "B" document includes a contingency plan that designates a specific Emergency Response Organization, and prescribes specific procedures to be taken. The plan also describes all available emergency

response equipment and reporting requirements as well as containing lists of emergency response and regulatory persons and agencies to be contacted.

Areas at HWAAP containing contaminated sites (Figure 3-8) are associated with past production, training, or testing programs. A 1988 survey conducted by the U.S. Army identified 82 potential hazardous waste disposal sites. Remedial action and/or additional study has been recommended or initiated at 42 of those 82 sites (DOE, 1989).

Transformers containing PCBs have been and currently are in use at the facility. As PCB-containing transformers are replaced they are stored and disposed of in accordance with TSCA regulations.

Asbestos has been used in buildings at the facility. Asbestos has been removed from numerous buildings utilizing appropriate OSHA techniques. The removed materials have been double bagged and placed into a specified portion of the state of Nevada permitted sanitary landfill in accordance with state regulations.

There are approximately 90 underground storage tanks at HWAAP. All tanks have been surveyed to document their location. All pre-1965 tanks have been leak tested per EPA (40 CFR, Part 280) regulations. Of the tanks tested a total of 11 were found to be leaking. The State of Nevada has been notified of the testing results. The contractor at HWAAP is awaiting a response from the state concerning the requirement to remove, remediate, or abandon the leaking tanks. The U.S. Army has implemented a regulation requiring that all tanks, regardless of age, be placed on a testing program. Most tanks at HWAAP contain DF-2 (diesel fuel), some contain gasoline.

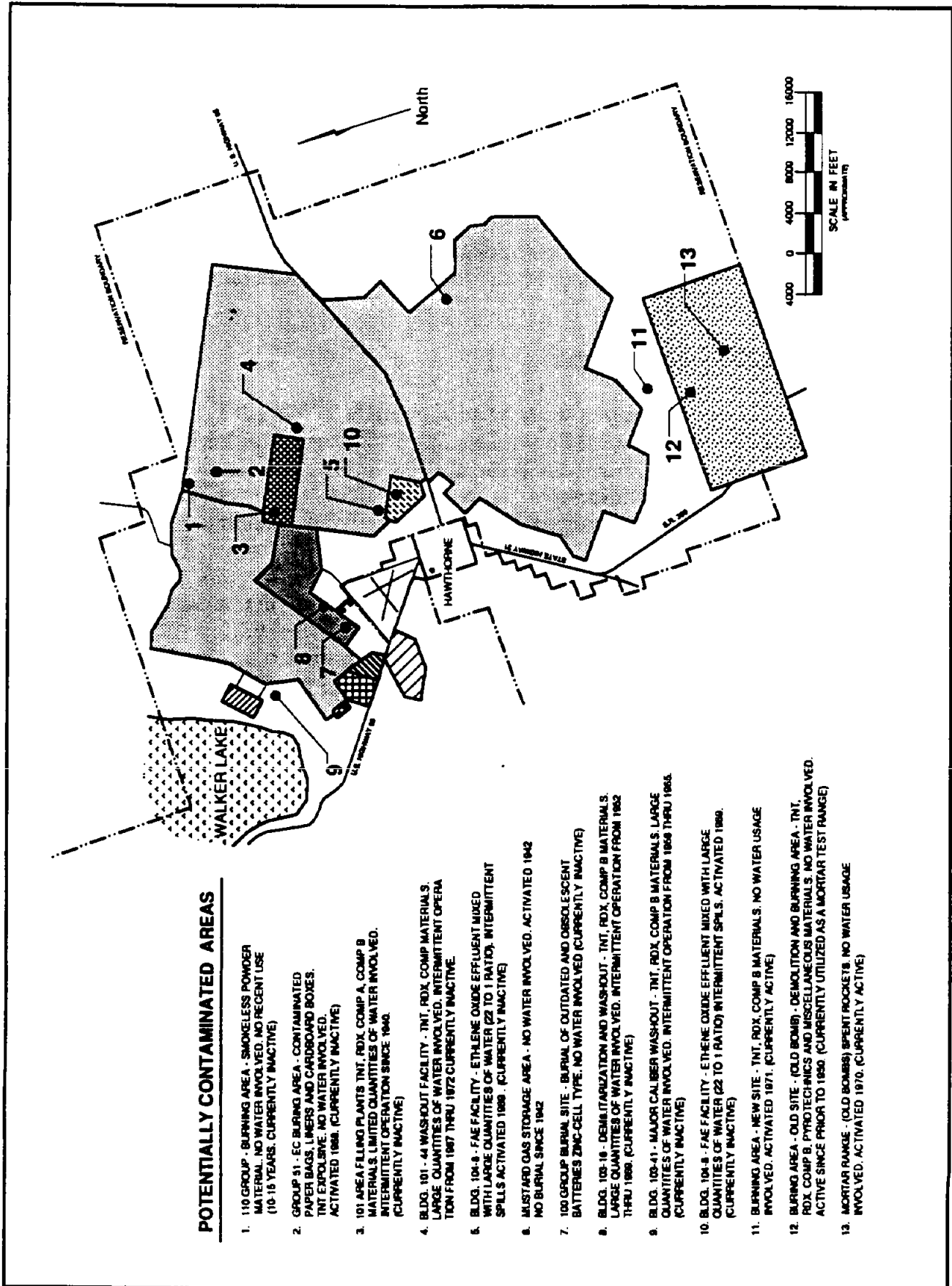
While radon release has not been investigated at HWAAP, surveys are currently being planned.

#### **3.4.12 ENERGY USAGE**

Electricity at HWAAP is supplied by Sierra Pacific Power Company. The installation's average monthly electric power utilization in 1989 was approximately 730 megawatt hours.

#### **3.4.13 AESTHETIC QUALITY**

The presently developed portions of HWAAP possess no notable aesthetic qualities (e.g., buildings, storage igloos). From viewpoints along U.S. Highway 95, the buildings and igloos of HWAAP are readily visible. The undeveloped landscape around the installation is classic Great Basin, with large treeless valleys bounded by mountains. The higher mountain ranges are forested with scattered piñon pine and juniper trees.



**POTENTIALLY CONTAMINATED AREAS**

1. 110 GROUP - BURNING AREA - SMOKELESS POWDER MATERIAL. NO WATER INVOLVED. NO RECENT USE (10-15 YEARS. CURRENTLY INACTIVE)
2. GROUP 51 - EC BURNING AREA - CONTAMINATED PAPER BAGS, LINERS AND CARDBOARD BOXES. TNT EXPLOSIVE. NO WATER INVOLVED. ACTIVATED 1988. (CURRENTLY INACTIVE)
3. 101 AREA FILLING PLANTS TNT, RDX, COMP A, COMP B MATERIALS. LIMITED QUANTITIES OF WATER INVOLVED. INTERMITTENT OPERATION SINCE 1940. (CURRENTLY INACTIVE)
4. BLDG. 101-44 WASHOUT FACILITY - TNT, RDX, COMP MATERIALS. LARGE QUANTITIES OF WATER INVOLVED. INTERMITTENT OPERATION FROM 1967 THRU 1972 CURRENTLY INACTIVE.
5. BLDG. 104-B - FAE FACILITY - ETHYLENE OXIDE EFFLUENT MIXED WITH LARGE QUANTITIES OF WATER (2 TO 1 RATIO). INTERMITTENT SPILLS ACTIVATED 1988. (CURRENTLY INACTIVE)
6. MUSTARD GAS STORAGE AREA - NO WATER INVOLVED. ACTIVATED 1942 NO BURIAL SINCE 1942
7. 100 GROUP BURIAL SITE - BURIAL OF OUTDATED AND OBSOLETE BATTERIES ZINC-CELL TYPE. NO WATER INVOLVED (CURRENTLY INACTIVE)
8. BLDG. 103-18 - DEMILITARIZATION AND WASHOUT - TNT, RDX, COMP B MATERIALS. LARGE QUANTITIES OF WATER INVOLVED. INTERMITTENT OPERATION FROM 1952 THRU 1968. (CURRENTLY INACTIVE)
9. BLDG. 103-41 - MAJOR CALIBER WASHOUT - TNT, RDX, COMP B MATERIALS. LARGE QUANTITIES OF WATER INVOLVED. INTERMITTENT OPERATION FROM 1959 THRU 1968. (CURRENTLY INACTIVE)
10. BLDG. 104-B - FAE FACILITY - ETHYLENE OXIDE EFFLUENT MIXED WITH LARGE QUANTITIES OF WATER (2 TO 1 RATIO) INTERMITTENT SPILLS. ACTIVATED 1988. (CURRENTLY INACTIVE)
11. BURNING AREA - NEW SITE - TNT, RDX, COMP B MATERIALS. NO WATER USAGE INVOLVED. ACTIVATED 1971. (CURRENTLY ACTIVE)
12. BURNING AREA - OLD SITE - (OLD BOMB) - DEMOLITION AND BURNING AREA - TNT, RDX, COMP B, PYROTECHNICS AND MISCELLANEOUS MATERIALS. NO WATER INVOLVED. ACTIVE SINCE PRIOR TO 1950 (CURRENTLY UTILIZED AS A MORTAR TEST RANGE)
13. MORTAR RANGE - (OLD BOMBS) SPENT ROCKETS. NO WATER USAGE INVOLVED. ACTIVATED 1970. (CURRENTLY ACTIVE)

**Figure 3-8. Hawthorne Army Ammunition Plant Contaminated Areas.**

### **3.4.14 SOCIOECONOMICS**

#### **3.4.14.1 Demography**

The 1980 population of Mineral County was 6,217. The County population estimate as of July 1, 1989 is 7,440 (State of Nevada, Department of Taxation, 1990), with a population density of 2.0 persons per square mile. Between 1980 and 1989, the population increased by 16%. Hawthorne, the county seat, contains 70 percent of the county's residents with a population of approximately 5,200. Four additional communities within Mineral County contain most of the remaining population. The number of persons residing on HWAAP was estimated to be 356 as of March 1990. The 1995 Mineral County population is forecast to reach 7,700.

#### **3.4.14.2 Regional Economic Activity**

The single largest employer in Mineral County is HWAAP. Approximately 23 percent of the county's average 1988 employment (849 jobs) can be attributed to HWAAP military, DOD civilian, and contractor personnel, an additional 9 percent (292 jobs) can be attributed to secondary employment. As of June 1989, the employment was 830. Approximately 32 percent of all employment in the county is the result of HWAAP activities (DOE, 1989).

In 1987, mining activities accounted for 15 percent of the county employment (Robinson, et al., 1990). Agriculture accounts for 1.2 percent of 1987 county-wide employment, equaling 34 residents. Total cash receipts from marketing of crops in 1986 was slightly less than \$1.3 million. Livestock sales contributed 88 percent of county-wide cash receipts in 1987 (Nevada Statistical Abstracts, 1988).

#### **3.4.14.3 Housing, Schools, Health Care, and Public Safety**

In July 1989, there were slightly more than 2,800 residential housing units in Mineral County. This estimate does not include residential housing owned by Native American people in the county. The county persons-per-household ratio is 2.66.

Education is provided within the county by the Mineral County School District which has a system of 4 schools none of which are located on HWAAP. Three are elementary schools and one is a high school. Average enrollment has been relatively stable since 1985 at about 1,077 students.

In 1988, medical care was provided to Mineral County residents by 5 licensed physicians, (personal communication, Claire Mowrey, State Board of Medical Examiners, 1989), 13 registered nurses, and 8 licensed practical nurses.

There is one hospital in Hawthorne, which has 15 acute care beds and 20 long-term care beds. The town has one dentist. There is one ambulance in Hawthorne and about 14 emergency medical technicians EMTs. Care flight services are provided from Reno by St.



Mary's and Washoe County hospitals. HWAAP maintains an outpatient clinic and a small pharmacy, and provides some laboratory services.

Law enforcement in Mineral County is provided by the County Sheriff's Department and the State Highway Patrol. Hawthorne does not have a police department. In 1988, the Sheriff's Department consisted of 20 commissioned officers and 5 civilian staff. Two commissioned officers of the State Highway Patrol are stationed in Churchill County but serve Mineral County. The Dick Pierce Company provides security services at HWAAP, with a force of about 90 personnel. The company does not have law enforcement jurisdiction; thus the Mineral County Sheriff's Department would be called if necessary.

Volunteer fire departments are located in Luning, Mina, Schurz, and Walker Lake. The Mineral County Fire Department, located in Hawthorne, is part-paid. The staff consists of 4 paid fire suppression personnel, 90 volunteers and 4 mechanics. HWAAP has its own fire department with two fire houses. One fire house is located in the industrial area the other in the ordnance area. The staff consists of 24 fire suppression personnel and one secretary-dispatcher.

#### **3.4.14.4 Traffic and Transportation**

Major access to the region is along U.S. Highway 95, which is the major north/south highway in western Nevada. U.S. 95 continues northward to intersect Interstate 80, a primary east/west truck corridor which provides access to Salt Lake City, Reno, Sacramento, and San Francisco. U.S. 95 continues southward from HWAAP to Las Vegas, where it intersects Interstate 15, another primary east/west corridor, which provides access to Southern California.

The Southern Pacific Transportation Company (SPTC) currently provides commercial rail service to the region. The SPTC branch line extends southward from the east-west main line at Hazen, Nevada, through the northeast portion of HWAAP. The rail line is currently operating with one or two trains per week between Hazen and Fort Churchill. Trains operate south to HWAAP on an intermittent, as needed, basis. The Army is in the process of purchasing the railroad spur from Southern Pacific. It is most likely that Southern Pacific will continue to operate the railroad as a contractor to the U.S. Army. This acquisition is in the negotiation process and conditions are subject to change. This negotiation is not related to the BRAC action.

The Hawthorne Municipal Airport is a non-controlled, visual approach, paved runway, general aviation facility which can handle aircraft as large as C-130 aircraft. The nearest commercial air service is at Reno Cannon International Airport in Reno, Nevada (131 miles away).

### **3.4.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

A mutual-aid agreement between HWAAP and Mineral County exists under which HWAAP will respond to Mineral County Fire Department (FD) requests for fire suppression within the county and the Mineral County FD will assist on base providing the fire is in a nonexplosive area. Support commitments have also been made with each of the tenant activities.

## Chapter 4

### ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES

This chapter describes the environmental and socioeconomic consequences of the proposed action and implementation alternatives at Fort Wingate Depot Activity (FWDA), Navajo Depot Activity (NADA), Umatilla Depot Activity (UMDA), and Hawthorne Army Ammunition Plant (HWAAP). These future conditions are described as anticipated with the base realignment and closure (BRAC) action during the 1991 through 1995 period.

The "no action" alternative reflects the operational requirements of the Army's ammunition logistical system within each installation's current capability and environmental permit limitations without the realignment or closure action. The "no action alternative" described in Chapter 2 (Alternatives Considered) and Chapter 3 (Affected Environment) provides the baseline which when compared with the conditions with the BRAC action determines the effects of the proposed action. The discussion of potential effects of the alternatives considered incorporate common elements described in this introduction. The relative magnitude of these effects is described qualitatively within a range from no impact to either substantially beneficial or substantially adverse. The significance of these impacts is also stated.

Evaluation of the significance of direct impacts on an environmental resource or indirect socioeconomic condition is based upon the potential for change resulting from the conventional ammunition mission realignment and closure or real property disposition alternative. For example, within the resource areas of climate, geographic setting and geology, exposed surface soil materials are prone to erosion by wind and water. Adverse impacts result from ground disturbing actions that substantially deplete the quantity or quality of available cover or topsoil. Determination of the significance of impacts on the biological environment was based on: the importance (legal, commercial, recreational, ecological, or scientific) of the resource; the proportion of the resource that would be affected relative to its occurrence in the region; the sensitivity of the resource to realignment and closure activities; and the duration of the ecological ramifications of the effect. In the wildlife analysis, impacts are also considered significant if wildlife management, as it relates to species of high concern, is adversely affected over relatively large areas.

The impact of BRAC actions which result in new urban land development, necessitating a change in the proportions of local land or airspace use as defined in the current applicable plans, would be considered significant. If, as a result of BRAC realignment actions, residential, commercial, or other sensitive land uses are included within areas exposed to noise levels higher than 75 dBC or to unacceptable safety hazards, the impact on land use would be considered significant. If realignment results in the inclusion of sensitive land uses within areas exposed to noise levels between 65 and 75 dBC, the impact on land use would be considered potentially significant.

Evaluation of the significance of impacts on forestry or mining is based on the economic potential of the resource, the extent or availability of the resource, and the degree to which BRAC actions will potentially deplete the resource. Adverse impacts result from actions that substantially deplete the known and expected reserves of a particular resource relative to its occurrence on a local, state, national, and world basis. If a BRAC action results in increased recreation demand that exceeds the capacity of the recreation resource, the impact would be considered significant. If the BRAC action results in precluding the performance of the mission or primary function of a major command, corporation, or governmental agency which is a party to a special land use agreement, the impact is considered significant.

Criteria to determine the significance of air quality impacts are based on federal, state, and local air pollution standards and regulations and installation air quality permits. Impacts would be considered significant if BRAC action emissions increase ambient pollutant concentrations from below to above any National Ambient Air Quality Standard (NAAQS) or appropriate state standards. This criteria is assumed to be met if installation operations are within current or future approved federal or state air quality permit levels.

Criteria for determining the significance of environmental impacts on water resources are based on water availability and use, quality, rights, and applicable regulations. A BRAC-related impact on water resources is considered significant if it will:

- Reduce water availability to, or interfere with the supply of, existing users.
- Endanger public health or safety by creating or worsening an adverse health hazard or safety condition.
- Threaten or damage unique hydrologic characteristics in an area.
- Violate laws or regulations adopted to protect or manage the water resource system.

The basis for determining the significance of noise impacts on the environment in the vicinity of military installations is taken from the Installation Compatible Use Zone (ICUZ) program. The ICUZ program provides threshold noise levels for various land uses that could typically be found near military installations. These threshold levels measured in decibels and "A" weighted for other than impulse noise and "C" weighted for impulse noise. Sound levels generated by gunfire and explosive blast such as from conventional ammunition demilitarization is considered impulsive noise. ICUZ assists local communities and the Army in managing land uses that could be affected by noise and safety hazards generated by military operations. The significance criteria for human activity near installations exposed to noise from conventional ammunition demilitarization include the following:

- Impulse noise levels less than 62 dBC are considered to be insignificant. According to Department of Housing and Urban Development, Department of Transportation and DOD guidelines, it is "acceptable" for humans to be exposed

to noise levels less than 62 dBC. Zone I is compatible with housing and represents an area of noise levels less than 62 dBC.

- Impulse noise levels between 62 and 70 dBC are considered to be potentially significant but mitigable, through the use of noise attenuation measures. Agency guidelines classify this range of noise as "normally unacceptable" for residential hospital, schools and other similar activities. Zone II (62-70 dBC) is considered compatible with housing and similar activities if noise reduction measures are used.
- Impulse noise levels greater than 70 dBC are considered to be significant and unmitigable. Agency guidelines classify these noise levels as "clearly unacceptable". Zone III (greater than 70 dBC) is incompatible with housing and other noise sensitive activities, but compatible with commercial development and manufacturing.

Because this document is an EIS and the terms "significance" and "significant" carry special connotations, it is necessary to clearly define the manner in which these terms are used relative to cultural resources. The impact assessment process, as outlined in federal cultural resource laws and regulations, centers on two types of significance (resource and impact significance). These two types of significance are tightly integrated with regard to cultural resources.

Resource Significance. The significance of prehistoric-archaeological, historic, and architectural resources is evaluated based on the criteria for inclusion in the National Register of Historic Places as defined in 36 CFR Part 60.4 and in consultation with the State Historic Preservation Officer. According to these criteria, the quality of significance is present in districts, sites, buildings, structures and objects that:

- are associated with events that have made a significant contribution to the broad patterns of history; or
- are associated with the lives of persons significant in the past; or
- embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic value or represent a significant and distinguishable entity whose components may lack individual distinction; or
- have yielded, or may be likely to yield, information important in prehistory or history.

Cultural resources determined to be significant according to National Register criteria are termed historic properties. To be listed in or determined eligible for listing in the National Register, a property must meet at least one of the above criteria and must possess integrity--an attribute defined as the authenticity of a property's historic identity as

evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric occupation or use. Included are integrity of location, design, setting, materials, workmanship, feeling, and association. If a property retains the physical characteristics it possessed in the past, it has the capacity to convey information about a culture or people, historical patterns, or architectural or engineering design and technology.

**Impact Significance.** To warrant consideration with regard to project impacts, an evaluation must establish the significance of cultural resource, and thus define it as an historic property. A project results in impacts to an historic property when it alters the property's characteristics that qualify it for inclusion in the National Register. Direct and indirect impacts are considered significant (adverse) if they result in loss, alteration, or destruction of properties listed on or determined eligible for listing on the National Register.

Evaluating the significance of Native American concerns requires consultation with affected tribal groups to develop relevant defensible criteria for establishing the relative importance of tangible and intangible resources. Certain categories of tangible Native American cultural resources, such as ancestral settlements or petroglyph and pictograph sites, may be afforded protection through their eligibility for the National Register. However, natural features such as biota and spiritual locations are not addressed in historic preservation legislation unless their historic use can be documented. Such features, as well as the more intangible resources that contribute to the uniqueness and maintenance of Native American cultures and communities, are afforded protection under the American Indian Religious Freedom Act.

If wastewater or solid waste disposal requirements generated by the BRAC action exceed the current level of service, the impact would be significant. If the public or environment are inadvertently exposed to hazardous waste, this localized impact would be considered significant. For example, if an inadvertent release of friable asbestos occurred during the demolition or modification of a structure as a part of the BRAC action, this localized impact would be considered significant.

Evaluation of the significance of impacts upon energy usage is based upon the availability of energy relative to the BRAC-related activities consumption of energy and the environmental effects of the change in consumption. Evaluation of potential impacts to aesthetic quality of the local setting requires determination of the extent to which the planned actions contrast with the existing visual setting and the degree to which the modification to the setting is noticeable. The degree of contrast provides the basis for identifying the significance of the impact. Significant impacts are defined as those resulting from actions which are visually incompatible with the existing visual setting and from actions which are obtrusive to or dominating the existing visual landscape.

The significance of demographic, regional economic activity (i.e. regional growth) impacts is typically evaluated in terms of related effects upon other socioeconomic resources, such as housing, schools, health care, and public safety. Consequently, regional growth impacts are considered significant if the change in the demographic or economic measure of the regional economy exceeds the peak historic growth rate or results in greater than 10

percent decline in the measure. Significant impacts to the housing market are defined as a positive or negative change which exceeds 10 percent of the total on and off-installation housing stock. If additional teachers, health care, or public safety personnel, facilities, or capital improvement projects are required as a result of the BRAC action beyond those required by the peak historic growth rate or a 10 percent decline, the impact is considered significant.

The impacts of the BRAC action on traffic and transportation are significant in terms of substantial changes in the level of service a change in traffic volume which would result in: (a) a reduction in level of service below the minimum design standard, (b) a significant change in the accident rate to one above the state-wide average for similar accidents, and (c) a change in transportation infrastructure maintenance requirements such as consequential rerouting of traffic which substantially disrupts other links of the existing network.

The magnitude of each environmental impact identified in this chapter (other than air quality effects) is based upon comparison of the incremental change from the baseline condition and, if appropriate, comparison with the existing permit conditions governing environmental compliance at the individual installations. The air quality effects of BRAC-related demilitarization of conventional ammunition were analyzed by comparing the quantity of emissions and contaminants from explosives destroyed by implementing the four-year BRAC demilitarization program at FWDA, NADA, and UMDA (Tables 4-1, 4-2, and 4-3) with current regional air quality standards permitted in the installation study areas. The total emissions and contaminant weights were converted to tons and compared with the allowable limits for each area. Since no BRAC demilitarization is planned at HWAAP, the analysis is not applicable for this action.

Several assumptions or considerations were integrated into the analysis presented in this chapter. Each installation will continue coordination with environmental and public safety agencies to assure regulatory compliance and schedule operations to remain within acceptable EPA and state guidelines in New Mexico, Arizona, Oregon, and Nevada.

- Security and protection of the real property will continue during the time interval between closure and the ultimate disposition of the lands and the facilities. Real property maintenance will be limited to basic protection of buildings, fences, and other developments from natural damage and vandalism.
- The ultimate disposition and uses of the lands and facilities could include land surface disturbance. The nature and extent of impacts associated with future uses by either the public or private sectors will be analyzed through additional NEPA documentation, as necessary.
- Federal employees who hold manpower positions at FWDA, NADA, or UMDA which would be eliminated under this action have several programs available to assist in the transition to new employment.

Office of Personnel Management Displaced Employee Program. Career employees being displaced receive priority referral benefits for a period of two years while career-conditional employees receive those benefits for one year. These benefits include referral of qualified employees to Federal agencies prior to the agencies' selection of registrants and other eligibles on civil service registers to fill vacancies or displace employees with temporary appointments. In addition, a displaced employee may apply after the closing date of an examination to place his/her name on an existing civil service register in regular order.

DOD Priority Placement Program (PPP). The PPP is a computerized world-wide referral program for Federal employees being separated due to a reduction in force or declination of a functional transfer offer. While registration does not guarantee continued employment, when a DOD installation has a vacancy that matches the employees' skills and an acceptable grade, an offer is required. Generally the employee can remain in the program for the duration of the notice period and 12 months after separation.

Discontinued Service Retirement. If a Federal employee is scheduled for involuntary separation by a reduction in force and is 50 years or older and has completed 20 years of Federal service (including 5 years of civilian service), or regardless of age has completed 25 years of Federal service (including 5 years civilian service), the employee may be entitled to a retirement annuity.

Relocation Allowances. Relocation expenses are allowable for Federal employee who accompany a transfer of function, have been issued a reduction in force notice and are reassigned within DOD or are former employees with rights under the Displaced Employee or Priority Placement Programs.

Homeowners Assistance Program. The Homeowners Assistance Program is available to Federal career employees separated at bases being closed (in whole or in part) in situations where the real estate market is determined to be severely affected by the closure.

These programs are not available to Federal temporary employees, nonappropriated fund employees, or independent contractors and their employees (either state agencies such as the AZNG at NADA or private companies such as Day and Zimmerman/Basil Corporation at HWAAP).

The following discussion of direct environmental and indirect socioeconomic consequences of the realignment or closure action at each installation focuses upon the preferred alternative. Mitigation measures also are discussed in the following sections.



## 4.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

This discussion of direct environmental and indirect socioeconomic consequences focuses primarily on closure of the conventional ammunition mission of Fort Wingate Depot Activity (FWDA). When the issue of land disposition at FWDA has been decided, additional NEPA documentation may be required to supplement the following discussions of the impacts of real property disposal alternatives.

### 4.1.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY

The BRAC action at FWDA will not change the climate, geographic setting, or geology of McKinley County. No impacts are expected as a result of the closure action or real property disposal alternatives.

### 4.1.2 BIOLOGICAL ENVIRONMENT

#### 4.1.2.1 Terrestrial Environment

FWDA closure would not significantly impact regional terrestrial ecosystems. Elimination of those few activities that now contribute to habitat degradation and contamination (e.g., demolition, burning of explosives, herbicide treatments, training, and tank maneuvers) would result in some moderate beneficial impacts to local and migratory wildlife and vegetation. In presently disturbed areas, native vegetation would gradually become reestablished. The selection of real property disposal alternatives has not been made. In the event of unrestricted public or even private access to FWDA lands, human disturbance would increase. This would unavoidably lower wildlife utilization of the area for some species and could result in moderate adverse impacts. The cooperative plan among the Army, the U.S. Fish and Wildlife Service (USFWS), and the new Mexico Department of Game and Fish (NMDGF) for management of introduced and native game as well as predator species would have to be revised to reflect selection of the real property disposition alternative. The remediation of hazardous material contamination prior to real property disposal may also provide a moderate benefit to the terrestrial environment.

#### 4.1.2.2 Aquatic Ecosystems, Wetlands, and Floodplains

As a result of FWDA closure, environmentally degrading activities that could potentially affect perched alluvial water tables or surface water quality would be eliminated and moderate beneficial effects would accrue to wildlife dependent on aquatic, floodplain, and wetland habitat.

Depot closure would have a minimum adverse impact on the existing installation aquatic habitats. Aquatic habitat associated with sewage treatment would be eliminated. The sewage lagoon that now provides some open-water area for avifauna would evaporate. Other animals such as coyotes, foxes, and bats also use the open water and associated

vegetation. The stocking of Lake McFerren would cease. The rate of eutrophication would increase with the elimination of dredging and the embankment would likely be breached within five to ten years. Eventually, the playa, Knudsen Lake, would silt in and would cease to exist due to lack of maintenance and management. The riparian and aquatic flora and fauna dependent upon the aquatic habitats would be lost resulting in moderate adverse impacts. Actions following the selection of the real property disposition alternative could result in the maintenance of this aquatic habitat.

#### **4.1.2.3 Threatened and Endangered Species**

Closure of FWDA would not significantly affect any known threatened, rare, or endangered species residing off-depot. FWDA closure could have some minimum adverse effects on those threatened, rare, or endangered species that utilize FWDA aquatic resources. For example, the suspension of pond and dam maintenance activities would lessen the value of the area to the occasional wintering bald eagles.

Future development accompanying land disposition could have moderate to substantial adverse effects on protected and endangered species, which may occur on FWDA. For example, since appropriate soil and habitat occur within FWDA, it is highly likely that the Zuni fleabane, a Federally Endangered species, may be present and could be affected by new land disturbances associated with future uses.

### **4.1.3 LAND AND AIRSPACE USE**

Activities associated with FWDA closure would have minimum adverse to moderate beneficial effects and would not significantly affect land and airspace use in McKinley County. Depot closure exclusive of real property disposition would involve termination of existing activities and deactivation of present facilities.

Future land use at FWDA under each of the real property disposition alternatives discussed may depend upon currently existing and any BRAC-related incremental increase in the levels of hazardous and toxic wastes on the installation. The proposed action and implementation alternatives do not affect the present Department of the Army policy; the remediation of hazardous and toxic waste to a level consistent with unrestricted land use is the Army's goal as described in the introduction to Chapter 2.

The principal real estate issues are related to disposal and alternative future use(s) rather than the closure action itself. The effects associated with those future uses could range from moderate to substantial adverse impacts. The Executive Orders that authorized the withdrawal of the land from the public domain provided for the return of the lands to the U.S. Bureau of Land Management (BLM), when they are no longer needed for military purposes. Subject to the Secretary of the Interior's determination that the lands are suitable for return and formal revocation of the withdrawal of these lands, the lands would be returned to the Bureau of Land Management. The relinquishment of the withdrawal, wholly or in part, will govern the amount of lands available for disposition by sale or otherwise.

Alternative future uses proposed during the scoping process (Section 2.1.2.2) are being studied by the Fort Wingate Redevelopment Commission. Topics of public interest included no-action, conveyance of lands to Native American tribes based on aboriginal land claims, and multi-use/occupancy (e.g., national cultural-historical research and curation facility, drug and alcohol detoxification and treatment center, industrial park, airport, and excessing the southern portion of land to the U.S. Forest Service-USFS). In formulating a balanced redevelopment plan, alternative future use planning and decision making would have to take into consideration the environmental effects on existing natural and cultural resources, as well as local economic needs.

The BRAC action is not expected to affect land use planning in McKinley County. However, possible conflicts between the real property disposition action and Federal, regional, state, and local (including Indian tribe) land and airspace use plans, policies, and controls is possible. FWDA is almost entirely surrounded by federally owned or administered lands, including both national forest and Indian trust lands. All areas of residential development within the immediate vicinity of the FWDA are on Native American lands. The nearest municipality to FWDA, the City of Gallup, is located approximately eight miles west of the FWDA. Any eastward expansion of the city is precluded by reservation, tribal, and Indian allotment lands. McKinley County presently has no zoning ordinance and no local zoning authority. However, county authority would not apply to federally owned or administered lands.

Closure of FWDA would not affect regional forests. Within the 5,800 acres of FWDA forested areas, such thinning and disease control activity as now occur would cease. The threat of forest fire would increase should current installation forest and watershed management lapse, resulting in minimum adverse impacts. The BRAC action is not expected to affect livestock grazing on FWDA. However, the impact of depot closure on grazing by the bison population on FWDA is unknown. In January 1990, the New Mexico Game and Fish Department held a public auction to thin the herd size. The size of the herd and its grazing requirements could experience minimum adverse effects depending upon the future use of FWDA land.

Closure of FWDA would have no effect on regional or installation mining activities. Real property disposition alternatives which allow future ground disturbance by mining sand and gravel could substantially adversely affect the biotic and cultural resources on FWDA. Regional recreational facilities, parks, museums, etc., would not be significantly affected by FWDA closure on the basis of the loss of demand by FWDA-related population (Section 4.1.14.1). Regional recreational facilities serve not only the local population but tourists as well. With closure, FWDA recreational facilities (horse barn, tennis court, Lakes Knudsen and McFerren) would fall into disuse and would deteriorate. Since public access has been restricted, closure of FWDA would have minimum adverse effects directed toward current installation recreational use.

The BRAC action prior to real property disposition is not expected to affect special land use agreements. The affects of real property disposition on these agreements are dependent upon the ultimate disposition of FWDA and could have substantial adverse

impacts upon current tenants. Closure of FWDA would not significantly affect regional or installation airspace use. The cessation of demolition activities that temporarily restrict flights directly over FWDA would be considered a minimum beneficial effect. Real property disposition alternatives which effect land and airspace use include (1) the feasibility of the Federal Aviation Administration acquiring a portion of FWDA for the relocation and expansion of the Gallup Municipal Airport, and (2) the interest the U.S. Air Force has expressed in utilizing a portion of FWDA for flight training. These future airspace uses could result in minimal adverse impacts to local civil aviation flight plan options.

#### 4.1.4 AIR QUALITY

Closure of FWDA would reduce impacts on both the regional and installation air quality by eliminating those activities that degrade air quality (e.g., operation of 10 small, natural-gas fueled, central heating plants; explosives detonations; and open burning of explosives propellants and explosives). Emissions of carbon monoxide, sulfur dioxide, nitrogen oxide, and hydrogen sulfide (produced as byproducts of explosives detonation and open burning) would be eliminated, resulting in minimum beneficial impacts.

Following closure, careful land management would be necessary to ensure that soils are not denuded or degraded. Most FWDA soils are highly susceptible to wind and water erosion. Until native vegetation is reestablished, unvegetated areas would be potential sources of windborne particulates, which could have minimum adverse impacts.

At present, New Mexico Environmental Improvement Division (NMEID) does not require air quality monitoring to determine if FWDA activities violate air quality or air toxic guidelines beyond FWDA boundaries. No major changes in SOPs are foreseen as a result of the minor demilitarization program. Coordination with environmental and public safety agencies is expected to continue as under the current mission.

Table 4-1 identifies the total annual emissions and contaminants expected to result from the BRAC demilitarization at FWDA. These estimates are based upon FWDA's capability described in Section 2.1.1 and the demilitarization program described in Section 2.1.2. The products of open burning and open detonation include both rapidly dissipating gaseous compounds and other substances that can contribute to potential ground contamination (Section 4.1.11). The estimates in the table are based upon the following assumptions - miscellaneous demilitarization for open detonation is divided evenly between TNT initiated by Composition B. The weight of contaminants, if any, derived from non-energetic components of the ammunition is not included.

The NMEID applies the National Ambient Air Quality Standards (NAAQS) in permitting demilitarization activities at FWDA for most emissions. The New Mexico ambient air quality standards for hydrogen ( $H_2$ ) and Hydrogen Sulfide ( $H_2S$ ) are described in parts per million (ppm) and are not compared quantitatively. Total suspended particulates are not yet calculated. Table 4-2 compares the level of emissions or contaminants (pollutants) generated during the FY92 demilitarization program scheduled

at FWDA with the standards for priority emissions or contaminants. The one-hour rates are assumed to be confined to FWDA with the maximum plume height of 260 feet. For the other rates, McKinley County is the area of confinement and the height is the average afternoon mixing height (about 7,600 feet above ground level); this is a small fraction of the total volume of the Four Corners Interstate Air Quality Region. The emissions or contaminants are slight in all cases, dissipate rapidly, and do not exceed the standard. No adverse effects on air quality at FWDA or McKinley County are expected as a result of the BRAC related demilitarization program.

Table 4-1. Weight of Emissions or Contaminants Generated by Open Burning/Open Detonation for Common Propellants and Explosives at FWDA

Annual Emissions (Short Tons)	
Emission or Contaminant	FY92
Carbon Dioxide (CO <sub>2</sub> )	383.4
Nitrogen (N <sub>2</sub> )	714.9
Carbon Monoxide (CO)	73.9
Water (H <sub>2</sub> O)	93.5
Carbon Solids	0.0
Hydrogen (H <sub>2</sub> )	3.0
Methane (CH <sub>4</sub> )	0.1
Ammonia (NH <sub>3</sub> )	0.002
Liquid Lead Compounds <sup>1</sup>	0.0003
Potassium Hydroxide (KHO) <sup>1</sup>	0.004
Elemental Lead (Pb) <sup>1</sup>	0.0018
Hydrogen Sulfide (H <sub>2</sub> S)	0.0001
Gaseous Lead Oxide (PbO) <sup>1</sup>	0.000
Sulfur Dioxide (SO <sub>2</sub> )	0.001
Nitrogen Oxide (NO)	0.001
Solid Lead Oxides <sup>1</sup>	0.001
Oxygen (O <sub>2</sub> )	2.3

O<sub>2</sub>, N<sub>2</sub>, and H<sub>2</sub>O are not considered contaminants and are listed to complete the material balance only.

<sup>1</sup> Potential ground contaminants.

Table 4-2. Priority Emissions or Contaminants from BRAC Demilitarization at FWDA, Peak Year (FY92) (Comparison with Most Restrictive Standards)

Priority Emission or Contaminant	Standard Measure	Standard Units	Demilitarization Units	Demilitarization Percent of Standard
Sulfur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup> /24 hr	365	0.0000002	0.00000006
Carbon Monoxide (CO)	μg/m <sup>3</sup> /1hr	40000	4.525190	0.011
Nitrogen Oxide (NO)	μg/m <sup>3</sup> :24 hr	188.1	0	0
Lead (Pb all forms)	μg/m <sup>3</sup> :QAM	1.5	0.000002	0.00011
Hydrogen (H <sub>2</sub> )	μg/m <sup>3</sup>	None	0.001735	Negligible
Hydrogen Sulfide (H <sub>2</sub> S)	μg/m <sup>3</sup>	None	0.0000000	Negligible
Hydrocarbons (CH <sub>4</sub> )	μg/m <sup>3</sup>	None	0.003	NA
T. Suspended Particulates	μg/m <sup>3</sup> :AAM	50	NA	NA

Notes: μg/m<sup>3</sup>: micrograms/cubic meter; AAM: annual arithmetic mean; QAM: quarterly arithmetic mean.

#### 4.1.5 WATER RESOURCES

Closure of FWDA would eliminate the demand placed on the principal aquifer by the installation's use of approximately 7,800 gallons of treated water per day. Water quantities made available by closure would be reduced by the water needs of the ultimate real property disposition alternative. The closure action could result in a minimum beneficial impacts on water supplies in the region or on FWDA if alternative use does not require water. However, the disposition alternative could require at least the current demand and result in minimum adverse impacts.

Regional water quality would improve with the suspension of those activities that could cause water quality degradation. The eventual remediation of contaminated areas in conjunction with real property disposal alternatives would reduce potential risks to water supplies. Although, presently, there is no documented evidence to indicate that the deep, confined Glorieta-San Andres aquifer has been contaminated as a result of FWDA-related activities, several activities are suspected of releasing contaminants to the soil. Consequently, there is potential for migration of explosives and chemical waste contaminants to groundwater supplies. Sampling of shallow alluvial aquifers and sediments within the Puerco River would be conducted as an element of installation restoration to determine the extent, if any, of hazardous material contamination via surface runoff and percolation. This has not yet been scheduled. BRAC-related demilitarization activities have potential to

affect the local groundwater via additional releases of explosives contaminants. However, these short-term potential minimum adverse impacts to water quality will cease upon closure and result in a minimum beneficial impact. Future uses of FWDA such as for industrial development could also have minimum adverse impacts upon local water quality.

#### 4.1.6 NOISE

With FWDA closure, FWDA-generated noise-producing activities (e.g., shop and maintenance activities, ammunition renovation and demolition, small-arms firing, rail and motor vehicle traffic) would cease resulting in minimum beneficial impacts. Externally produced noise (e.g., Interstate-40/U.S. Highway 66; Santa Fe Railroad traffic) would not be affected by FWDA closure. USAEHA, Bio-Acoustics Division, has prepared an updated ICUZ noise analysis for the projected BRAC-related demilitarization program. The environmental noise contours for demolition activity at FWDA were generated by the BNOISE computer model. The contours represent acoustic averages and do not take into account the effects of wind or terrain on blast propagation. Nor can they predict damage to structures from one large blast. The radius of the 62 dBC contour (e.g., boundary between Noise Zone I and II is 2,000 meters (6,560 feet); the radius of the 70 dBC contour, the boundary between Noise Zone II and III is 1,000 meters (3,280 feet). This is based upon the projected 4,000 pound per day (2,000 pounds of explosives per pit) detonation limit. These levels closely approximate and are within the current noise contours described in Section 3.1.6. Detonation noise would result in short-term minimum adverse impacts on the few residents occupying the scattered residential housing in Zone II. If the Hogback does not provide an adequate natural sound barrier, noise reduction measures may be necessary to avoid potentially significant impacts. No long-term significant noise impacts are expected from the BRAC action. The possible relocation and expansion of the Gallup airport as an alternative reuse of FWDA land could result in minimum to moderate adverse noise impacts.

#### 4.1.7 CULTURAL RESOURCES

FWDA closure would have minimum to moderate impacts on installation cultural resources, which have been afforded protection within a secured, limited-access area. Unless protection and security of the lands are continued, closure without protection would undoubtedly precipitate vandalism, pot hunting, and site destruction. The disturbance of land for future land uses such as development of a prison, airport, or interim low level nuclear waste storage site could result in moderate to substantial adverse impacts to cultural resources. Development of a national cultural historical resource facility and artifact repository suggested during scoping as a possible future use of facilities at FWDA could have moderate to substantial beneficial impacts to cultural resources.

Procedural requirements of Public Law 96-515 (National Historic Preservation Act of 1966, as amended) have not been completed. After land disposition has been decided, known problems and inconsistencies in the current cultural resource data base regarding site

locations and site descriptions will be resolved. The Department of the Army, the National Conference of Historic Preservation Officers, and the Advisory Council on Historic Preservation (ACHP) have developed, and executed a Programmatic Agreement for BRAC (Appendix C). This agreement stipulates the measures that will be taken to alleviate adverse effects to historic properties for all BRAC actions. Implementation of the programmatic agreement at FWDA constitutes compliance with Sections 106 and 110 of the National Historic Preservation Act. An installation specific Memorandum of Agreement for FWDA is being developed between the Army, the New Mexico SHPO, and the ACHP.

#### **4.1.8 NATIVE AMERICAN CONCERNS**

FWDA closure would not directly affect Native American cultural and religious values. However, disposal of the property and the resulting new future use could affect traditional and non-traditional values in as yet unidentified ways. The primary Native American concerns pertain to future land disposition and possible sacred sites. Historically, Navajo use of the region appears to date from at least the late 18th century, while Zuni use of the area is perhaps even earlier.

No Native American lands for which the Secretary of Interior has trust responsibility would be directly impacted by the proposed action. In 1970 the Navajo Tribe filed a claim to the Indian Claims Commission for compensation for approximately 40 million acres of land to which the tribe allegedly held aboriginal title at the time of the Treaty of 1868. FWDA is included within the claim boundaries. The Indian Claims Commission held that the Tribe had held aboriginal title to most of the 40 million acres claimed, that the land had been ceded by the Tribe to the United States under the 1868 treaty, and that the Tribe had not been paid fairly for the land, and was entitled to additional compensation. In 1981 the Indian Claims Commission entered judgment in favor of the Navajo Tribe for \$14.8 million for the loss of its land; the United States paid this sum. The Indian Claims Commission Act reflected a Congressional policy that Indian tribes with valid claims to lands taken from them without adequate payment would be compensated in money, and that no lands would be returned to the tribes.

Comprehensive archeological survey, testing, and data recovery in concert with ethnographic studies would identify and possibly confirm the presence and nature of sacred or sensitive sites. Mitigation of impacts to those resources endowed with cultural or religious value would be achieved in consultation with affected tribes. The Navajo Nation and Zuni Tribe have been invited to participate in the FWDA Memorandum of Agreement, described in Section 4.1.7, as concurring parties.

#### **4.1.9 WASTEWATER DISPOSAL**

The 5,600 gallons treated by the FWDA sewage treatment facility and functioning septic tank/drainfield systems would no longer be released into evaporation ponds or the South Fork of the Puerco River, resulting in minimum beneficial impact to local water



quality. Discharge of industrial wastewater is not a consideration because this activity was suspended in 1967. A minimum adverse effect would be the loss of potential aquatic habitat when the evaporation lagoon dries up. Future land use alternatives for FWDA such as light manufacturing could result in increased wastewater disposal resulting in minimum to moderate adverse impacts.

#### **4.1.10 SOLID WASTE DISPOSAL**

The existing FWDA sanitary landfill, which is used solely for non-perishable, non-hazardous waste, would be closed. The City of Gallup no longer provides refuse pickup. It is now done by a private contractor on the same one pickup per week schedule. Closure of FWDA might prolong the life of the Gallup city landfill resulting in minimum beneficial impacts. However, the land use alternatives such as prison facilities or light manufacturing could result in minimum adverse impacts to the life of the existing landfill.

#### **4.1.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

Closure of FWDA would cease actions that generate hazardous wastes discussed in Section 3.1.11. Before closure, minor BRAC-related demilitarization activities would continue to release known explosives contaminants to the soil in the ammunition demolition area in previously contaminated areas (Table 4-1). Impacts from BRAC-related demilitarization with FWDA prior to closure would be minimum adverse but not significant. Ceasing demilitarization activities following closure would have a minimum beneficial effect. Wastes would comprise primarily of heavy metals derived from the approximately 500 tons of non-energetic components of ammunition. Liquid and solid fragments of incompletely detonated explosives also would be present. Future consequences could include potential groundwater contamination via runoff and percolation. If hazardous waste generating activities cease, the potentially contaminated areas such as OB/OD sites must be closed in accordance with applicable RCRA regulations under 40 CFR Part 265. Thus, remediation of BRAC-related contamination would be integrated and concurrent with the present ongoing Installation Restoration Program (IRP). Regardless of the reuse alternative selected, the IRP must be completed by U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) and approved by Federal and New Mexico agencies before property transfer. Depending upon the reuse alternative selected, the appropriate environmental restoration studies are to be conducted in support of base closure by USATHAMA and approved by Federal and New Mexico agencies before property transfer.

#### **4.1.12 ENERGY USAGE**

Closure of FWDA would result in a net decrease in energy consumption of 18,000 MBTUs per year. This correlates to approximately \$1,200 per month in electrical charges and \$12,000 per month during the winter months for natural gas. This decrease of energy consumption would not significantly impact the regional utility systems. One minimum

benefit of closure on regional air quality from the cessation of natural gas burning at FWDA would be the elimination of emission products, particularly carbon monoxide. Future real property disposition alternatives such as light manufacturing could result in increased energy consumption and moderate adverse effects on air quality.

#### **4.1.13 AESTHETIC QUALITY**

Closure of FWDA would have no impact on visual aesthetic quality. Alternative future use(s) of FWDA could potentially affect visual aesthetic quality. Expansive, large-scale building and development would alter the existing cultural landscape as new construction, architectural styles, and landscaping are introduced and could result in minimum adverse to moderate beneficial impacts upon visual aesthetic quality. Should the new land use result in a more aesthetically pleasing landscape, the changes could be viewed as minimally beneficial.

#### **4.1.14 SOCIOECONOMICS**

The only indirect effects of FWDA closure are socioeconomic which are not considered significant. These effects are analyzed in the Socioeconomic Effects Analysis, Fort Wingate Depot Activity Related BRAC Actions.

##### **4.1.14.1 Demography**

A net total of 95 authorized manpower positions (93 civilian; 2 military) would be eliminated by FWDA closure. Currently, 82 civilian and 1 military positions are occupied. FWDA closure and subsequent out-migration of the current staffing of 82 civilian and 1 military personnel as well as all secondary employees and their families would reduce county population by an estimated 305 persons, or 0.5 percent. A 1989 Census Bureau estimated population growth in the county to be 833 persons per year from 1980 to 1989. At this rate, population growth would replace the FWDA population in less than three months.

##### **4.1.14.2 Regional Economic Activity**

Depot closure would eliminate the FWDA payroll and the payrolls generated from secondary employment in the area. If all affected employees migrated from the area, McKinley County would lose \$4.9 million in retail sales, or 0.5 percent of the 1987 total sales in the county. From the period between 1980 and 1987, annual sales have grown by 8.8 percent. If this rate is maintained, base closure would result in a net loss of retail activity equivalent to slightly less than one month of growth. This modest impact would be mitigated somewhat if 100 percent out-migration did not occur and if the FWDA-related employees remaining in the area collected unemployment benefits or found other work.

It is estimated that the number of civilian and military personnel holding second jobs would decrease by two full-time jobs. The number of working dependents is expected to

decrease by 53 person-years. These job changes will decrease regional wages and salaries by \$750 thousand.

Total employment impact at FWDA is thus estimated at 83 direct and 55 secondary employees, for a total of 138. This represents less than 1 percent of the total employment in McKinley County in 1988. Closure of FWDA would result in the loss of the 83 jobs at the depot. If these individuals were not able to find alternative employment and had to leave the area, the 55 secondary jobs would also be eliminated. This would result in a 1.0 percent decline in employment in McKinley County and a minimum adverse impact. If all 138 job-holders left the county, the 1988 unemployment rate would rise from 12.2 percent to 12.3 percent due to the decline in the labor force.

The total income impact of FWDA is made up of direct gross payrolls of \$2.0 million and gross secondary payrolls estimated at \$750 thousand. Total income impact amounts to \$2.7 million, or 1.1 percent of total personal income in 1987 for McKinley County residents. This decrease in income would not significantly affect total income levels in McKinley County.

#### **4.1.14.3 Housing, Schools, Health Care, and Public Safety**

Assuming out-migration of all direct civilian employees, 82 housing units (32 owner-occupied and 50 renter-occupied) would be vacated. This impact represents 0.5 percent of the 17,059 existing units in McKinley County (1980 census), increasing the vacancy rate to 12.1 percent. The three currently occupied housing units on post would be vacated. Two other FWDA residential units, currently vacant, would remain vacant.

In 1988, the Gallup School District had 39 students from the families of the 83 employees of FWDA. Based on the district's average per-pupil expense factor of \$2,860, the cost to educate these students was \$111,540. This represents only 0.3 percent of the students and operating budget of the district. Closure of the depot and 100 percent out-migration of depot employees and their families would decrease enrollment in the Gallup School District by 39 students, or 0.3 percent of the total enrollment, and would also eliminate an estimated \$111,540, or 0.02 percent, of school district expenditures.

Hospital beds in McKinley County number 251, or one for every 255 persons. The total impact on area population from direct and indirect employment at FWDA was determined to be 305. This number of people would create demand for 1.2 hospital beds in McKinley County. With 18 physicians in private practice, or one for every 3,553 persons in the county; FWDA theoretically creates a demand for 0.09 physicians. The regional impact of depot closure would be considered negligible, since no decline in beds or physicians would probably occur.

FWDA closure would affect regional public safety to the extent FWDA civilian personnel assist McKinley County with fire protection and emergency medical services. FWDA public safety (security, emergency, medical, and fire protection) functions would be eliminated with closure. Measures to exclude and prohibit pedestrian and vehicular trespass

within contaminated areas in the interim between closure and land disposal would be implemented. In addition, security would be necessary to safeguard property (i.e., buildings and facilities) from vandalism.

#### **4.1.14.4 Traffic and Transportation**

Regional traffic and transportation would not be significantly affected by FWDA closure. The 1988 average daily traffic volume on Interstate Highway 40 in the Gallup vicinity immediately north of FWDA was 11,478, of which 36.3 percent (4,167) were heavy commercial vehicles. The 1988 volume of heavy commercial traffic on U.S. Highway 666 north of Gallup was 6,674 vehicles, of which 6.2 percent (414) were heavy commercial vehicles.

The peak annual movement of ammunition from FWDA would occur during FY91 and would be about 8,000 tons below the baseline capability of 28,000 tons per year and is greater than the peak historical ammunition movement (14,000 tons) experienced during 1984 through 1989. Of the 20,000 ton total shipment requirement, almost all are BRAC related; only about 50 tons are normal shipments. Therefore, increased transportation effects are anticipated as a result of the total movements including those which are BRAC-related. Assuming 100 percent truck transportation, 18 tons per truck, and 260 days per year, annual truck transportation requirements would be less than 5 trucks per day. The current weekly shipment goal is 540 tons (30 trucks per week). The total would be equivalent to the peak FY84-89 movement level from FWDA. Of these, the majority of the 5 per day would be BRAC-related. The added volume of traffic contributed by the transportation of FWDA ammunition is considered a minimum adverse impact which is not significant.

Although, historically, there have been no accidents involving commercial shipping of hazardous materials from FWDA, the FWDA emergency response team (fire department personnel) and Ft. Bliss, Texas, Explosive Ordnance Disposal (EOD) team would be dispatched to assist local, Federal, state, or county agencies in the event of a hazardous materials spill on or near FWDA. The FWDA fire department would continue to provide emergency response capability at and near FWDA.

Upon closure internal rail and heavy truck traffic relating to ammunition shipping would cease resulting in minimum beneficial impacts. Depot closure would not notably affect existing Santa Fe railroad operations or local trucking company revenues. Traffic from tenant activities would continue as is until the issue of land disposition is resolved.

Beneficial effects of FWDA closure would also accrue. One minimum benefit following the closure action would be the reduced risk of motor vehicle accidents involving ammunition transport units. Another would be the temporary increase in revenues to local trucking firms selected to haul BRAC ammunition prior to closure. A minimum adverse effect would be the termination of emergency response services currently provided by FWDA fire department personnel.

#### **4.1.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

The special installation agreements would require modification depending upon the ultimate disposition of FWDA real property. Until that time no effects are expected on the current agreements or commitments by the BRAC action.

#### **4.1.16 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS**

Closure of FWDA would not result in any unavoidable adverse effects.

#### **4.1.17 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

Irreversible commitments are resource uses that would affect nonrenewable resources such as soils and cultural properties. There are no identifiable irreversible commitments associated with closure of FWDA that would affect regional or installation nonrenewable resources. Irretrievable commitments are the lost productions or uses of renewable resources. The decisions that commit these irretrievable resources are reversible, but the opportunities to produce these resources are irretrievable. There are no identifiable reversible decisions that would provide for any production or use of regional or installation renewable resources.

However, the potential for irreversible or irretrieval commitment of nonrenewable soil and cultural resources exists as a consequence of disposition and reuse alternatives. These activities would have to incorporate appropriate soil management techniques and proper design of drainage systems to divert and channelize runoff. Without proper soil management, devegetation and increased siltation could result. Cultural resources or information regarding these resources could be irretrievably committed if the area were to be disposed of or developed prior to completion of an adequate inventory and assessment. In order to avoid irreversible commitments of renewable resources to future uses, selected uses following disposition should have the least destructive effect on plant and wildlife resources.

#### **4.1.18 MITIGATION MEASURES**

The Army is committed to continue the Installation Restoration Program, which includes identification, assessment, and feasibility studies and remedial action of all contaminated sites on FWDA as described in Chapters 2 and 3. While the IRP is independent of the proposed BRAC action, the program will include measures which mitigate the effects of BRAC-related conventional ammunition demilitarization upon land use and water quality at FWDA before real property disposition.

An intensive survey to identify threatened or endangered plant species, particularly the Zuni fleabane (Erigeron rhizomatus), which is likely to be found within FWDA, will be conducted prior to land disposition. Consultation with the U.S. Fish and Wildlife Service (USFWS) to identify mitigation features that will offset potential impacts from real property disposal will be initiated as appropriate following this survey in conjunction with subsequent NEPA analysis.

To prevent a possible increase in vandalism and archaeological artifact and site destruction resulting from closure, protective measures will be maintained as necessary. To assure mitigation of any impacts to cultural resources resulting from land disposition and to comply with the National Historic Preservation Act of 1966, as amended, a two-phased program will be implemented that will include survey, testing, ethnographic investigation and determination of an appropriate mitigation strategy. The mitigation strategy will be determined in consultation with the Advisory Council on Historic Preservation (ACHP), the New Mexico State Historic Preservation Officer (SHPO), and interested parties.

Phase I will include sample and appropriately-scaled intensive archeological survey of the installation to identify all sites within FWDA that are potentially eligible for inclusion to the National Register. Sample surveys will be stratified by elevation, landform, and vegetation and provide statistically valid data on site frequency and type from which probability statistics or predictions of site type and density can be made. This sample would be compatible with a number of statistical manipulations that would provide estimates with known confidence levels for site frequency, site types, age, landform, and vegetative associations. The sample survey will condition the level of effort to be expended on the intensive survey. Phase II will include any further assessment and mitigation activities appropriate to the nature of the real property disposition action as determined through implementing the Programmatic Agreement (Appendix C).

To assure consideration of any possible impacts to Native American sacred or sensitive sites, the affected Indian tribes will be consulted to discuss their interests, including ways to avoid or mitigate potential harm to recognized sacred or sensitive sites. Comprehensive archeological survey, testing, and data recovery in concert with consultation and ethnographic studies will identify and possibly confirm the presence and nature of sacred or sensitive sites. Mitigation of impacts to those resources ascribed with cultural or religious value will be achieved in consultation with affected tribes.

## 4.2 NAVAJO DEPOT ACTIVITY, ARIZONA

The following assessment of direct environmental and indirect socioeconomic consequences focuses upon closure of the active Army ammunition mission at NADA and includes discussions of three real property reuse alternatives. Those alternatives are: (1) amendment of the license with the State of Arizona for use by the Arizona National Guard (AZNG) (the preferred alternative), (2) the return of the property to the U.S. Forest Service (USFS), which presumes the cessation of all National Guard activity, and (3) joint management by the AZNG and USFS. When the issue of land disposition at NADA has

been decided, additional NEPA documentation may be required to supplement the following discussions of the impacts of real property disposal alternatives.

#### **4.2.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY**

The BRAC action at NADA will not change the climate, geographic setting, and geology of Coconino County. No impacts are expected as a result of the closure action or real property disposal alternatives.

#### **4.2.2 BIOLOGICAL ENVIRONMENT**

##### **4.2.2.1 Terrestrial Ecosystems**

No regional or installation impacts to the terrestrial environment or wildlife would result from the closure of the active Army ammunition mission at NADA. Assuming AZNG training activity would remain at current levels no regional or installation impacts are anticipated from transfer of the real property to the AZNG. Future AZNG training activity above current levels would require additional NEPA documentation. No regional impacts are anticipated should the real property be returned to the USFS. Under this disposal alternative, due to the discontinuation of NADA activities, positive minimum beneficial impact could be expected given recovery of habitat previously affected by depot activities.

##### **4.2.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

Closure of the active Army ammunition mission at NADA and continuation of the license to the AZNG or return of the land to the USFS would not impact aquatic ecosystems, wetlands or floodplains. No regional or installation-specific impacts to these resources are anticipated as a result of activities specific to real property disposal alternatives. These results assume continuation of the present practice of stocking and maintaining depot reservoirs which serve as forage areas.

##### **4.2.2.3 Threatened and Endangered Species**

Closure of the active Army ammunition mission at NADA would not impact threatened and endangered species. Similarly, no regional or installation-specific impacts to these resources are anticipated as a result of activities specific to real property disposal alternatives. These results are contingent upon continuation of present stocking and maintenance of depot reservoirs, which serve as forage areas for the bald eagle, and identification and protection, if possible, of sensitive plant species.

### 4.2.3 LAND AND AIRSPACE USE

Closure of the active Army ammunition mission at NADA would not significantly affect land and airspace use within Coconino County. However, closure of the installation involves termination of the existing license to the State of Arizona and ceasing to use the land for AZNG activities. Land use could be changed on NADA as a result of the real property disposition alternative selected.

Future land use at NADA under each of the real property disposition alternatives discussed may depend upon currently existing levels of hazardous and toxic waste contamination and any BRAC-related incremental increase in the level of contamination on the installation. The proposed action and implementation alternatives do not affect the present Department of the Army policy; the remediation of hazardous and toxic waste contamination to a level consistent with unrestricted land use is the Army's goal as described in the introduction to Chapter 2.

Return of the land to the USFS, or joint administration by the AZNG and the USFS is operationally incompatible for the following reasons:

(a) The "buffer" areas the U.S. Forest Service has expressed an interest in are required by the AZNG as field training areas.

(b) Numerous training activities such as night convoys under black-out conditions, bivouac sites, tactical training using blank ammunition, pyrotechnics, CS gas, and simulators (i.e. artillery) of different types are conducted in the buffer zone. Besides presenting potential hazards to the public, training activities would be severely impacted by the reversion of the "buffer" zone to the USFS or "joint administration."

(c) The "buffer" zone currently contains live firing ranges, demolition training ranges and demolition/burning areas. Any uncontrolled public access or joint use would present an extreme liability and safety problem for the U.S. Army, the AZNG and the State of Arizona. This is particularly true in the "buffer" zone where fences and barriers do not exist. NADA can enforce range controls over units and troops training at the Depot; however, "joint administration" would necessitate curtailment of necessary operational and training activities.

The continuing mission of the AZNG requires use of lands for bivouac and training areas, map reading courses, and small arms firing ranges. The AZNG also uses the extensive road network for convoy and tactical field training. The AZNG currently manages NADA lands under the multiple use concept providing for operationally compatible levels of use for forestry, recreation, and wildlife habitat. This alternative would result in impacts similar to those discussed below for separate AZNG and USFS land use administration and is not discussed further.

The BRAC action is not expected to affect land use planning in Coconino County. However, possible conflicts between the real property disposition action and Federal,



regional, state, and local land and airspace use plans, policies, and controls is possible and would have to be considered in determining the ultimate use of NADA.

Closure of the active Army ammunition mission at NADA would cause no impact to forestry resources. No regional impacts to forestry are anticipated as a result of disposition of NADA to AZNG. Approximately 4,000 acres of timber growth in two separate parcels on the installation are currently scheduled to be cut over the next four years. Under disposition to the AZNG, no change to the present logging schedule is anticipated, therefore, no impact is expected. No substantial regional or installation impacts are expected as a result of disposition to the USFS. Presently there is commercial forester support in the area for return of the lands to USFS administration due to perceived greater opportunity for timber resource use. Return of the depot to the USFS could commit new tracts of timber resources, intensify utilization of foraging resources and natural habitat, and open the area to more intensive recreational use by hunters and fishermen. Regional significance is dependent on the extent of utilization. Such commitment could only follow revision or development of timber, grazing, and habitat management plans. Any increase in the use of timber resources could result in minimum adverse environmental impacts and would be addressed in subsequent NEPA documents and/or management plans prepared by the USFS.

Return of the land to the USFS would result in substantial adverse operational impacts to the National Guard and other Reserve Component Units which currently utilize the lands for bivouac and training areas, map reading courses, convoy and tactical field training, small arms ranges, as well as formal individual and collective (unit) training, both planned and presently conducted at NADA. The full range of operational impacts to readiness, force structure, training costs (time and financial), etc., would require additional NEPA documentation if this real property disposal alternative is to be considered for implementation.

No impacts to grazing are expected from closure of the active Army ammunition mission at NADA. Currently, approximately 19,000 acres, dispersed over the igloo and buffer areas, are leased for cattle grazing. The present level of grazing can be expected to continue on the installation. No regional or installation impacts on grazing are anticipated with either of the disposal alternatives.

No mining other than for the NADA's use of cinders occurs on the installation and none is anticipated. No impact to this resource is anticipated from either of the active Army ammunition mission at or real property disposal.

Recreation is not expected to be impacted substantially by the closure of the active Army ammunition mission at NADA. No regional impact on recreation is expected as a result of the disposition of NADA to AZNG. Under this disposal alternative, there would be no change in the very limited recreational use of the depot by NADA personnel, therefore, no impact is anticipated. If disposal were by return to the USFS, the change in management could result in additional hunting and fishing opportunities in the region, which would ultimately be addressed in additional NEPA documents or USFS management plans.

Closure of the active Army ammunition mission at NADA is not expected to have any significant impact on land-use agreements either within the region or on the installation under the continuation of the license with the State of Arizona (AZNG) disposal alternative. There may be changes within the confines of the installation; however, assessment is contingent upon the disposal decision. Access to privately owned lands adjacent to NADA and to the Naval Observatory is not expected to be effected by the proposed action.

Return to the USFS would result in no impact on existing Federal land use agreements relating to the adjacent national forests, as it would represent a continuance of current land management practices. The remaining 10 percent of the NADA, withdrawn from private holdings would be held in abeyance pending disposition determination. Access to private parcels should be provided by the USFS. The agreements under which NADA provides fire protection, snow removal, water, and sewer services for an 89 unit rental housing complex (Wherry Housing) located on NADA and leased to the Buskin Agency would have to be renegotiated under this disposition alternative.

The AZNG maintains an unlighted heliport at the depot. It is assumed that operation would continue status quo, which would result in no impacts to airspace use. Under the disposal to the USFS alternative, it is assumed that the AZNG would discontinue use of the heliport, which would result in a reduction of airspace use and, therefore, would cause a minimum beneficial impact on airspace use.

#### **4.2.4 AIR QUALITY**

Activities associated with the closure of the active Army ammunition mission at NADA would not have a significant impact on the overall excellent regional air quality. Air quality impacts within NADA associated with the realignment of the active Army ammunition mission at NADA would be minimal and short-term, and, overall, would not be significantly greater than any current impacts associated with existing activities such as demilitarization of ammunition. The peak annual demilitarization period is during FY92 when 8,000 tons of ammunition are expected to be burned or detonated. This is about 75 percent of the 1990 ADEQ permitted quantity of 10,500 tons. No major changes in SOPs which affect current air quality protection practices are necessary as a result of the demilitarization program. Coordination with environmental and public safety agencies is expected to continue as under the current mission.

Table 4-3 lists total air emissions and contaminants resulting from the four years of BRAC demilitarization (FY91-94). These estimates are based upon NADA's capability described in Section 2.2.1 and the demilitarization program described in Section 2.2.2. The products of open burning and open detonation include both rapidly dissipating gaseous compounds and other substances that can contribute to potential local ground contamination (Section 4.2.11). The emission estimates are based upon the following assumptions - all 3.5 rocket and M157 center sections are Composition B initiated by Composition B; 90mm and

Table 4-3. Weight of Emissions or Contaminants Generated by Open Burning/Open Detonation for Common Propellants and Explosives at NADA

Annual Emissions (Short Tons)

Emission or Contaminant	FY91	FY92	FY93	FY94	Total
Carbon Dioxide (CO <sub>2</sub> )	923.4	1041.0	614.0	221.6	2800.0
Nitrogen (N <sub>2</sub> )	2101.6	2305.4	1334.7	445.2	6187.0
Carbon Monoxide (CO)	119.6	147.6	87.3	44.7	399.3
Water (H <sub>2</sub> O)	228.9	255.9	152.6	50.6	688.0
Hydrogen (H <sub>2</sub> )	7.1	8.2	4.7	2.0	22.0
Methane (CH <sub>4</sub> )	0.1	0.2	0.0	0.2	0.6
Ammonia (NH <sub>3</sub> )	0.008	0.009	0.004	0.003	0.023
Liquid Lead Compounds <sup>1</sup>	0.001	0.001	0.0002	0.001	0.003
Potassium Hydroxide (KHO) <sup>1</sup>	0.015	0.016	0.009	0.003	0.043
Elemental Lead (Pb) <sup>1</sup>	0.028	0.028	0.014	0.004	0.074
Hydrogen Sulfide (H <sub>2</sub> S)	0.001	0.001	0.0005	0.0001	0.002
Gaseous Lead Oxide (PbO) <sup>1</sup>	0.011	0.011	0.006	0.001	0.029
Sulfur Dioxide (SO <sub>2</sub> )	0.002	0.002	0.001	0.0003	0.006
Nitrogen Oxide (NO)	0.012	0.012	0.006	0.001	0.031
Solid Lead Oxides <sup>1</sup>	0.017	0.016	0.009	0.001	0.044
Oxygen (O <sub>2</sub> )	55.2	53.0	29.0	3.6	140.8

O<sub>2</sub>, N<sub>2</sub>, and H<sub>2</sub>O are not considered contaminants and are listed to complete the material balance only.

<sup>1</sup> Potential ground contaminants.

miscellaneous demilitarization open detonation is divided evenly between TNT initiated by Composition B and Composition B initiated by Composition B. The weight of contaminants, if any, derived from non-energetic components of the ammunition is included.

Table 4-4 compares the level of emissions or contaminants (pollutants) generated during the peak year (FY92) of the demilitarization program at NADA with the standards for priority emissions or contaminants. The Arizona Department of Environmental Quality (ADEQ) applies the National Ambient Air Quality Standards in permitting demilitarization activities at NADA. The NAAQS do not include standards for H<sub>2</sub>, H<sub>2</sub>S, or CH<sub>4</sub>. Total suspended particulate concentrations have not been estimated. The one hour rates are assumed to be confined to NADA with the maximum plume height of 260 feet. For the other rates, Coconino County is the area of confinement and the height is the average afternoon mixing height (about 7,600 feet above ground level), and is a small fraction of the

Table 4-4. Priority Emissions or Contaminants from BRAC Demilitarization at NADA, Peak Year (FY92) (Comparison with Most Restrictive Standards)

Priority Emission or Contaminant	Standard Measure	Standard Units	Demilitarization Units	Demilitarization Percent of Standard
Sulfur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup> /24 hr	365	0.0000003	0.00000008
Carbon Monoxide (CO)	μg/m <sup>3</sup> /1hr	40000	10.246044	0.026
Nitrogen Oxide (NO)	μg/m <sup>3</sup> :AAM	100	0	0
Lead (Pb all forms)	μg/m <sup>3</sup> :QAM	1.5	0.000008	0.00057
Hydrogen (H <sub>2</sub> )	μg/m <sup>3</sup>	None	0.001375	NA
Hydrogen Sulfide (H <sub>2</sub> S)	μg/m <sup>3</sup>	None	0.0000002	NA
Hydrocarbons (CH <sub>4</sub> )	μg/m <sup>3</sup>	None	0.014	NA
T. Suspended Particulates	μg/m <sup>3</sup> :AAM	50	NA	NA

Notes: μg/m<sup>3</sup>: micrograms/cubic meter; AAM: annual arithmetic mean; QAM: quarterly arithmetic mean

total volume of the Northern Arizona Intrastate Air Quality Control Region. The rates at which the emissions and compounds are released will be within ADEQ and EPA guidelines for acceptable emission levels at NADA. No adverse effects on air quality at NADA or Coconino County are expected as a result of the BRAC demilitarization program.

Under the transfer to the AZNG disposal alternative, similar activities may continue. However, the impact on the installation from potential demilitarization of ammunition would cease under USFS management, resulting in minimum beneficial impacts.

#### 4.2.5 WATER RESOURCES

Although potable water is scarce in the region, under disposition to the AZNG, the impact would be in line with existing conditions and therefore, would not be significant. Impacts could result if the AZNG requires additional regional sources of water for the proposed training mission at NADA; however, such an action would require additional NEPA documentation.

Regional water quality would, most likely, suffer no impact from the closure of the active Army ammunition mission at NADA. The increase in OB/OD operations planned at NADA for FY91-95 could result in more explosives contaminants in the soil of the already contaminated sites and therefore presents a potential for increased groundwater contamination. As is the current case, surficial stratigraphy generally prevents downward

movement of contaminants into aquifers and springs. Specifically, clay beds separate perched subsurface groundwater from recharge aquifers that are the source for the depot's water supply, preventing percolation. However, locations where vertical faults break clay beds could conduct pollutants into deeper groundwater. Because of a high mean lake evaporation rate of 59 inches per year compared to annual precipitation of 20 inches per year, actual percolation to groundwater is unlikely. Disposition of NADA to the AZNG does not represent a change from existing water quality conditions.

NADA disposition to the USFS would not have a significant impact upon regional water supply. Likewise, depot water quality would not suffer detrimental impact from USFS activities, which should include sharp curtailment of water use. An eventual minimum benefit could be realized as the production of contaminating agents ceases following the termination of current AZNG activities. Cessation of AZNG activities at the depot would reduce water supply demand. The independently operated Wherry Housing area and the Arizona Department of Transportation rest stop on Interstate Highway 40, which obtain their water from the depot's water supply systems, would either have to find and develop alternative sources or continue receiving water from the NADA system under an agreement with the USFS.

#### 4.2.6 NOISE

The transfer of ammunition to HWAAP and other locations as necessary for closure of the active Army ammunition mission at NADA would be accomplished by both rail and truck. Some additional short-term noise from railroad or truck traffic during closure is expected but would not be present in urban areas. Due to the increase in OB/OD activity during FY91-95, the frequency of explosions is expected to increase by as much as 20 times; however, the noise level contours described in Section 3.2.6 are expected to remain the same as exist under the current operation. The effects of the frequency increase would be most apparent in Zones III (highest impact entirely within NADA) and II (minimum adverse impact to some scattered housing outside of NADA's southern boundary). Any increase in installation noise levels on and near NADA related to either demilitarization or movement of ammunition would be a short-term, minimal impact, which is potentially significant for the few residents within the 62 to 70 dBC zone and may require noise reduction activities. Therefore, no significant noise impacts are expected to result from the BRAC action.

Disposition of the depot to AZNG would represent no change from present conditions, resulting in no impact. Noise levels on the depot would be reduced under USFS management, thereby reducing the depot's contribution to area noise levels resulting in a minimum beneficial impact.

#### 4.2.7 CULTURAL RESOURCES

Closure of the active Army ammunition mission at NADA would not effect regional cultural resources as activities associated with this mission do not affect historic properties

located off the premises. NADA closure would not adversely affect installation cultural resources, which have been afforded protection within a secured, limited-access area. That protection is expected to continue during the closure period under the direction of the AZNG.

Procedural requirements of Public Law 96-515 (National Historic Preservation Act of 1966, as amended) are ongoing. The Department of the Army, the National Conference of Historic Preservation Officers, and the Advisory Council on Historic Preservation (ACHP) have developed and executed a Programmatic Agreement for BRAC. This agreement stipulates the measures that will be taken to alleviate adverse effects to historic properties for all BRAC actions. Implementation of the Programmatic Agreement at NADA constitutes compliance with Sections 106 and 110 of the National Historic Preservation Act. An installation specific Memorandum of Agreement for NADA is being developed between the Army, the Arizona SHPO, and the ACHP. NADA is coordinating with the U.S. Army Corps of Engineers to conduct Phase 1 of a Cultural Resource Management Plan to address these concerns.

The Programmatic Agreement being developed for NADA recognizes that current training activities potentially affect cultural resources eligible for the National Register. As long as the facility continues under the jurisdictions of the AZNG and the Programmatic Agreement requirements are fulfilled, there would be no increased direct effects from the proposed action on cultural resources. When the withdrawn lands are no longer required for military purposes, they will be returned to the USFS administration and after the Programmatic Agreement is fulfilled, there would be no resulting direct effects to cultural resources, except perhaps in timber sale or thinning areas. However, if those lands held in fee title by the DA are sold to a non-Federal entity then potentially minimal adverse effects could occur. Before release of the property, additional NEPA documentation could be necessary to comply with Section 106 of the NHPA.

#### **4.2.8 NATIVE AMERICAN CONCERNS**

Closure of the active Army ammunition mission at NADA would not affect Native American cultural and religious values. No impacts are anticipated as a result of activities specified by either real property disposal alternative.

#### **4.2.9 WASTEWATER DISPOSAL**

The demand on depot wastewater disposal facilities would be reduced by up to 72,000 gallons per day by closure of the active Army ammunition support mission at NADA, resulting in a potential minimal benefit to local water quality.

Under disposal of lands to the AZNG or USFS, any activities (e.g. dismantling) related to wastewater facilities would also be conducted in accordance with laws, rules, or regulations set forth by ADEQ. The independently operated Wherry Housing complex,

which presently uses the NADA treatment facility, may have to find and develop an alternative conveyance system under either real property disposition alternative or, if possible, continue using depot sewage treatment facilities under an agreement with either agency. This may result in a minimum adverse impact.

#### **4.2.10 SOLID WASTE DISPOSAL**

It is also anticipated that there would be no regional or installation impact on solid waste disposal resources as a result of closure of the active Army ammunition mission at NADA and disposition to the AZNG. The AZNG would continue the following facilities and practices: use of the Cochfield sanitary landfill; monitoring of the four-acre sanitary landfill in the standard magazine area (currently inactive); monitoring of several constructional debris waste landfills on the installation; monitoring of dumping areas including the quarry tank in igloo area B and the cinder pit no. 3 in the igloo area A; and monitoring of a waste pile in the warehouse area.

It is anticipated that there would be no regional or installation impact on solid waste disposal resulting from return of lands to the USFS, assuming no substantial change to activities related to depot landfill facilities (e.g. sanitary landfill or construction debris waste landfill), dumping area, and the waste pile.

#### **4.2.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

Closure of the active Army ammunition mission at NADA would cease actions that generate hazardous wastes discussed in Section 3.2.11. Before closure, BRAC-related demilitarization activities would continue to release known explosives contaminants to the soil (Table 4-3). Impacts from demilitarization within NADA associated with the active Army ammunition mission would be minimal but not significant. The impacts include increasing the amount of waste in the ammunition demolition area in previously contaminated locations. Wastes primarily would include aluminum, iron, copper, cadmium, zinc and other heavy metals from the approximately 15,500 tons of shell fragments and other non-energetic constituents of ammunition. Wastes also will include liquid and solids from incompletely detonated explosives. Future consequences could include potential groundwater contamination via runoff and percolation. Several groundwater studies have been conducted in the ammunition workshop area in recent years. The most recent one was completed by the U.S. Army Environmental Hygiene Agency (AEHA) in February, 1991. AEHA concluded that the deactivation furnace and TNT washout lagoon sites are not a threat to human health and the environment. Thus, remediation of BRAC-related contamination would be integrated and concurrent with the present ongoing IRP. Regardless of the reuse alternative selected, the IRP would be completed by USATHAMA and approved by Federal and Arizona agencies before property transfer.

#### **4.2.12 ENERGY USAGE**

Closure of the active Army ammunition support mission would result in only a slight reduction in energy demand at the NADA. It is assumed that under disposition to AZNG, there would not be a significant change in energy usage. Even if the AZNG mission were to be modified and portions of the facility shut down, the same utility costs may be incurred, given that many of these utility costs are fixed rather than variable.

If the NADA were to be completely shut down under disposal to the USFS, the only impacts would be the very minor loss of revenue to Arizona Public Service Company (electric power); Southern Union Gas company (natural gas); AT&T (phone service); and City of Flagstaff (landfill charges). Total FY88 cost for these services was approximately \$232,000. One minimal benefit of either closure alternative on local air quality would be the elimination of emission products, particularly carbon monoxide from the cessation of burning natural gas and oil for heating purposes in the facilities supporting the ammunition mission.

#### **4.2.13 AESTHETIC QUALITY**

Closure of the active army conventional ammunition mission would not impact the aesthetic environment. No change in the regional or installation's aesthetic environment is anticipated under real property disposition to AZNG. Under disposal to the USFS, possible changes in land use could alter the aesthetic environment of the NADA. Any potential modification to the aesthetic environment would be addressed in separate NEPA documentation by the receiving agency.

#### **4.2.14 SOCIOECONOMICS**

The only indirect impacts associated with closure of the active Army ammunition mission at NADA are socioeconomic. Both closure of NADA and disposition to the AZNG or USFS result in minimal but not significant adverse impacts. The following impact analysis is for both closure and both disposal alternatives. The impacts are applicable to both the region and installation, except as otherwise noted.

##### **4.2.14.1 Demography**

Closure of the active Army ammunition mission at NADA and real property disposition to AZNG or USFS could result in a reduction of 4 Federal and 120 State of Arizona positions. The employment reduction would not have a pronounced impact on regional demography because the current base population accounts for only 0.5 percent of the region.



#### **4.2.14.2 Regional Economic Activity**

Based on the results of the SEA Report (Robinson, et al., June 1990), closure of the active Army ammunition mission and continuation of the license to the AZNG or disposal to the USFS would produce two types of direct economic impacts on Coconino County: (1) losses to the local economy of depot payrolls, and (2) losses to the local economy of goods and services provided to the depot by local businesses. As there would be no realignment associated construction or one-time expenditures other than minor amounts to improve depot road surfaces and the portion of the ammunition movement which might go to local firms, the impacts associated with these activities are insignificant. However, based upon the SEA Report, there would be a decrease of \$2.8 million in regional civilian wages and salaries due to the direct loss of jobs (124 manpower positions) and a decrease in the number of NADA employees holding secondary jobs (5 full time equivalents) and the number of working dependents (79 person-years).

Closure of NADA may result in a large percentage of NADA employees leaving the county although some personnel may find employment locally. There are few jobs in the region that either parallel current on-base activities, such as ammunition handling, or compensate the work force at their present salaries. Personnel displaced by the cessation of AZNG activity would either have to relocate or secure alternative employment in the area at a significantly lower wage, resulting in considerable socioeconomic impacts to both wage-earner and dependents. Federal job relocation assistance programs are not available to the State of Arizona employees operating NADA.

In terms of total economic activity, the closure of the active Army ammunition mission or real property disposal to the USFS is expected to decrease regional sales volume by \$3.7 million, regional income by \$3.2 million, and regional employment by 165 person-years. Therefore, after this implementation alternative, the expected changes in regional sales volume, employment, income, and population within the region affected by NADA represent 0.4 percent, 0.4 percent, 0.3 percent, and 0.5 percent of their 1987 level, respectively. The SEA Report concludes that these socioeconomic effects are not significant.

#### **4.2.14.3 Housing, Schools, Health Care and Public Safety**

Both disposition alternatives would result in an estimated 124-unit decrease in the total number of occupied housing units within the region. If the transfer alternative were implemented, this 0.5 percent decrease would not be a significant regional impact.

Wherry Housing would lose the majority of its residents following possible early termination of its current lease through the year 2010. However, owing to low rental costs, the complex could continue to operate according to the Bellemont Homes management company presuming alternative water supply and sewage disposal sources could be focused. Indeed, presently, some residents of Wherry Housing are not connected to the NADA. Continued operation of Wherry Complex would result in minimal impact to regional housing while buy-out of the present lease and closure of the complex could cause some increased

regional demand for housing in Flagstaff and Williams. However, owing to the limited number of units (69 in the Wherry complex) and potential out-migration of State of Arizona employees, impact on the region which had approximately 33,000 housing units in 1988 is not considered to be significant.

Under closure and disposition to either the AZNG or USFS, the resulting loss of about 60 students would cost the Flagstaff Unified School District approximately \$44,000 per year. This is 0.1 percent of this school district's FY 89/90 annual budget of \$36 million and is not considered to be significant. An undetermined transportation savings would be realized, if it is no longer necessary to transport children from NADA to Flagstaff for school.

There would be no effective change in the health care for the region under either of the disposal alternatives. The lack of health-care facilities at NADA precludes any impacts.

Closure and disposition to the AZNG would also result in no impact to fire protection services, if the depot fire department operates as before. If it is closed by either the AZNG or USFS, impact to public safety could result in that the NADA Fire Department would cease operations. Response times to accidents and injuries on the portion of Interstate Highway 40 near the depot could increase because emergency units from Williams and Flagstaff would have to travel farther to reach an accident site. This increased response time could result in increased loss of life and property. The impact, while difficult to assess, is not expected to be significant.

The existing network of mutual-aid agreements could be minimally impacted. For example, the NADA Fire Department assists the Arizona Department of Public Services, Coconino County Sheriff's Department, USFS in the national forests, and the Arizona State Lands Department. Elimination of the department by the AZNG or return of NADA to the USFS and the consequent elimination of the depot fire department would eliminate these mutual-aid agreements.

#### **4.2.14.4 Traffic and Transportation**

Regional traffic and transportation resources would not be significantly affected by NADA closure. Access to the depot along lightly congested Interstate Highway 40 and by rail would remain excellent. Depot use of the local airport does not extend beyond utilization of commuter airline facilities to provide for occasional transport of personnel. There would be no impact to these facilities.

The peak annual movement of ammunition occurs during 1991 and is within the baseline capability of 44,000 tons per year and slightly below the peak historical ammunition movement (36,000 tons) experienced during 1984 through 1989. Assuming 100 percent truck transportation, 15 tons per truck, and 260 days per year, during 1991 total truck transportation requirements would be about 9 trucks per day. This total is about the same as the peak 1984-89 movement level from NADA. Therefore, no transportation effects beyond those associated with the current mission are anticipated from BRAC-related

ammunition movements. The NADA fire department would continue to provide emergency response capability at and near NADA. No impact to the transportation system within Coconino County is expected following either continuation of the license with the AZNG or return of the land to the USFS.

#### **4.2.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

The existing installation agreements with agencies and tenants could require modification depending upon the ultimate disposition of NADA real property. Until that time no effects are expected on the current agreements or commitments by the BRAC action. Disposal of NADA to the AZNG would require termination or modification of the agreements, while disposal to the USFS would likely result in termination of the agreements.

#### **4.2.16 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS**

Closure of the active Army ammunition mission at NADA would not result in any unavoidable adverse effects. This EIS does not provide a full assessment of real property disposition alternatives at NADA as the alternatives are still being developed at this time. If necessary the effects of the disposition alternatives will be addressed in additional NEPA documentation.

#### **4.2.17 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

There are no identifiable irreversible or irretrievable commitments of resources associated with closure of the active Army ammunition mission at NADA. Irreversible or irretrievable commitments, if any, which would derive from future alternative uses of resources following land disposition to the AZNG or USFS are dependent upon the disposition alternative selected and the programs of that agency.

Natural resources of regional significance irretrievably committed could include buffer zones, presuming the AZNG expands its training mission, and additional portions of the rest of the installation, if the AZNG expands its storage mission. The AZNG would also continue to manage base resources consistent with the installation mission (as per AR 420-74). Thus, any new commitment of resources would also include prior surveys to determine affected sensitive habitat(s) and appropriate avoidance and mitigation measures.

Consideration of alternatives for disposal would have to take into account impacts to any significant cultural resources present on the installation and incorporate appropriate management techniques. Significant cultural resource information could be lost if the area were to be disposed of prior to completion of an adequate inventory and assessment and/or if measures are not put in place to protect important resources. Presently, the cultural resource base is unknown.

#### **4.2.18 MITIGATION MEASURES**

The Army is committed to continue the Installation Restoration Program, which includes identification, assessment, and feasibility studies and remedial action of all contaminated sites on NADA as described in Chapters 2 and 3. While the IRP is independent of the proposed BRAC action, the program will include measures which mitigate the effects of BRAC-related conventional ammunition demilitarization upon land use and water quality at NADA before return to the USFS, if this real property disposal alternative is selected. Otherwise, the AZNG will continue to pursue and comply with all required permits and applicable laws and regulations under this disposition alternative.

Intensive surveys to identify locations of sensitive habitat and the presence and location of any Threatened or Endangered Species will be conducted as appropriate before return of the land to the USFS, if this real property disposal alternative is selected. Formal consultation with the USFWS to develop avoidance, mitigation, or other compensation measures will be completed before disposal of NADA is complete.

The closure of the active Army ammunition mission at NADA will not affect cultural resources as neither land use nor security measures would change. Measures will be required to mitigate any expected impacts on significant historic properties that may result during the follow-on disposal action. Loss of cultural resources of significance is to be avoided by the Army's commitment to ensure preservation under the Programmatic Agreement provided in Appendix C before turning over the depot lands to other parties.

If the disposal of installation lands is by transfer to the AZNG, an agreement will be made limiting AZNG use of the depot for purposes no more likely to damage historic properties than are those for which the lands are presently used. In addition, the AZNG will have to agree to develop and implement a program, in consultation with the Arizona SHPO and the ACHP, for identifying and protecting historic properties.

If the majority of the facility is returned to the USFS, in accordance with the Army's programmatic agreement, the Army will seek agreement that the USFS will develop and implement a program for carrying out the requirements of the National Historic Preservation Act.

If portions of the installation presently held by the Army in fee title are to be sold to a non-Federal party or organization; this will result in implementation of standard inventory, assessment, and mitigation measures specified in the programmatic agreement and refined in further consultation with the Arizona SHPO, ACHP, and other interested parties.

#### **4.3 UMATILLA DEPOT ACTIVITY, OREGON**

The following discussion of direct and indirect consequences focuses on the realignment of the UMDA conventional ammunition mission. The discussion of real

property disposition impacts in this EIS considers potential effects of the probable reuse of structures and lands not needed to support the CHEM DEMIL mission. The ultimate uses and disposition of the real property not needed to support the CHEM DEMIL mission will determine the exact nature and extent of impacts; detailed analysis of these actions will be included, if appropriate, in future NEPA documentation.

#### **4.3.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY**

The BRAC action at UMDA will not change the climate, geographic setting, and geology of Morrow or Umatilla counties. No impacts are expected as a result of the realignment action or real property disposal alternatives.

#### **4.3.2 BIOLOGICAL ENVIRONMENT**

##### **4.3.2.1 Terrestrial Ecosystems**

The realignment of the conventional ammunition mission at UMDA would have no significant regional or installation impacts on the terrestrial environment because there would be no basic change in land use and no land would be sold. Range fires occasionally occurred in the past associated with the conventional ammunition mission. The potential decline in these fires may affect the quality of wildlife habitat, including antelope range.

As any real property disposition before CHEM DEMIL is completed would not affect continued use of UMDA's lands for wildlife (including antelope) management, there would be no significant effects on the terrestrial environment. No relocation of antelope will be needed as a result of BRAC.

##### **4.3.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

Neither the realignment nor the disposition of real property not needed to support the CHEM DEMIL mission would have effects on aquatic ecosystems, wetlands and floodplains because none are present at UMDA.

##### **4.3.2.3 Threatened and Endangered Species**

As no increase in activity would result from the BRAC action and a longer-term reduction in activity would result, there should be either no effect or a beneficial effect on threatened and endangered species such as bald eagles. The disposition of real property not needed to support the CHEM DEMIL mission would result in no change to the majority of UMDA lands and, as commercial reuse would be confined to areas that already are minimally used by bald eagles, no effect on bald eagles should result from human intrusion as a result of this action. Either loss or change of habitat is a more serious impact than human disturbance, since habitat loss is constant and permanent, while human disturbance

is variable. If habitat at UMDA were substantially changed from the existing condition to a more developed state, the eagles that utilize UMDA land would probably disappear. Peregrine falcons, which rarely if ever use UMDA, are not expected to be affected by either the realignment or future land disposition, as no peregrine food sources, night roosts, nests, or perches would be affected.

Ferruginous and Swainson's hawks also could be subjected to degraded or lost habitat and a diminished food supply if the land were to be altered as a result of the realignment or disposition of real property not needed to support the CHEM DEMIL mission. However, since UMDA does not appear to be a vital habitat for either species, the loss of this habitat would not be a serious impact to these species. Washington ground squirrels could be affected through changes in habitat as a result of the realignment or disposition of real property not needed to support the CHEM DEMIL mission although the extent of the impact would not be known until such change actually occurred.

### **4.3.3 LAND AND AIRSPACE USE**

The realignment of the conventional ammunition mission at UMDA would not significantly affect land and airspace use within Morrow or Umatilla Counties. The realignment affects only the land used at the installation to support this specific activity.

Future land use at UMDA under each of the alternatives for disposition of real property not needed to support the CHEM DEMIL mission may depend upon existing and any BRAC-related incremental increase in the levels of hazardous and toxic wastes on the installation. The proposed action and implementation alternatives do not affect the present IRP; the remediation of hazardous and toxic waste to a level consistent with unrestricted land use is the Army's goal as described in the introduction to Chapter 2.

The realignment action would not conflict with existing land use plans in Morrow and Umatilla Counties. The disposition of real property not needed to support the CHEM DEMIL mission may involve such conflicts, however. The region is trying to preserve agricultural land uses; UMDA is surrounded by agricultural land. As the developed areas on the property would lend themselves most readily to uses that are primarily commercial or industrial in nature, conversion to these uses probably would require county zoning changes. This is not likely to be a major conflict, and impact would be minimally adverse.

No regional or installation forestry land would be affected by realignment or disposition of real property not needed to support the CHEM DEMIL mission. UMDA is not currently used for agriculture or grazing; the realignment or disposition of real property not needed to support the CHEM DEMIL mission would have no effect on regional or installation agriculture or grazing. There will be no effects on regional or installation mining by realignment or real property disposition. As the lands at UMDA have minimal recreational value, no regional effects on recreation are expected as a result of the realignment or real property disposition. UMDA's limited recreational facilities largely would be retained to support the CHEM DEMIL mission. Realignment of the conventional

ammunition mission at UMDA is not expected to have any significant impact on special land-use agreements.

If the airfield is converted to commercial use, there may be conflict with the airspace restriction south and west of UMDA, a minimally adverse effect. The disposition of real property not needed to support the CHEM DEMIL mission may have minimum to moderate adverse impacts.

#### 4.3.4 AIR QUALITY

No significant effects on regional air quality are expected as a result of either the realignment or the future real property disposition. Demilitarization of ammunition during the realignment will cause short-term increases in dust, and demolition byproducts, but particulate constituents would be confined largely to UMDA according to ODEQ air quality permit conditions. Total annual air emissions and contaminants resulting from the four years (FY91-91) of BRAC demilitarization are shown in Table 4-5. The products include both rapidly dissipating gaseous compounds and other substances that can contribute to potential local ground contamination (Section 4.3.11). The emissions shown in the table are based upon the assumption that all open detonation would be TNT initiated by Composition B; the table does not include weight of contaminants, if any, derived from non-energetic components of the ammunition.

Table 4-6 compares concentrations for priority pollutants generated during the peak demilitarization year (FY94) with the standards for priority emissions or contaminants. The NAAQS or OAAQS do not include standards for H<sub>2</sub>, H<sub>2</sub>S, or CH<sub>4</sub>. Total suspended particulate concentrations have not yet been estimated. The one-hour rates are assumed to be confined to UMDA with the maximum plume height of 260 feet. For the other rates, Morrow and Umatilla counties make up the area of confinement and the height is the average afternoon mixing height (about 5,000 feet above ground level); this is a small fraction of the total volume of the Eastern Oregon Intrastate Air Quality Control Region. The emissions or contaminants are slight in all cases, dissipate rapidly and do not exceed the Oregon Ambient Air Quality and National Ambient Air Quality Standards. No adverse effects on air quality at UMDA or Morrow and Umatilla counties are expected as a result of the BRAC related demilitarization program.

No major changes in ODEQ permit conditions or SOPs are expected as a result of the planned demilitarization activities. In no year will the expected emissions exceed PSD standards that could trigger ODEQ review of UMDA BRAC demilitarization as a new air pollution source. New SOPs may boost the limit on the amount of explosive per pit higher than 100 pounds to allow flexibility in demilitarization, but all permit restrictions will continue to be observed. Local coordination with environmental and public safety agencies will continue in accordance with established procedures. While the amounts of ammunition planned for demilitarization at UMDA each year are outside the current EPA Part B RCRA permit estimate of 213.5 tons per year, the actual amount disposed of would be in accordance with a revised EPA permit application and the ODEQ air contaminant discharge

Table 4-5. Weight of Emissions or Contaminants Generated by Open Burning/Open Detonation for Common Propellants and Explosives at UMDA

Annual Emissions (Short Tons)

Emission or Contaminant	FY91	FY92	FY93	FY94	Total
Carbon Dioxide (CO <sub>2</sub> )	282.5	13.5	146.0	679.6	1121.7
Nitrogen (N <sub>2</sub> )	517.8	25.2	275.3	1354.9	2173.2
Carbon Monoxide (CO)	57.7	2.9	32.3	173.5	266.5
Water (H <sub>2</sub> O)	67.8	3.1	33.2	136.2	240.3
Hydrogen (H <sub>2</sub> )	2.30	0.12	1.35	7.90	11.67
Methane (CH <sub>4</sub> )	0.08	0.01	0.13	1.48	1.71
Ammonia (NH <sub>3</sub> )	0.002	0.000	0.002	0.017	0.020
Liquid Lead Compounds <sup>1</sup>	0.00049	0.00006	0.00078	0.00861	0.00994
Potassium Hydroxide (KHO) <sup>1</sup>	0.00273	0.00014	0.00155	0.00858	0.01301
Elemental Lead (Pb) <sup>1</sup>	0.00074	0.00009	0.00116	0.01291	0.01490
Hydrogen Sulfide (H <sub>2</sub> S)	0.00002	0.00000	0.00004	0.00043	0.00050
Sulfur Dioxide (SO <sub>2</sub> )	0.0005	0.0000	0.0002	0.0006	0.0013

N<sub>2</sub> and H<sub>2</sub>O are not considered contaminants and are listed to complete the material balance only.

<sup>1</sup> Potential ground contaminants.

Table 4-6. Priority Emissions or Contaminants from BRAC Demilitarization at UMDA, Peak Year (FY94) (Comparison with Most Restrictive Standards)

Priority Emission or Contaminant	Standard Measure	Standard Units	Demilitarization Units	Demilitarization Percent of Standard
Sulfur Dioxide (SO <sub>2</sub> )	ug/m <sup>3</sup> /3hr	1300	0.000063	0.00000
Carbon Monoxide (CO)	ug/m <sup>3</sup> /1hr	40000	19.777194	0.049
Nitrogen Oxide (NO)	ug/m <sup>3</sup> :AAM	100	0	0
Lead (Pb all forms)	ug/m <sup>3</sup> :MAM	3	0.000016	0.001
Hydrogen (H <sub>2</sub> )	ug/m <sup>3</sup>	None	0.006039	NA
Hydrogen Sulfide (H <sub>2</sub> S)	ug/m <sup>3</sup>	None	0.0000003	NA
Hydrocarbons (CH <sub>4</sub> )	ug/m <sup>3</sup> /3hr	160	0.00013	0.00008
T. Suspended Particulates	ug/m <sup>3</sup> :AGM	60	NA	NA

Notes: ug/m<sup>3</sup>: micrograms/cubic meter; AAM: annual arithmetic mean; AGM: annual geometric mean; MAM: monthly arithmetic mean.



permit for the appropriate year and would result in no impact to regional or local air quality.

After the realignment is completed, there will be a long-term decrease in air contaminant emissions from all sources at UMDA associated with the conventional ammunition mission, including the conventional demilitarization. Thus, the realignment will have minimum beneficial effects on air quality. While no new uses of the property are planned under the realignment, any disposition of real property not needed to support the CHEM DEMIL mission use will be required to conform to Oregon ambient air quality standards. The property reuse will have no impact on air quality.

Table 4-6 compares the level of emissions or contaminants (pollutants) generated during the demilitarization program at UMDA with the standards for priority emissions or contaminants. The one hour rates are assumed to be confined to UMDA with the maximum plume height of 260 feet. For the other rates, Morrow and Umatilla counties make up the area of confinement and the height is the average afternoon mixing height (about 5,000 feet above ground level). The emissions or contaminants are slight in all cases, dissipate rapidly and do not exceed the standard. No adverse effects on air quality at UMDA or Morrow and Umatilla counties are expected as a result of the BRAC related demilitarization program.

No major changes in ODEQ permit conditions or SOP's are expected as a result of the planned demilitarization activities. New SOP's may boost the limit on the amount of explosive per pit higher than 100 pounds to allow flexibility in demilitarization, but all permit restrictions will continue to be observed. Local coordination with environmental and public safety agencies will continue in accordance with established procedures. While the amounts of ammunition planned for demilitarization at UMDA each year are outside the current EPA Part B RCRA permit estimate of 213.5 tons per year, the actual amount disposed of would be in accordance with a revised EPA permit application and the ODEQ air quality permit for the appropriate year and result in no impact to regional or local air quality. Following mission realignment the cessation of conventional ammunition demilitarization would result in minimum beneficial impacts.

After the realignment is completed, there would be a long-term decrease in air contaminant emissions from all sources at UMDA associated with the conventional ammunition mission, including the conventional demilitarization. Thus, the realignment will have minimum beneficial effects on air quality. While no new uses of the property are planned under the realignment, any disposition of real property not needed to support the CHEM DEMIL mission use will be required to conform to Oregon air quality standards. Thus, the real property reuse will have no impact on air quality.

#### **4.3.5 WATER RESOURCES**

When the preferred realignment action is completed, demand on regional water supply would initially decline by a small amount. Demilitarization under the realignment

would require water supply for fire prevention and suppression, cleaning of contaminated clothing and personal hygiene, but the quantities needed would be within recent historical demands.

Following the realignment, water supply demand would rise again when CHEM DEMIL starts up. If the disposition of real property not needed to support the CHEM DEMIL mission called for converting facilities to industrial use, increased local demand for water probably would result. No additional wells can be drilled in the area, including the confines of UMDA, and start-up of CHEM DEMIL will require commitment of existing supply to administrative functions. Reusers of facilities not required for CHEM DEMIL could not rely on existing developed supplies at UMDA and would have to establish new sources. Water for operation of the CHEM DEMIL facility itself probably will come from a pumping plant on the Columbia River, but this supply would not be available for the future real property disposition alternative. Impact of the reuse would be moderate to substantially adverse, in view of the limited local and regional supplies. Restrictions on water allocation and rights may exist and might conflict with the real property disposition.

The demilitarization would add an increment of organic chemical contamination from explosives residue and inorganic chemical ground contamination to areas in the ammunition demolition area that already are suspected of being contaminated, adding to the potential for contamination of groundwater supplies at those sites. The contamination from BRAC demilitarization is not expected to be a significant increment above current levels or add substantially to the ongoing IRP actions.

#### 4.3.6 NOISE

Noise associated with the realignment and disposition of real property not needed to support the CHEM DEMIL mission would conform to noise contours in the UMDA ICUZ. Demilitarization by detonation during FY92-94 would affect activities in Zone III where there are no residential units. Most of the noise would be confined to the area of UMDA. However, 676 residential units and one school in the City of Irrigon are located within the outermost limits of Zone II (62-70 dBC). Some additional short-term noise from railroad or truck traffic associated with removal of surplus equipment or supplies during realignment is expected but would not be present in urban areas. Demolition or construction actions that might be required for the realignment or future real property disposition might produce some short-term, minimum adverse noise increases, but these largely would be confined to the perimeters of UMDA. The frequency of detonation is not expected to be greater than that experienced during FY89. As a result, the noise effects on the residents of the City of Irrigon within Zone II (62-70 dBC) are not expected to increase from the baseline experience.

Under the realignment, there would be a long-term reduction in noise on and around UMDA from normal ammunition maintenance and disposal operations. Any zoning that might have been undertaken by local government in accordance with recommendations in the ICUZ could be revised. The disposition of real property not needed to support the

CHEM DEMIL mission action and conversion to commercial or industrial use might result in continuation of existing levels or some rise in long-term noise levels in industrial or commercial areas. Increases in noise from air traffic might result from conversion of the landing strip to an air park, but inasmuch as traffic patterns avoid developed residential areas and wildlife management areas, the noise impact from the potential uses should be minimal. Neither the realignment or the real property reuse would have long-term significant impacts on local and regional noise level.

#### **4.3.7 CULTURAL RESOURCES**

No impacts on the region's prehistoric and historic cultural resources (for example, the Oregon Immigrant Road) are expected as a result of the proposed realignment or disposition of real property not needed to support the CHEM DEMIL mission because no lands would be sold, and there would be no change from existing land use. No standing architecture eligible for the National Register would be affected. Even if the disposition of real property not needed to support the CHEM DEMIL mission should change to include sale or transfer of lands (and no change is expected), it is BRAC policy (Appendix C) that any such lands at UMDA will be inventoried. Any cultural resources on them will be evaluated for National Register eligibility before the lands are transferred to other agencies or sold on the open market. The effects of such an undertaking will be taken into account as required by the National Historic Preservation Act.

#### **4.3.8 NATIVE AMERICAN CONCERNS**

Native American concerns have been expressed over potential effects of the current realignment and future real property disposition on Columbia River anadromous fish resources. This is an issue that relates to the ongoing mission and land utilization or remediation decisions. Neither the BRAC realignment nor the potential real property disposition at UMDA would have impacts on such resources or Native American religious or cultural sites.

#### **4.3.9 WASTEWATER DISPOSAL**

UMDA's runoff and treated wastewater currently is absorbed into the granular surface material at UMDA and percolates into the unconfined aquifer. As a result of the realignment, the discharge would be reduced proportional to the percentage of activity represented by the conventional ammunition mission but would be offset by the requirements of the CHEM DEMIL mission. The realignment itself would have no impact on local or regional wastewater disposal.

Under the disposition of real property not needed to support the CHEM DEMIL mission, conversion of vacated plant to new private industrial or commercial uses would require new wastewater treatment arrangements. If the reuse were similar in character and

intensity to current UMDA activities and there were no change in effluent quality or quantity, the new users might be accommodated into the existing UMDA treatment plant by agreement, and no regional effects on industrial wastewater disposal would be expected. Given the possibility of the Department of the Army becoming saddled with liability for contamination as a result of industrial use of its facilities, it may be unlikely that such an agreement would be available in the future. If significant changes in effluent quality or quantity were expected and could not be accommodated by the existing UMDA treatment plant, new disposal arrangements would have to be made with regional authorities, possibly including construction of new plant or extension of effluent lines to existing plant. Any local population increase resulting from economic changes as a result of the disposition of real property not needed to support the CHEM DEMIL mission (Section 4.3.14.2) would increase the volume of domestic wastewater discharge through local municipal treatment facilities, although the increase probably would not be large. Overall, the impact of the real property reuse could be moderately adverse.

#### **4.3.10 SOLID WASTE DISPOSAL**

Current use of the UMDA solid waste disposal areas might be affected by the realignment; any construction rubble resulting from the realignment might tax the capacity of existing landfills, requiring new locations. Careful monitoring of fill would be required to prevent accidental contamination. However, since no construction is planned at present, there will be no effect on local solid waste disposal. Following the disposition of real property not needed to support the CHEM DEMIL mission, regional solid waste disposal areas might have to accept commercial or industrial refuse resulting from new activities. Depending on the intensity of the new activities, this might represent an added burden for local waste-management authorities. Any local population increase resulting from economic changes following disposition of real property not needed to support the CHEM DEMIL mission (Section 4.3.14.2) would increase the volume of domestic solid waste entering county or local municipal disposal facilities, although the effect would not be large. The real property reuse may have a moderate adverse effect on regional solid waste disposal.

#### **4.3.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

Some hazardous wastes would be generated as a result of BRAC demilitarization activities at UMDA. Wastes would enter the soil in the ammunition demolition area in previously contaminated areas (Table 4-4). Wastes primarily would include iron, copper, cadmium, zinc and other heavy metals derived from the approximately 2,300 tons of shell fragments and other inert constituents of ammunition. The wastes also include solid and liquid organic chemical residues from detonation. Typically the wastes will include fragments of incompletely detonated explosives. No significant adverse effects on the region or installation from hazardous waste disposal would result from realignment at UMDA because (a) no new contaminated areas would be created, (b) the BRAC demil would not result in new kinds of contaminants in those areas, and (c) the total amount of contamination is likely to be a small fraction of the existing levels. This minimal adverse

impact would add to the total burden for remediation under the Federal Facility Agreement signed on October 31, 1989. In that agreement, the Department of the Army is committed to remediate hazardous waste contamination. Thus, remediation of BRAC-related contamination would be integrated and concurrent with the present ongoing IRP. Regardless of the reuse alternative selected, the IRP will be completed by USATHAMA and approved by Federal and Oregon agencies before property transfer. The realignment will result in minimal beneficial impacts through a long-term reduction of contamination of local soils.

All remediation activities that require use of regional hazardous waste disposal facilities are under authorities other than BRAC and will be undertaken regardless of BRAC. Contaminated site remediation will be required under varying schedules depending upon disposition of real property not needed to support the CHEM DEMIL mission and funding. Alternative reuse resulting in new industrial or commercial enterprises at vacated facilities could increase demand on regional hazardous waste disposal facilities. If vacated facilities are not used for other purposes, there will be no effect on the installation remediation program at UMDA. Neither the realignment nor the reuse will impact hazardous wastes and their disposal.

#### **4.3.12 ENERGY USAGE**

Local and regional electrical and other energy usage would decline by the percentage of UMDA use devoted to the conventional ammunition mission under the realignment but probably would be more than offset by start-up of CHEM DEMIL. A short-term rise in energy consumption resulting from construction, demolition, and restoration activities will be evident. Overall, the regional demand will be reduced in the long-term--a moderate beneficial effect. Real property disposition of unused commercial/industrial areas probably would increase regional energy usage, but projection of changes requires a redevelopment plan which outlines the nature of the commerce/industry. Any approved reuse plan would meet Oregon State and local energy conservation goals and guidelines. Commercial reuse would have either no impact or a minimum adverse impact on regional energy consumption.

#### **4.3.13 AESTHETIC QUALITY**

Structures at UMDA that would be affected under either the realignment or reuse of real property not needed to support the CHEM DEMIL mission are not architecturally significant nor do they occur in a local special architectural zone. Both actions would have no impacts on local or regional aesthetic quality.

#### **4.3.14 SOCIOECONOMICS**

Socioeconomic impacts from the UMDA realignment action are the only indirect effects associated with the realignment action at UMDA. Although the realignment impacts

are minimally adverse, they are not considered to be significant when compared to normal fluctuations in regional economic and social conditions. Local staffing and economic declines within the period 1991 to 2000 expected as a direct result of the realignment almost certainly will be offset by construction and operations hiring associated with the CHEM DEMIL and IRP missions. Public reuse of the vacated assets following the real property not needed to support the CHEM DEMIL mission probably would result in net gains, but these would occur outside the current BRAC schedule.

#### **4.3.14.1 Demography**

Regional population loss directly attributable to the realignment at UMDA includes 468 persons (0 on-base, 468 off-base), a net 0.47 percent decline (1987 levels). Start-up of CHEM DEMIL in 1995 probably would offset predicted realignment losses. Real property not needed to support the CHEM DEMIL mission to commercial/industrial reuse after 1995 may actually result in local population increases. Conversely, remedial actions could restrict the use of the land and facilities not required in support of CHEM DEMIL and result in the predicted population loss.

The installation effect of the realignment and real property not needed to support the CHEM DEMIL mission would include the loss of 168 civilian and no military positions at UMDA. As a result of the realignment, 75 civilians and 9 military positions would remain at UMDA (March 5, 1990) to perform environmental monitoring of ammunition storage igloos, ammunition handling, transport, quality control activities, and security escort.

#### **4.3.14.2 Regional Economic Activity**

In considering the realignment at UMDA, the SEA team analyses predict annual sales losses of \$6.7 million, including a direct primary loss of \$3.7 million (including post expenditures of \$654,000) and a secondary loss of \$3.0 million. A 225-person-year decrease in regional employment would result, together with a \$4.8 million decrease in regional income. This represents less than 1 percent of 1987 total regional employment and less than 1 percent of total personal income, respectively.

In the absence of a specific reuse plan, it is impractical to project regional economic changes resulting from disposition of real property not needed to support the CHEM DEMIL mission at UMDA. Potential increase in regional economic activity under an approved local economic development plan could be expected, a minimum beneficial impact.

#### **4.3.14.3 Housing, Schools, Health Care, and Public Safety**

The SEA analyses predict a 168-unit decrease in occupied housing units in the region (60 owner-occupied and 108 renter-occupied) under the realignment. The disposition of real property not needed to support the CHEM DEMIL mission reasonably could be expected to result in some longer-term increase in housing demand proportional to the number of jobs created. No on-base housing would be affected by the realignment or disposition of

real property not needed to support the CHEM DEMIL mission as all units would be retained to support the CHEM DEMIL mission.

Regionally, schools would lose 94 pupils under the realignment. The disposition of real property not needed to support the CHEM DEMIL mission could be expected to contribute to a gain in regional school population in proportion to the number of jobs created. No schools are present at UMDA; therefore, neither action would have installation effects on schools.

Although the region would lose 468 residents, there would be no significant changes to regional health care as a result of the realignment at UMDA because no health care facilities would be closed or altered. All health care facilities at UMDA will be retained to support CHEM DEMIL. The disposition of real property not needed to support the CHEM DEMIL mission could be expected to affect regional health care in proportion to the number of jobs created and attendant population growth.

No regional or installation effects on public safety are expected as a result of the realignment or disposition of real property not needed to support the CHEM DEMIL mission.

#### **4.3.14.4 Traffic and Transportation**

The movement of ammunition by truck is expected to remain below the peak 1984-89 movement level from UMDA prior to the realignment action. The peak annual movement level occurs during 1991 and 1993. This peak is slightly above the baseline capability dedicated to the conventional ammunition mission of 13,000 tons per year. However, it is below the 26,000 tons moved during 1989. Assuming 100 percent truck transportation, 15 tons per truck, and 260 days per year, during the peak years of 1991 and 1993 total truck transportation requirements would be about 1 truck per day. This total is below the peak 1984-89 movement level from UMDA. Therefore, increased effects are not expected as a result of the total movements including those which are BRAC-related.

Following the realignment, regional and installation commuting traffic may be reduced by 168 daily round-trips and associated travel of the 468 total population to be lost. Therefore, no impacts to regional traffic and transportation resources or from transportation-related risk exposure are expected from the realignment.

However, the decreased traffic from realignment could be offset by the CHEM DEMIL mission. Following realignment, regional trucking firms that receive work from UMDA may lose business proportional to the conventional ammunition mission loss. The disposition of real property not needed to support the CHEM DEMIL mission could result in increased work for regional air and ground transportation, as well as increased commuter traffic, but the increase is not likely to be great.

No changes to local transport conditions in SOP's are planned, and as strict regulation of shipping procedures is practiced, the likelihood of accidental release of

contamination or explosions is very low. Existing emergency response plans would remain in effect, and no changes in these plans appear to be needed at this time to support the BRAC action at UMDA.

#### **4.3.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

No effects are expected on the current agreements or commitments as a result of the realignment action.

#### **4.3.16 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS**

No unavoidable adverse regional environmental impacts have been identified as a result of either the realignment or disposition of real property at UMDA because it is probable that all impacts can be offset or avoided by appropriate measures.

#### **4.3.17 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

The realignment and disposition of real property not needed to support the CHEM DEMIL mission would require no irreversible or irretrievable commitment of natural resources.

Under either the realignment or the disposition of real property not needed to support the CHEM DEMIL mission, loss of cultural resources of national or regional importance would be prevented by programs to ensure their preservation; losses of significant scientific information would be prevented by these programs.

#### **4.3.18 MITIGATION MEASURES**

The Army is committed to continue the Installation Restoration Program, which includes identification, assessment, and feasibility studies and remedial action of all contaminated sites on UMDA as described in Chapters 2 and 3. Remediation at contaminated sites is scheduled under the Federal Facility Agreement to meet or surpass applicable EPA and ODEQ standards. Although the IRP remediation is independent of the proposed BRAC action, it will result in mitigation of the effects of BRAC-related conventional ammunition demilitarization upon land use and water quality at UMDA.

Although no effects are expected on cultural resources eligible for the National Register of Historic Places, currently unknown activities under either the realignment or the disposition of real property not needed to support the CHEM DEMIL mission may require mitigation. Sample surveys are scheduled by the Army. General procedures for BRAC cultural resource activities are set forth in a February 1990, Programmatic Agreement



between the Department of the Army and the Advisory Council on Historic Preservation and the National Conference of State Historical Preservation Officers (Appendix C). Developers of mitigation measures at UMDA will involve the ACHP, Oregon State Historic Preservation Officer, the Army or its authorized representative, and other interested parties.

#### **4.4 HAWTHORNE ARMY AMMUNITION PLANT, NEVADA**

The following assessment of direct environmental and indirect socioeconomic consequences focuses upon the realignment of conventional ammunition missions from FWDA, NADA, and UMDA to HWAAP.

##### **4.4.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY**

The BRAC action at HWAAP will not change the climate, geographic setting, and geology of Mineral County. No impacts are expected as a result of the realignment action.

##### **4.4.2 BIOLOGICAL ENVIRONMENT**

###### **4.4.2.1 Terrestrial Ecosystems**

There are no anticipated impacts on regional biological systems. However, the realignment would require a small amount of ground disturbance associated with the construction of a new parking lot, movement processing building, and some road alignment activities. It is not anticipated that these actions would impact any areas of critical environmental concern. The improvements would be undertaken in an area in which the majority of land has already been disturbed. As such, the impact upon remaining native wildlife and vegetation is not considered to be significant.

###### **4.4.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

There are no anticipated impacts on aquatic ecosystems or wetlands resulting from realignment. It is not anticipated that the addition of more graveled parking surface would alter drainage or floodplain dynamics in any substantial manner.

###### **4.4.2.3 Threatened and Endangered Species**

There are no anticipated actions resulting from the realignment that would exert any additional influence upon threatened and endangered or candidate species within the region. No threatened or endangered or candidate species are known to inhabit HWAAP. As such, there are no significant adverse impacts upon those species by activities at HWAAP. Several threatened or endangered or candidate species of birds may potentially be sighted within the more remote areas of HWAAP since migration routes cross the installation. Even so, these occurrences are likely to be in the more remote areas.

One candidate plant, Oryctes nevadensis, known to occur in the region may occur at HWAAP. An initial field survey was conducted by a Soil Conservation Service Naturalist in December 1989. No remnants of members of the specific plant family were identified. A second survey was conducted in mid- to late-spring 1990 when the annual species is expected to be in flower. The surveys indicate that realignment activities are not likely to adversely impact any threatened or endangered or candidate species.

#### 4.4.3 LAND AND AIRSPACE USE

The realignment of the conventional ammunition mission at HWAAP would not significantly affect land and airspace use within Mineral County. The realignment effects only the land used at the installation to support this activity.

Future land use at HWAAP is not expected to change as a result of the realignment. Although no change in land use is anticipated, future uses may depend upon the levels of toxic and hazardous waste on the installation. The proposed action and implementation alternatives do not affect the present Department of the Army policy; the remediation of hazardous and toxic waste to a level consistent with unrestricted land use is the Army's goal as described in the introduction to Chapter 2.

No anticipated conflicts arise from the realignment that would impact land use plans, policies, or controls either in Mineral County or at HWAAP. There are no anticipated actions resulting from the realignment that would influence regional forestry. No utilization of forestry resources occurs within the HWAAP; therefore, there are no impacts to the resource. No impacts are expected to regional agriculture or grazing resulting from the realignment. No agriculture or grazing activities occur within HWAAP; therefore, no impacts to agriculture would result from the realignment.

The effects of the realignment upon regional mining activities are considered to be minimal. The truck inspection facility expansion would require sand and gravel, which is in abundant supply within the region. No other impacts to mining resources are anticipated. No impacts to recreation are expected as a result of the realignment action. Special land use agreements are not expected to be affected by the BRAC action. The realignment action is not expected to affect airspace use over or near HWAAP.

#### 4.4.4 AIR QUALITY

Construction of the road alignment and truck inspection facility would generate dust over a short period of time. Dust will be minimized by use of standard construction techniques of wetting disturbed surfaces. The minimum adverse impact is not considered to be significant at either the regional or the installation level. No other air quality impacts are anticipated.

#### 4.4.5 WATER RESOURCES

Although dust control during construction of BRAC-related improvements requires some water, these requirements result in minimum adverse impacts to regional and installation water supplies. The realignment action is not expected to impact either regional or installation water quality.

#### 4.4.6 NOISE

There are no anticipated increases in regional noise levels resulting from the realignment. Some additional noise from the improvement of the truck inspection facility may occur, but this would be localized within the industrial area of HWAAP. No other additional noise-producing phenomenon is associated with the realignment; therefore, there would be no noise impacts.

#### 4.4.7 CULTURAL RESOURCES

The proposed construction activities at HWAAP would not have any impact upon regional cultural resources. The construction, which is entirely within the installation, would not directly effect any prehistoric or historic sites or structures. The Nevada State Museum's site location and survey coverage files were examined. That effort revealed that no sites have been recorded within this project's area of potential effort. However, the area had not previously been examined for such resources. A systematic field survey of the area of potential effects was completed on January 30, 1990. In total, roughly 14.2 acres were examined in a series of north-south 20 meter zig-zag transects.

This survey revealed that virtually all of the area of potential effect had previously been disturbed by a combination of man-induced and natural factors. The former category consists of general grading/leveling which, as HWAAP personnel have indicated, is the result of the general project vicinity having served as a staging area during initial construction of the Hawthorne facility. More recent disturbance consists of the placement of a sewage outfall line. The natural disturbance is the result of periodic sheetwash flooding. Ground visibility was greater than 95 percent throughout the area. No evidence of either prehistoric or historic period cultural resources was encountered.

Given the negative findings of this investigation, the realignment should have no effect on National Register of Historic Places eligible or listed properties. If, however, any previously unknown historic resources are encountered during the course of construction, activity in that specific locale will be halted until the provisions of 36 CFR 800.11 have been met.

#### **4.4.8 NATIVE AMERICAN CONCERNS**

Consultations have been held with the Walker River Paiute Tribe regarding their concerns relative to realignment at the HWAAP. Since the realignment involves the stabilization of current HWAAP mission levels and the expansion of an existing truck inspection facility, tribal concerns related to this action are not affected by the action.

#### **4.4.9 WASTEWATER DISPOSAL**

No effects of the realignment are expected to impact wastewater disposal either regionally or within the HWAAP.

#### **4.4.10 SOLID WASTE DISPOSAL**

The realignment is not expected to impact regional or installation solid waste disposal capacities.

#### **4.4.11 HAZARDOUS WASTES AND THEIR DISPOSAL**

No new quantities or types of hazardous wastes are expected to be generated as a function of the realignment; therefore, no additional impacts are anticipated. Since only serviceable ammunition would be shipped to HWAAP under the proposed action, no additional impacts from demilitarization of ammunition are anticipated.

#### **4.4.12 ENERGY USAGE**

There are no anticipated activities resulting from the realignment to HWAAP that would impact regional energy consumption in any significant manner. The realignment is not anticipated to significantly alter current rates of power consumption at HWAAP, as existing facilities and their support infrastructure would continue to be used at current levels.

#### **4.4.13 AESTHETIC QUALITY**

There are no anticipated effects resulting from the realignment that would alter the aesthetic quality of the region. The improvements to the truck inspection facility will increase the total paved and graveled area at HWAAP, which may be considered by some to be a negative aesthetic impact. The impact would occur in an area that is already disturbed and bounded by other areas of surfacing; as such, the overall adverse impact would be a minimum.

#### **4.4.14 SOCIOECONOMICS**

The only indirect effects potentially associated with the proposed action at HWAAP are socioeconomic. The Social and Economic Analysis (SEA) report concludes that the socioeconomic effects of HWAAP realignment are not significant, since no employment changes and relatively small construction activities are associated with the realignment.

##### **4.4.14.1 Demography**

The realignment is not expected to have any impacts upon regional or installation demography.

##### **4.4.14.2 Regional Economic Activity**

The improvement of the truck inspection facilities may provide short-term employment to local construction concerns but would be of limited size and duration. These are considered minimum beneficial impacts.

##### **4.4.14.3 Housing, Schools, Health Care, and Public Safety**

There is no anticipated impact upon housing, schools, health care, or public safety due to the realignment.

##### **4.4.14.4 Traffic and Transportation**

As a function of the realignment, the movement of ammunition to and from HWAAP would be stabilized at approximately 88,000 short tons per year. The influx of ammunition from the depot activities undergoing realignment or closure will be offset by a commensurate shift in movement of ammunition that could have been sent to HWAAP to other facilities within the ammunition supply and transfer system.

As proposed, levels of ammunition transported to and from HWAAP from 1991 through 1995 will be maintained at or below levels of activity experienced 1988 and 1989 (89,000 and 84,000 short tons), respectively. Assuming 100 percent truck transportation, 15 tons per truck, and 260 days per year, the peak truck transportation requirements would be about 23 trucks per day. Since this estimate is based upon the baseline peak, no increased transportation effects or increased accident potential are anticipated as a result of the total movements including those which are BRAC-related. The HWAAP fire department would continue to provide emergency response capability at and near HWAAP.

#### **4.4.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

The realignment action at HWAAP is not expected to affect special installation agreements or commitments to other organizations.

#### **4.4.16 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS**

There are no anticipated unavoidable adverse environmental impacts resulting from the realignment at HWAAP.

#### **4.4.17 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

There are no aspects of the realignment that require substantial irreversible or irretrievable commitments of resources. The facility improvements at HWAAP associated with realignment would require rock aggregate which is a resource in plentiful supply.

#### **4.4.18 MITIGATION MEASURES**

Considering the minimal nature of anticipated adverse impacts from the realignment at HWAAP, no mitigation measures are proposed.

## Chapter 5

### PUBLIC INVOLVEMENT

#### 5.1 EIS SCOPING

At the beginning of the Environmental Impact Statement (EIS) process the U.S. Army Corps of Engineers conducted public scoping sessions in the communities that would be most affected by the proposed action.

The purpose of the scoping meetings was to receive input and comments from interested parties about issues they believe should be considered and addressed in the EIS. The meetings began with an overview of the Corps' involvement in the environmental documentation for the proposed action, a description of the recommendations by the Defense Secretary's Commission on Base Realignment and Closures (BRAC), and a discussion of the purpose, procedure and schedule of the EIS process. The meetings were then opened to receive comments and suggestions from the participants on issues they believed should be addressed in this document. Transcripts of the meetings are on file at Fort Worth District, U.S. Army Corps of Engineers.

It should be noted this document is not intended to address the impacts associated with potential remediation, property exessing or with specific reuses of the sites. The Army will evaluate these actions in separate NEPA analysis. Hazardous materials are discussed in this document only to the extent that they affect or are affected by closure or realignment.

The scoping issues identified below are addressed throughout this document and are very closely keyed to the Table of Contents. The most appropriate sections relating to the area of concern are identified after each topic.

##### 5.1.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

An environmental impact scoping meeting was held at the Gallup Campus of the University of New Mexico on June 8, 1989, with approximately 50 people in attendance. Of these, twenty people represented various local, county, state, Native American, and Federal entities as well as local wildlife associations, concerned citizens groups, and the press.

Several issues of public concern were identified during the scoping meeting and in subsequent letters and telephone conversations:

- Effect of future land development and reuse on biological resources; the majority of attendees supported the return of substantial portions of FWDA to the public

domain in order to preserve the biological integrity and uniqueness of the property (Section 4.1.2).

- Effect of future land development and reuse on cultural resources; several individuals recommended that the facilities house a national cultural-historical research facility and artifact repository (Section 4.1.7).
- Native American concerns regarding ultimate disposition of lands and facilities (Section 4.1.8).
- Effects of closure on environmental cleanup of any hazardous and toxic wastes (Section 4.1.11).
- Socioeconomic effects of base closure regarding elimination of jobs and reduction of regional income (Section 4.1.14).

### **5.1.2 NAVAJO DEPOT ACTIVITY, ARIZONA**

A scoping meeting was held on June 12, 1989, in Flagstaff, Arizona. Nineteen people attended. Two attendees spoke, one from Kaibab National Forest, the other from the Arizona Game and Fish Department.

The following issues and concerns have been identified in response to comments received at that meeting and in subsequent letters and telephone conversations:

- Protection of sensitive plant and animal species found on or near NADA (Section 4.2.2).
- Future ownership of NADA land and management of resources thereon; to include sharing of jurisdiction between the Arizona National Guard and the U.S. Forest Service (Sections 2.2.2.2, 4.2.3).
- Potential access to privately owned lands which are adjacent to NADA (Section 4.2.3).
- Commercial forester support for return of the land to the U.S. Forest Service (Section 4.2.3).
- Concern by the Arizona National Guard for continued use of NADA land (Sections 2.2.2, 4.2.3).
- Future use and access to Naval Observatory for stellar research purposes when NADA closes (Section 4.2.3).



- Potential environmental problems and issues that include hazardous waste cleanup, groundwater contamination, cleanup of an old demolition area, and possible soil contamination from an old sanitary landfill (Section 4.2.11).

### 5.1.3 UMATILLA DEPOT ACTIVITY, OREGON

A scoping meeting was held on June 7, 1989, in Umatilla, Oregon. Of approximately 40 persons who attended the meeting, two local persons spoke.

The following concerns have been identified in response to comments received during the scoping meeting and in subsequent letters and telephone conversations:

- Land use and population changes since UMDA opened (Sections 2.3.1, 3.3.3).
- Effects on the Oregon Immigrant Road and its traces and prehistoric cultural resources (Section 4.3.7).
- Impacts to Native American religious and cultural sites (Section 4.3.8).
- UMDA's wildlife populations, including relocation of pronghorn antelope to safe refuges (Section 4.3.2).
- Coordination of all installation remediation activities with BRAC actions. (Chapter 2, Section 4.3.11).
- Careful listing of all local, state, and Federal laws and regulations that will be addressed in the remediation and BRAC actions and discussion of how they will be met (Executive Summary, Chapter 2, Chapter 3, Sections 3.3.3, 3.3.5, 3.3.7, 3.3.8, 3.3.9, 3.3.10, 3.3.11, 3.3.12, 4.3.2, 4.3.4, 4.3.5, 4.3.7, 4.3.8, 4.3.9, 4.3.10, 4.3.11).
- Consideration of the hazards of different modes of transportation of conventional ammunition, including contrast of convoy with dispersed shipment (Chapter 2, Section 2.3.2.1).
- Assessment of relative hazards presented by individual rail cars or truck loads containing different types of ammunition (Chapter 2).
- Evaluation of demilitarization on site versus relocation of ammunition alternatives (Chapter 2).
- Plans for addressing liabilities for accidents (Chapter 2).
- Full disclosure of data and information needed for careful evaluation of alternatives and impacts (Chapter 2, Section 2.3.1, Chapter 3, Chapter 4, Supporting Documentation available upon request).

- Effects of contaminated groundwater migration on Columbia River salmon populations (Sections 4.3.2.2, 4.3.5, 4.3.8, 4.3.11).

#### **5.1.4 HAWTHORNE ARMY AMMUNITION PLANT, NEVADA**

A scoping meeting was held on June 13, 1989, in Hawthorne, Nevada, with about 20 persons attending. Four attendees provided public input.

The following concerns have been identified in response to comments received in that meeting and in subsequent letters and telephone conversations:

- Provision of a portion of funds generated from closure of FWDA, NADA, AND UMDA to mitigate impacts at HWAAP (Sections 1.2, 4.4.14).
- Differences in ammunition from three plants closing and ammunition arriving at HWAAP currently (Chapter 2, Section 2.4.2.1).
- Transportation safety, modes, and routes for movement of serviceable and unserviceable ammunition (Chapter 2, Sections 2.4.2.1, 4.4.14.4).
- Accident potential and emergency response plans for addressing transportation accidents (Chapter 2, Sections 2.4.1, 4.4.14).
- Economic fluctuations due to workload variations at HWAAP (Sections 3.4.14.3, 4.4.2.2).
- Coordination with Nevada Division of Environmental Protection and Department of Transportation (Sections 4.4.2, 4.4.14.4).
- Impacts to Walker Lake and biological resources, water quality, hazardous waste management and site remediation (Sections 4.4.2, 4.4.5, 4.4.11).
- Impacts to Native American religious and cultural sites (Section 4.4.8).

## **5.2 COORDINATION**

The appropriate state historical preservation officers (SHPOs) have been contacted and coordination has been initiated for each of the installations associated with the closure and realignment action. Coordination also has been initiated for each of the installations with the USFWS. Appendix A documents this correspondence.

### **5.3 COMMENTS ON DRAFT EIS**

Comments received are shown, addressed, and incorporated in the Final EIS as discussed in Appendix A.

### **5.4 FURTHER PUBLIC INVOLVEMENT**

There will be additional opportunities for public involvement and agency coordination throughout the EIS process. After the Final EIS is published and distributed there will be a 30-day public review period. Public notices of these actions will be provided, as well as press releases and official Notification of Availability in the Federal Register.

## Chapter 6

### LIST OF PREPARERS

The following individuals were primarily responsible for the Hawthorne Army Ammunition Plant Realignment Environmental Impact Statement.

<u>Name</u>	<u>Degree</u>	<u>Area(s) of Responsibility</u>
<b><u>Fort Worth District, USACE: Hawthorne Army Ammunition Plant Realignment EIS</u></b>		
Arver I. Ferguson, Jr.	B.S., Community Parks and Recreation, Forestry	Project Manager, Public Interface, EIS Review and Coordination
Paul R. McGuff	M.A., Anthropology	Cultural Resource Manager
<b><u>Institute for Water Resources, USACE: Socioeconomics Effects Analysis (FWDA, NADA, UMDA, and HWAAP)</u></b>		
Dennis P. Robinson		Project Manager, Economist
Morris W. Clark, Jr.		Economist
Kim M. Bloomquist		Economist
Ian McDevitt		Economist
Edwin J. Rossman		Social Scientist
<b><u>Albuquerque District, USACE: Ft. Wingate Depot Activity, New Mexico</u></b>		
Sandra L. Rayl	M.A., Anthropology	BRAC NEPA Coordination, EIS preparation

**Los Angeles District, USACE: Navajo Depot Activity, Arizona**

Ron Ganzfried	M.L.A., Landscape Architecture B.A., Geography and Environmental Studies	BRAC NEPA Coordination, EIS Reviews
Jonathan Freedman	M.S., Geography	EIS Preparation not attributed to others
Lee Hackeling	B.A., Geography	Affected Environment Preparation
Ron Conner	B.A., Economics	Socioeconomics
Jennifer Mulvihill	B.A., Biology	Biological Environment
Steve Dibble	B.A., Archaeology	Cultural Resources
Laura Tschudi	M.A., Environmental Planning	EIS Preparation

**Seattle District, USACE: Umatilla Depot Activity, Oregon**

Lawr V. Salo	B.S., Anthropology	BRAC NEPA Coordination, EIS Preparation not attributed to others
Kenneth Brunner	B.S., Wildlife Science	Natural and Biological Resources
Richard Eckerlin	B.S., Geology	Geological, Toxic and Hazardous Wastes
James R. Smith	M.S., Economics	Socioeconomics

**Science Applications International Corporation: Hawthorne Army Ammunition Plant, Nevada**

John A. Raines	M.S., Management Engineering M.S., Economics	EIS Coordination and Review
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**Science Applications International Corporation: Hawthorne Army Ammunition Plant, Nevada (continued)**

Kent O. Wirtz	M.S., Biology	Biological Resources and EIS Preparation not attributed to others
J. B. Turnmire	Ph.D., Civil Engineering	Water Resources, Toxic and Hazardous Wastes
Thomas Greider	Ph.D., Sociology	Native American Concerns

**Sacramento District, USACE: Hawthorne Army Ammunition Plant, Nevada**

Richard Weaver	B.S., Anthropology	Cultural Resources
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## Chapter 7

### DISTRIBUTION LIST

This distribution list displays the public agencies, officials, and private persons or organizations who have been provided copies of the FEIS. A mailing list is being maintained by the Corps of Engineers, Fort Worth District, and will be used to notify interested persons of the availability of FEIS. Copies of the FEIS have been provided to installation Public Affairs offices and local media.

#### COMMON TO EACH INSTALLATION

Chief, Western Office of Project Review, Advisory Council on Historic Preservation  
U.S. Department of Defense, Office of Economic Adjustment

#### FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

##### United States Congress

The Honorable Pete Domenici, U.S. Senate  
The Honorable Jeff Bingaman, U.S. Senate  
The Honorable Joseph Skeen, U.S. House of Representatives  
The Honorable Bill Richardson, U.S. House of Representatives  
The Honorable Steven H. Schiff, U.S. House of Representatives

##### U.S. Environmental Protection Agency

Regional Administrator, U.S. Environmental Protection Agency, Region VI

##### U.S. Department of Commerce

U.S. Economic Development Administration, Regional Office, Austin, TX  
U.S. Economic Development Administration, Field Office, Santa Fe, NM

##### U.S. Department of the Interior

Director, Office of Environmental Affairs, U.S. Department of the Interior  
State Director, Bureau of Land Management  
Bureau of Land Management, Albuquerque District Office  
Field Supervisor, Ecological Services, U.S. Fish & Wildlife Service

U.S. Department of the Interior (continued)

Regional Director, U.S. Fish & Wildlife Service  
Office of Environmental Project Review, U.S. Department of the Interior, Albuquerque, NM  
Regional Director, U.S. National Park Service  
Area Director, Bureau of Indian Affairs, Albuquerque Area Office  
Bureau of Indian Affairs, Zuni Agency  
Area Director, Bureau of Indian Affairs, Navajo Area Office  
Regional Director, U.S. Bureau of Reclamation

U.S. Department of Agriculture

U.S. Forest Service, Region 3, Albuquerque  
U.S. Forest Service, Southwest Regional Office, Cibola National Forest  
State Conservationist, SCS, U.S. Soil Conservation Service

U.S. Department of Transportation

U.S. Federal Aviation Administration, Region 6  
U.S. Federal Highway Administration, Southwest Region

State of New Mexico

Honorable Bruce King, Governor of New Mexico  
New Mexico State Representative, District 69

State Offices

Director, Commerce & Industry Department  
Director, Department of Game and Fish  
Director, Environmental Improvement Division  
Director, Economic Development & Tourism  
New Mexico State Historic Preservation Officer  
New Mexico State Clearing House for Intergovernmental Review,  
Department of Finance & Administration  
New Mexico Energy, Minerals & Natural Resources Department  
New Mexico Department of Parks & Recreation  
New Mexico State Highway & Transportation Department



### Counties and Commissioners

Cibola County, County Manager  
McKinley County Attorney  
Gallup-McKinley County Chamber of Commerce

### Cities and Towns

Mayor, City of Grants  
Mayor, City of Gallup  
City Manager, City of Gallup  
City Manager, City of Grants

### Native American Organizations

Administrator, Office of Navajo Land Administration  
Pueblo of Zuni  
Navajo Code Talkers Association  
Environmental Specialist, Navajo Nation  
Navajo Natural Heritage Program

### Other Interested Organizations

Public Lands Coordinator, The Nature Conservancy  
Ft. Wingate Redevelopment Commission  
EIP-Field Office, Grants  
Southwest Research and Information Center  
New Mexico Archaeological Council  
New Mexico Archaeological Society  
New Mexico Wildlife Federation  
Central New Mexico Audubon Society  
National Audubon Society  
Sierra Club  
The Conservation Fund  
Archaeological Conservancy  
National Trust for Historical Preservation, Texas & New Mexico Field Office

### Libraries and Postal Offices

Gallup Public Library  
Six U.S. Postal Service offices

Individuals

13 Interested Individuals

**NAVAJO DEPOT ACTIVITY, ARIZONA**

United States Congress

The Honorable Dennis DeConcini, U.S. Senate  
The Honorable Bob Stump, United States Representative

U.S. Environmental Protection Agency

Regional Administrator, U.S. Environmental Protection Agency, Region IX

U.S. Department of the Interior

U.S. Bureau of Land Management, Phoenix Office  
U.S. Park Service, Grand Canyon National Park  
U.S. Bureau of Indian Affairs, Navajo Area Office  
U.S. Bureau of Reclamation, Regional Director  
U.S. Fish and Wildlife Service, Phoenix Office

U.S. Department of Agriculture

U.S. Forest Service, Coconino National Forest  
U.S. Forest Service, Kaibab National Forest  
Farmers Home Administration, Phoenix, AZ

U.S. Department of Commerce

U.S. Economic Development Administration, Regional Office

U.S. Department of Defense

U.S. Naval Observatory, Flagstaff, AZ  
U.S. Naval Facilities Command

U.S. Department of Transportation

U.S. Federal Aviation Administration, Regional Office  
U.S. Federal Highway Administration, Regional Office

State of Arizona

Honorable Rose Mufford, Governor of Arizona  
Arizona State House of Representatives  
Arizona State Senate

State Offices

Arizona National Guard  
Arizona Department of Water Resources  
Arizona Game and Fish Department  
Arizona Department of Public Safety  
Arizona State Land Department  
Arizona Department of Transportation  
State Historic Preservation Officer, Arizona State Parks  
Arizona State Clearing House  
Arizona Department of Environmental Quality

Counties and Commissioners

Coconino County Board of Supervisors

Cities and Towns

Mayor, City of Flagstaff  
Chamber of Commerce, City of Flagstaff  
Utilities Department, City of Flagstaff  
Mayor, Town of Williams

Native American Organizations

Havasupai Tribal Council  
Hopi Tribal Council  
Navajo Tribal Council

### Other Interested Organizations

Arizona Desert Bighorn Sheep  
Arizona Native Plant Society  
Arizona Wildlife Federation  
Bass America  
Northern Arizona Audubon Society  
Northern Arizona Council of Governments  
Plateau Group, Grand Canyon Chapter, Sierra Club  
The Arizona Nature Conservancy  
Wilderness Society, Southwest Region  
Wildlife Society, Arizona Chapter  
Arizona Riparian Council  
Stone Forest Industries

### Libraries and Postal Offices

Coconino County Public Library  
Arizona State University, Center for Environmental Studies  
Northern Arizona University Library  
Williams Public Library

### Individuals

Twenty-seven individuals.

## **UMATILLA ARMY DEPOT, OREGON**

### United States Congress

The Honorable Mark O. Hatfield, U.S. Senate  
The Honorable Bob Packwood, U.S. Senate  
The Honorable Les AuCoin, U.S. House of Representatives  
The Honorable Peter DeFazio, U.S. House of Representatives  
The Honorable Denny Smith, U.S. House of Representatives  
The Honorable Robert F. Smith, U.S. House of Representatives  
The Honorable Ron Wyden, U.S. House of Representatives

### U.S. Environmental Protection Agency

Regional Administrator, U.S. Environmental Protection Agency, Region X

U.S. Department of the Interior

U.S. Department of the Interior, Office of Environmental Project Review, Portland, OR  
U.S. Bureau of Mines, Western Field Operations Center  
U.S. Bureau of Land Management, Oregon State Office  
U.S. Bureau of Indian Affairs, Umatilla Agency  
U.S. Bureau of Indian Affairs, Portland Area  
Regional Director, U.S. Fish and Wildlife Service  
Regional Director, U.S. Bureau of Reclamation

U.S. Department of Transportation

Regional Director, U.S. Federal Aviation Administration  
Regional Administrator, U.S. Federal Highway Administration

U.S. Department of Commerce

U.S. Economic Development Administration, Regional Office

U.S. Department of Energy

Bonneville Power Administration  
U.S. Department of Energy, Richland Operations Office

U.S. Department of Agriculture

U.S. Forest Service, Regional Office  
U.S. Soil Conservation Service, Seattle Office

State of Oregon

The Honorable Neil Goldschmidt, Governor of Oregon  
Oregon State House of Representatives  
Oregon State Senate

State Offices

Oregon State Historic Preservation Officer  
Oregon Emergency Management Division  
Oregon Army National Guard, Oregon Depot

### Counties and Commissioners

Morrow County Commission  
Umatilla County Commission

### Cities and Towns

Mayor, City of Umatilla  
Mayor, City of Stanfield  
Mayor, City of Echo  
Mayor, City of Irrigon  
Mayor, City of Boardman  
Mayor, City of Pendleton  
Mayor, City of Hermiston  
City Manager, Hermiston

### Native American Organizations

Columbia River Inter-Tribal Fish Commission  
Chairman, Umatilla Tribes  
Board of Trustees, Confederated Tribes of the Umatilla Indian Reservation  
Warm Springs Planning Department, Confederated Tribes, Warm Springs Reservation  
Council of Energy Resource Tribes

### Other Interested Organizations

Burlington Northern Railroad Co.  
Riedel International, Inc.  
Black Hills Audubon Society  
Mastrogioseppe & Gill, Environmental Consultants  
Sierra Club, NW Conservation Representative  
Small Towns Institute  
Pacific Northwest Power, Planning Council  
Pacific Power and Light  
Nature Conservancy  
Development Director, Greenpeace Northwest  
Friends of the Earth  
Port of Umatilla  
Federation of West Outdoor Clubs  
National Resource Defense Council  
Western Archaeological Consultants

Libraries and Postal Offices

Ten public or university libraries.

Individuals

Sixteen interested individuals

**HAWTHORNE ARMY AMMUNITION PLANT, NEVADA**

United States Congress

The Honorable Richard Bryan, U.S. Senate  
The Honorable Harry Reid, U.S. Senate

United States Congress (continued)

The Honorable William Bilbray, U.S. House of Representatives  
The Honorable Barbara Vucanovich, U.S. House of Representatives

U.S. Environmental Protection Agency

U.S. Environmental Protection Agency, Region IX

U.S. Department of the Interior

U.S. Bureau of Land Management, Ely District Office  
U.S. Fish and Wildlife Service, Reno Office  
U.S. Bureau of Land Management, Nevada State Office  
U.S. Fish and Wildlife Service, Rocky Mountain Regional Office

U.S. Department of Agriculture

U.S. Forest Service, Humboldt National Forest  
U.S. Soil Conservation Service, Reno Office

U.S. Department of Commerce

U.S. Economic Development Administration, Regional Office

U.S. Department of Transportation

U.S. Federal Aviation Administration, Regional Office  
U.S. Federal Highway Administration, Regional Office

State of Nevada

The Honorable Robert Miller, Governor, State of Nevada  
Nevada State Representative, District No. 36  
Nevada State Senator, Central Nevada "Senatorial" District

State Offices

State Historic Preservation Officer, Division of Historic Preservation and Archaeology,  
Department of Conservation and Natural Resources  
Nevada Department of Wildlife  
Nevada Division of Environmental Protection  
Nevada Military Department  
Nevada State Historical Society  
Nevada Office of Community Services  
Nevada Department of Transportation

Counties and Commissioners

Mineral County Commission  
Mineral County Regional Planning Commission  
Mineral County Sheriff

Cities and Towns

Town of Hawthorne

American Indian Tribes

Walker River Paiute Tribe

Other Interested Organizations

Nature Conservancy, Nevada Chapter  
Sierra Club, Toiyabe Chapter



Libraries and Postal Offices

Mineral County Public Library  
Library, University of Nevada - Reno  
Library, University of Nevada - Las Vegas

Individuals

Nine interested individuals

## Chapter 8

### REFERENCES

- U.S. Department of Defense, 1988. Base Realignments and Closures. Report of the Defense Secretary's Commission, Washington, D.C.
- U.S. Army Toxic and Hazardous Materials Agency, 1990. U.S. Army Toxic and Hazardous Materials Agency Pollution Abatement and Installation Restoration Research and Development Program Activities FY89, Aberdeen Proving Ground, MD.
- U.S. Army Headquarters, 1986. Ammunition Handbook. A Guide for Specialists, Field Manual No. 9-13, Washington, D.C.
- FORT WINGATE DEPOT ACTIVITY, NEW MEXICO**
- Breternitz, C.D., and L.R. Ash, 1984. A cultural resources overview and management plan for the Fort Wingate Depot Activity, prepared for the National Park Service, San Francisco, CA, unpublished manuscript on file, U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, TX.
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## Chapter 9

### GLOSSARY

<u>Abatement</u>	Halting of deterioration; usually applied to measures designed to contain asbestos fibers.
<u>Affected environment</u>	The natural and physical environment and the relationship of people to that environment that will or may be changed by actions proposed.
<u>Cultural resources</u>	The physical remains (artifacts, standing architecture, ruins, burial mounds, petroglyphs, etc.) which represent former human cultures.
<u>Decibel</u>	A unit of sound energy, equal to 10 times the logarithm to base 10 of the ratio of the pressure of a given sound to a reference pressure, which is 20 micropascals (20 micronewtons per meter). Noise levels (measured in decibels) are described in two ways; A-frequency weighted and C-frequency weighted . The "A" weight is used to describe all noises except large amplitude impulse noise ("C" weight) which are generated by explosive devices, large caliber weapons, weapons systems and sonic booms. The following commonly used zones correspond to these weights as follows: (A scale: Zone I - less than 65 DNL; Zone II - 65-70 DNL; Zone III - greater than 75 DNL and C level: Zone I - less than 62 DNL; Zone II - 62-70 DNL; Zone III - greater than 70 DNL).
<u>Demilitarization</u>	Disassembly or destruction of ordnance or supplies to the point that they are useless for military purposes; note that this does not mean they are without hazard.
<u>Disposal</u>	(1) Systematic destruction: as in demilitarization of ammunition. (2) The act or process of disposing: as in distribution such as real property transfer, sale, or lease to other governmental agencies or private interests.
<u>Diversity</u>	The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

<u>Effects</u>	A change in an attribute. Effects can be caused by a variety of events, including those that result from program attributes acting on the resource attribute (direct effect); those that do not result directly from the action or from the attributes of other resources acting on the attribute being studied (indirect effect); those that result from attributes of other programs or other attributes that change because of other programs (cumulative effects); and those that result from natural causes (e.g., seasonal change).
<u>Endangered species</u>	A species which is in danger of extinction throughout all or a significant portion of its range and which have been designated under the provisions of the Endangered Species Act of 1973.
<u>Environmental analysis</u>	An analysis of alternatives and their short and long-term environmental effects which include physical, biological, economic, social, and environmental design factors and their interactions.
<u>Environmental impact statement</u>	The version of the statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.
<u>Erosion</u>	The processes whereby earthy or rocky material is worn away, loosened, dissolved, and removed from any part of the earth's surface.
<u>Floodplain</u>	That portion of a stream valley, adjacent to the channel which is covered with water, when the stream overflows its banks at flood stages.
<u>Habitat</u>	The natural environment of a plant or animal. The locality where the organism may generally be found and where all essentials for its development and existence are present. Habitats are described by their geographical boundaries, or with such terms as "banks of streams," "dry hillsides," etc.
<u>Historic property</u>	A cultural resource (district, site, building, structure or object) that has been determined important by virtue of qualifying for nomination to the National Register of Historic Places, and therefore warrants consideration with regard to project impacts.



Irretrievable resource  
commitment

Allocation decision causing loss of production or use of a renewable resource.

Irreversible resource  
commitment

Allocation decision affecting nonrenewable resources--soil, minerals, and cultural resources--causing permanent loss of these resources.

Mitigation measures

Those measures used to reduce the impact of a proposed action. Examples related to cultural resources include excavation of sites to recover important information before they are destroyed or impacted by construction activities.

National Environmental  
Policy Act (NEPA)

An act declaring a National policy to encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and the biosphere and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the Nation and to establish a Council on Environmental Quality.

National Priorities List

A list of hazardous waste sites that are categorized on a national "worst-case" basis and one eligible for EPA Superfund funding.

No Action Alternative

The most likely condition expected to exist in the future if current management direction would continue unchanged.

Non-energetic

Non-explosive (inert) components of conventional ammunition such as shell casings, shrapnel, non-explosive fuse components, rotating bands, and packaging materials.

Proposed action

Specified in the National Environmental Policy Act as the project, activity, or decision that a Federal agency intends to implement or undertake which is the subject of an environmental impact statement.

Remediation

Curing of defects in environmental conditions due to pollution.

Riparian area

An area usually found along the banks of streams or lakes and identified by the presence of vegetation that requires free or unbound water or conditions more moist than normally found in the area.

<u>Scoping</u>	Determination of the significant issues to be addressed in an EIS.
<u>Threatened species</u>	Plants and animals included on the National Register are defined in the Endangered Species Act of 1973 [Section 3(4)] as "any species which is in danger of extinction through all or a significant portion of its range; the term threatened is defined [Section 3(15)] "as any species which is likely to become and endangered species within the foreseeable future..."
<u>Washout</u>	The removal of explosives from munitions, bombs, and projectiles by flushing with water and steam cleaning.
<u>Wetlands</u>	An area that is more or less regularly wet or flooded. Where the water table stands at or above the land surface for at least part of the year.
<u>Wildlife</u>	All nondomesticated mammals, birds, reptiles, and amphibians living in a natural environment, including both game species and nongame species. Animals, or their progeny, which once were domesticated but escaped captivity and are running wild (i.e., feral animals), such as horses, burros, and hogs, are not considered wildlife.

## Chapter 10

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**APPENDIX A**

**COMMENTS AND RESPONSES ON THE  
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**For**

**BASE REALIGNMENT AND CLOSURE**

**Fort Wingate Depot Activity (FWDA), New Mexico  
Navajo Depot Activity (NADA), Arizona  
Umatilla Depot Activity (UMDA), Oregon  
Hawthorne Army Ammunition Plant (HWAAP), Nevada**

## I. SOURCES OF PUBLIC COMMENTS

In accordance with the provisions of the National Environmental Policy Act and regulations of the Council on Environmental Quality, public input to the draft Environmental Impact Statement (DEIS) has been sought. A notice of availability of the DEIS was published in the Federal Register on May 24, 1991, advising that copies of the DEIS could be obtained from Fort Worth District. Copies of the document were provided to the agencies, organizations, and individuals listed in Chapter 7 of the DEIS. A 45-day public comment period ran from May 25 to July 8, 1991. On May 31, 1991, an extensive public notice mailing announcing the availability of the EIS and public meetings near each installation was sent out. Legal notices and press releases were provided to local newspapers and radio and television stations. The public meetings were held between June 11 and 20, 1991.

## II. COMMENTS AND RESPONSES

The process of treating public comments and responses to those comments is described in the following paragraphs. The comments and responses are organized as follows: General, FWDA, NADA, UMDA, and HWAAP. Generally, the comment and response sections for each installation address comments in letters first. Next, oral comments from public meeting transcripts are discussed. Finally, document changes resulting from internal review are discussed.

A. LETTERS. Each comment identified in a letter is marked with a vertical bar along the left hand margin of the text and numbered in sequence for that letter. The comment and response section for each installation addresses letters in the following order by source: federal government; state, county, city and tribal governments; independent organizations; and individual citizens. The comment/response section either paraphrases or quotes each comment, then provides a response. In addition to answering the comments, the responses either display resulting changes in EIS text, if any, listing FEIS page and paragraph numbers for each change, or refer to the appropriate text. The following is a list of letters received for each installation, in order of response.

### 1. GENERAL

- a. United States Environmental Protection Agency, Region 9, Office of External Affairs, dated July 9, 1991.

### 2. FWDA.

- a. United States Department of Agriculture, Forest Service, Cibola National Forest, dated July 5, 1991.
- b. State of New Mexico, Environment Department, dated July 2, 1991.
- c. McKinley County Wildlife Association, dated June 26, 1991.
- d. City of Gallup, dated July 2, 1991.



- e. The Navajo Nation, Historic Preservation Department, dated June 19, 1991.
- f. The Navajo Nation, Navajo Environmental Protection Administration, dated July 8, 1991.
- g. The Nature Conservancy, New Mexico Field Office, dated June 24, 1991.

### 3. NADA

- a. United States Department of Agriculture, Forest Service, Kaibab National Forest, Kaibab and Coconino Forest Supervisors, dated July 2, 1991.
- b. United States Department of the Interior, Bureau of Land Management, Arizona State Office, Lands and Renewable Resources, dated June 28, 1991.
- c. Arizona State Parks, State Historic Preservation Officer, dated June 10, 1991.
- d. Arizona Department of Environmental Quality, Office of Waste Programs, dated May 28, 1991.
- e. State of Arizona, Game and Fish Department, dated July 8, 1991.
- f. The Hopi Tribe, Cultural Preservation Office, dated July 2, 1991.
- g. The Navajo Nation, Navajo Environmental Protection Administration, dated July 8, 1991.
- h. Richard G. Smith, dated June 18, 1991.
- i. Kerry McCracken, McCracken Realty, dated July 1, 1991.

### 4. UMDA

No letters of comment were received.

### 5. HWAAP

- a. State of Nevada, Department of Conservation and Natural Resources, Division of Environmental Protection, dated July 3, 1991.

## B. PUBLIC MEETING TRANSCRIPTS

Oral comments received during the public meetings and recorded in the meeting transcripts are treated in the same manner as written comments, except that comments are addressed in order of presentation in the transcript. The following lists the dates and locations of the meeting for each installation and identifies the commenters.

1. FWDA. The public meeting for FWDA was held on June 13, 1991, at 7:00 pm at the University of New Mexico, Gallup Campus in Gallup, New Mexico. Thirteen persons attended the meeting and five persons presented oral statements.

- a. Jack Boyd, Navajo Nation, Economic Development Committee
- b. Hurley Benally, Navajo Nation, Church Rock Chapter

- c. Patricia Lundstrom, Council of Governments Agency
- d. Chavez John, Navajo Nation, Office of Navajo Land Administration
- e. Gaurav Rajen, United States Environmental Protection Agency, Navajo Superfund Program

2. NADA. The public meeting for NADA was held on June 11, 1991, at 7:11 pm at the Thorpe Park Armory in Flagstaff, Arizona. Thirty persons attended the meeting and four persons presented oral statements.

- a. COL James Burns, State of Arizona, Arizona National Guard
- b. R. Dennis Lund, United States Department of Agriculture, Forest Service, Kaibab and Coconino National Forests
- c. Kerry McCracken
- d. Cheri McCracken

3. UMDA. The public meeting for UMDA was held on June 18, 1991, at 7:00 pm at the Hill Country Inn in Umatilla, Oregon. Seventeen persons attended the meeting and two persons presented oral statements.

- a. Don Hanson
- b. LTC Larry Sparks, Commander, UMDA

4. HWAAP. The public meeting for HWAAP was held on June 20, 1991 at 7:00 pm at the Mineral County Public Library in Hawthorne, Nevada. Nine persons attended the meeting and none presented oral statements.

### C. CHANGES FROM INTERNAL REVIEW

In addition to changes resulting from review comments received in letters and public meetings, internal agency review has identified areas where the DEIS should be changed to correct errors of fact, update important studies, or substantially improve clarity. Changes under each installation are listed, in order by page and paragraph numbers. For example, the internal review changes which apply to all four installations are listed below.

Page ES-1, second paragraph. The first sentence reads: "Disposition of strategic stockpile material and real estate is beyond the scope of this EIS."

Page ES-2, second paragraph. The last sentence reads: "Additional NEPA analyses will be prepared for real property disposal actions and may be needed for disposition of DLA stockpiles at FWDA, NADA and UMDA as required to implement future reuse plans."

Page 4, Section 1.4, first paragraph. The following has been inserted at end of the paragraph: "NEPA applies, however, to all other actions: 1) "during the process of the

## COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS

### GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IX, DATED JULY 9, 1991

1. Based upon our review of the information and related impact assessment presented in the DEIS, we have classified this DEIS as category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). Although no further analysis or data collection beyond those described in the DEIS may be necessary, there are areas which require additional clarification or information. Our detailed comments are attached.

RESPONSE: No response required.

2. We urge the Army to seriously consider the preparation of additional environmental impact statements for implementation of future base reuse plans. The closure and realignment of Army facilities represent valuable resources which will be the focus of diverse and conflicting interest groups. A clear and detailed presentation of the environmental consequences of base reuse options will provide decisionmakers and the public with an understanding of potential impacts and tradeoffs and will help decisionmakers take actions that protect, restore, and enhance the environment.

EPA feels it is very important to include Federal and State environmental and resource agencies in the base reuse planning process. Given the complex hazardous waste cleanups and environmental problems on many bases, it is important that local communities clearly understand potential environmental constraints.

RESPONSE: The findings of this EIS are whether or not there are significant environmental impacts associated directly with the ceasing of conventional ammunition missions at FWDA, NADA, and UMDA and preparation for the transfer of the mission to HWAAP. Additional NEPA analysis and documentation will be prepared for each of the installations as required for disposal and reuse. Prior to real property disposition, the Army will dispose of hazardous materials at these installations in accordance with NEPA, RCRA, CERCLA and other applicable laws. The Army's Installation Restoration Program is on-going at these installations. Both the reuse NEPA process and IRP process include opportunities for further public involvement in the decision.

3. We encourage the Army to consider alternatives which will optimize and preserve the long-range environmental benefits of their holdings. For instance, EPA recommends preservation and enhancement of existing wetland and riparian resources. The Army should consider the transfer of sensitive or valuable habitat and natural resources to resource agencies (i.e. US Fish and Wildlife Service, National Park Service) in order to optimize environmental benefits.

closing or realigning of a military installation after such military installation has been selected for closure or realignment but before the installation is closed or realigned and the functions relocated"; and 2) "during the process of the relocating of functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated."

### III. LETTERS OF COMMENT AND PUBLIC MEETING TRANSCRIPTS

Letters of public comment and public meeting transcripts are attached for each installation in the order in which they are addressed.

**RESPONSE:** The Army has a progressive long-range environmental preservation and enhancement program to wisely utilize its assets. Both attention to and execution of this program are steadily improving. The Army is striving to identify and improve deficient areas. The Army position is, that after balancing all the relevant issues, the natural and environmental resources located on Army installations will best be served in the long term by remaining under Army care.

4. The description and evaluation of ammunition shipment, demilitarization and disposal alternatives (pgs. 15-16) appear very limited and should be further developed in the FEIS. One of the primary functions of the NEPA process is to identify and assess the reasonable alternatives to the proposed action(s) that will avoid or minimize adverse effects of these action(s) upon the quality of the human environment (40 CFR 1500.2(e)).

Describe the full range of possible alternative ammunition transportation and disposal options and their potential hazard and environmental impacts. For instance, evaluate convoy versus dispersed shipment, assess the relative hazards presented by individual rail cars or truck loads containing different types of ammunition, and evaluate demilitarization on site versus relocation of ammunition. The reasons for the elimination of alternatives from detailed study should be fully disclosed.

**RESPONSE:** The Army balances its transportation method according to system-wide capabilities. The proposed action is within the historic capability of these installations and does not result in substantial change in transportation mode from current operations as a result of on-going mission requirements. The Army conducts demilitarization on-site rather than relocating ammunition for demilitarization to the maximum extent practicable consistent with technical requirements and system-wide workloads. This will not change under the proposed action.

5. The DEIS does not address the change in status or potential impacts to tenant organizations which may occur as a result of realignment and closure. It is unclear whether the proposed action includes realignment or closure of these tenant activities. Furthermore, a detailed description of tenant activities is not provided. It is therefore very difficult to determine the local activity level as each depot and the proportion of activities attributable to tenant organizations.

We strongly recommend the FEIS fully address tenant activities and the potential impacts to these activities. Fully describe current tenant activities and the proportion of depot activities attributable to these activities. Clearly state whether the proposed realignment and closure action includes tenant activities and the movement and/or elimination of tenant manpower and facilities (equipment, buildings, etc.).

**RESPONSE:** The proposed realignment and closure of the conventional ammunition missions at NADA and UMDA does not affect the special agreements with tenant organizations nor their operations. The small USAISC and MEDDAC tenant units at FWDA support the conventional ammunition mission and will close as a result of the

action. The effects of this mission closure on the environment and socioeconomic effects on the region are minimal. The effects of real property disposition on these tenant organizations will be the subject of NEPA analysis associated with the disposal action.

6. The FEIS should indicate whether the proposed ammunition disposal levels by open burning/open detonation are within the RCRA permit limitations for each depot. The DEIS does not appear to address this issue. For example, the DEIS describes the level of disposal proposed for the Navajo Depot Activity, indicating that the disposal level is within the 1990 Arizona Department of Environmental Quality permit but does not state whether requirements of the RCRA permit are met.

RESPONSE: The current ammunition disposal levels are within the RCRA permit criteria at both facilities. The EIS has been revised at Sections 2.2.2.1 and 2.3.2.1, to indicate compliance at NADA and UMDA. Text changes are as follows. On page 28, Section 2.2.2.1, Ammunition disposal, second paragraph, last line, after "limits" insert ", the RCRA permit limits,". On page 35, Section 2.3.2.1, Ammunition disposal, second paragraph, third sentence, after "(2,194 tons)" insert ", the RCRA permit limits,".

7. Figure ES-1, pg. ES-3. We recommend that Figure ES-1 include the NEPA documentation schedule (e.g., scoping, public hearings, EIS) for Base Reuse actions.

RESPONSE: The follow-on reuse NEPA analysis and documentation has not been scheduled at this time. The Army will follow established procedures for informing the public and interested agencies when the process is initiated.

8. It is important that the proposed action does not impact the pace and quality of cleanup programs. We encourage the Army to select alternatives which will have minimal effect on cleanup schedules, staffing and funding. Early and close coordination with EPA and State hazardous waste regulatory staff is highly recommended.

RESPONSE: Selecting alternatives which have minimal environmental effects continues to be a high Army priority. Close and early coordination with all involved regulatory agencies and the interested public will be continued.

9. EPA recognizes that rapid closure/realignment, development and reuse of Army facilities may be desirable. It is important that all parties understand the environmental constraints which may be imposed due to cleanup actions. At most Federal facilities, the extent of contamination has not yet been fully determined, nor has remedial work been completed. Transfer and development may be delayed or may not proceed if the risks are deemed unacceptable. In any case, transfer and development must not interfere with the investigation and cleanup of the base. Access for cleanup and investigation activities must be assured. This also applies to development at realigned bases to render them acceptable for increased military uses.

We note that a conclusive evaluation for National Priorities List listing has not been done for the Navajo Depot Activity or the Hawthorne Army Ammunition Plant.

Both of these facilities are included in the list of sites that must be reviewed by July 15, 1992 in accordance with the Conservation Law Foundation vs. EPA lawsuit court order. Both facilities are scheduled for review this summer. It is important to note that past practices at both facilities indicate that a hazard rating evaluation (HRS) will be necessary. A full HRS evaluation is necessary to determine the continued application of CERCLA/SARA to these facilities. The National Contingency Plan is applicable to any type of remediation.

**RESPONSE:** The Army will assure access for remediation and investigation activities prior to the disposal action. Army cooperation in the EPA review for possible inclusion on the National Priority List will continue and appropriate action will be implemented in compliance with the finding. The proposed action will not impact the pace nor the quality of ongoing IRP activities as indicated in response to the following Comment 10.

10. The proposed realignment and closure action includes disposal of unserviceable ammunition through open burning/open detonation at Fort Wingate, Navajo, and Umatilla Depot Activities. This disposal will increase the amount of waste in the ammunition demolition areas in previously contaminated locations on these depots. To remediate this realignment and closure-related contamination, the Army proposes to integrate cleanup of these wastes with the present ongoing Installation Restoration Program (IRP) (pg.134). The FEIS should address the potential impact of cleanup of realignment and closure-related contamination on the pace and quality of ongoing IRP activities. In addition, potential mitigation measures for the effects of the proposed action upon land use, water quality and soil contamination should be fully disclosed in the FEIS and not deferred to future IRP documentation as implied in the DEIS (pg. 16).

**RESPONSE:** The EIS has been modified as follows at Section 1.5.1 to indicate that the proposed action is not anticipated to impact the pace nor the quality of the ongoing IRP activities. "This phase is not scheduled for NADA or HWAAP at this time although local planning and studies are proceeding. The facilities are included in the EPA list of sites that must be reviewed by July 15, 1992, for inclusion on the National Priorities List. Closure and realignment at these installations will not impede development of the Army's RI/FS program schedule."

The data from which to develop appropriate mitigation are not available, but will be developed as a part of the future IRP investigations.

11. The FEIS should clearly define "release of property" for reuse. Indicate whether release will be of the entire depot(s) or portions of the depot(s).

**RESPONSE:** Release of property is disposal of property as described in Section 1.5.3. The extent of disposal will depend on results of IRP studies and will be addressed in follow-on environmental documentation.

12. The FEIS should address the possible closure of RCRA permitted facilities as a result of the proposed realignment and closure action. Indicate whether there will be

modification or termination of RCRA Part A or B permits. We recommend additional public comment and involvement in the closure of RCRA units.

**RESPONSE:** The proposed action requires continuation of operations at the current level which includes continuing with the present RCRA authorization. With regard to FWDA, the Army will continue close coordination with EPA, other regulatory agencies, and the public during the process of ceasing current operations.

13. The FEIS should clearly state whether the proposed transfer of ammunition to Hawthorne Army Ammunition Plant will increase truck and rail trips and the number of vehicle miles travelled (VMTs) at the different depots. If an increase in traffic is anticipated, the FEIS should address the potential for increased air emissions and the environmental impacts of these increases.

**RESPONSE:** The Army is balancing the shipments of ammunition stocks to HWAAP related to the proposed action in accordance with available support workload. If the incoming traffic increases beyond historic levels, NEPA analyses will be conducted to analyze the effects of the incremental increase on air quality.

14. Describe in the FEIS the reasons for the nonrenewal of Hawthorne Army Ammunition Plant air quality permits (pg. 40).

**RESPONSE:** The only air quality permit at HWAAP which was not renewed was for open burning/open detonation. When it was time for renewal of this permit, the Western Area Demilitarization Facility had just become available. This facility was to be used for all demilitarization operations and resulted in cancellation of the OB/OD air quality permit. As a result, OB/OD operations are now permitted on a case-by-case basis.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

9 JUL 1991

Mr. Arver Ferguson  
U.S. Army Corps of Engineers  
Fort Worth District  
819 Taylor St.  
Fort Worth, TX 76102-0300

Dear Mr. Ferguson:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement for the project entitled ~~Base Realignment and Closure: Fort Wingate Depot Activity, Navajo Depot Activity, Umatilla Depot Activity, and Hawthorne Army Ammunition Plant.~~ Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and Section 309 of the Clean Air Act.

The proposed realignment and closure of the conventional ammunition missions at the above facilities are part of the recommendation package prepared by the Defense Secretary's Commission on Base Realignments and Closures in response to the Defense Authorizations Amendments and Base Closure and Realignment Act. The conventional ammunition missions of Fort Wingate Depot Activity (New Mexico), Navajo Depot Activity (Arizona), and Umatilla Depot Activity (Oregon) will be reassigned to the Hawthorne Army Ammunition Plant (Nevada).

The Army proposes to reduce the quantities of ammunition to be transferred by utilizing current mission shipments and demilitarization and disposal of unserviceable ammunition. The quantities of ammunition shipped to Hawthorne Army Ammunition Plant will be within this installation's recent historical shipment levels. The existing truck inspection facility will be upgraded but there will be no change in manpower levels. Affected manpower positions at Fort Wingate, Navajo, and Umatilla Depot Activities will be eliminated or transferred to other facilities before mission closure in 1995. Additional NEPA analyses may be prepared for real property disposal actions, as required, to implement future base reuse plans.

Based upon our review of the information and related impact assessment presented in the DEIS, we have classified this DEIS as category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). Although no further analysis or data collection beyond those described in the DEIS may be necessary, there are areas which require additional

clarification or information. Our detailed comments are attached.

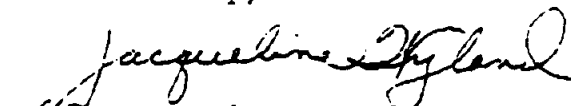
We urge the Army to seriously consider the preparation of additional environmental impact statements for implementation of future base reuse plans. The closure and realignment of Army facilities represent valuable resources which will be the focus of diverse and conflicting interest groups. A clear and detailed presentation of the environmental consequences of base reuse options will provide decisionmakers and the public with an understanding of potential impacts and tradeoffs and will help decisionmakers take actions that protect, restore, and enhance the environment.

We encourage the Army to consider alternatives which will optimize and preserve the long-range environmental benefits of their holdings. For instance, EPA recommends preservation and enhancement of existing wetland and riparian resources. The Army should consider the transfer of sensitive or valuable habitats and natural resources to resource-agencies (i.e. US Fish and Wildlife Service, National Park Service) in order to optimize environmental benefits.

EPA feels it is very important to include Federal and State environmental and resource agencies in the base reuse planning process. Given the complex hazardous waste cleanups and environmental problems on many bases, it is important that local communities clearly understand potential environmental constraints.

We appreciate the opportunity to review this DEIS. Please send three copies of the Final EIS to this office at the same time it is officially filed with our Washington, D.C. office. If you have any questions, please call Ms. Laura Fujii at (415) 744-1579, (FTS 484-1579).

Sincerely,

  
Deanna Wieman, Director  
Office of External Affairs

Enclosure (4 pages)

91-098  
MI# 000076

cc: Base Commander, Fort Wingate Depot Activity  
Base Commander, Navajo Depot Activity  
Base Commander, Umatilla Depot Activity  
Base Commander, Hawthorne Army Ammunition Plant  
DOD, Office of Economic Adjustment  
EPA Region 6, Mike Jansky  
EPA Region 10, Clark Smith

COMMENTS

General Comments

1. The description and evaluation of ammunition shipment, demilitarization and disposal alternatives (pgs. 15-16) appear very limited and should be further developed in the FEIS. One of the primary functions of the NEPA process is to identify and assess the reasonable alternatives to the proposed action(s) that will avoid or minimize adverse effects of these action(s) upon the quality of the human environment (40 CFR 1500.2(e)).

Describe the full range of possible alternative ammunition transportation and disposal options and their potential hazard and environmental impacts. For instance, evaluate convoy versus dispersed shipment, assess the relative hazards presented by individual rail cars or truck loads containing different types of ammunition, and evaluate demilitarization on site versus relocation of ammunition. The reasons for the elimination of alternatives from detailed study should be fully disclosed.

2. The DEIS does not address the change in status or potential impacts to tenant organizations which may occur as a result of realignment and closure. It is unclear whether the proposed action includes realignment or closure of these tenant activities. Furthermore, a detailed description of tenant activities is not provided. It is therefore very difficult to determine the total activity level of each depot and the proportion of activities attributable to tenant organizations.

We strongly recommend the FEIS fully address tenant activities and the potential impacts to these activities. Fully describe current tenant activities and the proportion of depot activities attributable to these activities. Clearly state whether the proposed realignment and closure action includes tenant activities and the movement and/or elimination of tenant manpower and facilities (equipment, buildings, etc.).

3. The FEIS should indicate whether the proposed ammunition disposal levels by open burning/open detonation are within the RCRA permit limitations for each depot. The DEIS does not appear to address this issue. For example, the DEIS describes the level of disposal proposed for the Navajo Depot Activity, indicating that the disposal level is within the 1990 Arizona Department of Environmental Quality permit but does not state whether requirements of the RCRA permit are met.

4. Figure ES-1, pg. ES-3. We recommend that Figure ES-1 include the NEPA documentation schedule (e.g., scoping, public hearings, EIS) for Base Reuse actions.

## **Hazardous Waste Comments**

1. It is important that the proposed action does not impact the pace and quality of cleanup programs. We encourage the Army to select alternatives which will have minimal effect on cleanup schedules, staffing and funding. Early and close coordination with EPA and State hazardous waste regulatory staff is highly recommended.

2. EPA recognizes that rapid closure/realignment, development and reuse of Army facilities may be desirable. It is important that all parties understand the environmental constraints which may be imposed due to cleanup actions. At most Federal facilities, the extent of contamination has not yet been fully determined, nor has remedial work been completed. Transfer and development may be delayed or may not proceed if the risks are deemed unacceptable. In any case, transfer and development must not interfere with the investigation and cleanup of the base. Access for cleanup and investigation activities must be assured. This also applies to development at realigned bases to render them acceptable for increased military uses.

We note that a conclusive evaluation for National Priorities List listing has not been done for the Navajo Depot Activity or the Hawthorne Army Ammunition Plant. Both of these facilities are included in the list of sites that must be reviewed by July 15, 1992 in accordance with the Conservation Law Foundation vs. EPA lawsuit court order. Both facilities are scheduled for review this summer. It is important to note that past practices at both facilities indicate that a hazard rating evaluation (HRS) will be necessary. A full HRS evaluation is necessary to determine the continued application of CERCLA/SARA to these facilities. The National Contingency Plan is applicable to any type of remediation.

3. The proposed realignment and closure action includes disposal of unserviceable ammunition through open burning/open detonation at Fort Wingate, Navajo, and Umatilla Depot Activities. This disposal will increase the amount of waste in the ammunition demolition areas in previously contaminated locations on these depots. To remediate this realignment and closure-related contamination, the Army proposes to integrate cleanup of these wastes with the present ongoing Installation Restoration Program (IRP) (pg.134). The FEIS should address the potential impact of cleanup of realignment and closure-related contamination on the pace and quality of ongoing IRP activities. In addition, potential mitigation measures for the effects of the proposed action upon land use, water quality and soil contamination should be fully disclosed in the FEIS and not

deferred to future ERP documentation as implied in the DEIS (pg. 16).

4. The FEIS should clearly define "release of property" for reuse (pg. 6). Indicate whether release will be of the entire depot(s) or portions of the depot(s).
5. The FEIS should address the possible closure of RCRA permitted facilities as a result of the proposed realignment and closure action. Indicate whether there will be modification or termination of RCRA Part A or B permits. We recommend additional public comment and involvement in the closure of RCRA units.

#### **Air Quality Comments**

1. The FEIS should clearly state whether the proposed transfer of ammunition to Hawthorne Army Ammunition Plant will increase truck and rail trips and the number of vehicle miles travelled (VMTs) at the different depots. If an increase in traffic is anticipated, the FEIS should address the potential for increased air emissions and the environmental impacts of these increases.
2. Describe in the FEIS the reasons for the nonrenewal of Hawthorne Army Ammunition Plant air quality permits (pg. 40).

SUMMARY OF RATING DEFINITIONS  
AND FOLLOW-UP ACTION\*\*

Environmental Impact of the Action

**LO—Lack of Objections**

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EO—Environmental Concerns**

The EPA reviewer has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that are needed to reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

**EO—Environmental Objections**

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU—Environmentally Unsatisfactory**

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

**Category 1—Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2—Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

**Category 3—Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*\*From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment.

COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS

FORT WINGATE DEPOT ACTIVITY

This section identifies the written and oral comments received on the DEIS, specific to FWDA, and responds to those comments.

WRITTEN COMMENTS-RESPONSES AND DRAFT EIS REVISIONS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE,  
CIBOLA NATIONAL FOREST, DATED JULY 5, 1991.

RESPONSE: No response required.

STATE OF NEW MEXICO ENVIRONMENT DEPARTMENT, DATED JULY 2,  
1991

7. The only impact to surface waters may be the loss of aquatic habitat associated with the lakes. Mitigation for these losses may be required under the policy of "no net loss of wetlands".

RESPONSE: Prior to property disposal, these wetlands will be maintained as they have been in the past. Further mitigation measures will be addressed in the follow-on NEPA reuse analysis and documentation.

McKINLEY COUNTY WILDLIFE ASSOCIATION, DATED JUNE 26, 1991

1. There was a "PUBLIC" Draft Environmental Impact Statement meeting for the closure of Fort Wingate Army Depot held on June 13, 1991 in Gallup, New Mexico, but the "PUBLIC" was not notified or invited. . . We feel that people were notified selectively so that their comments would favor what we feel the Draft Environmental Impact Statement implies, under Section 2-1-2-2, it states "Representatives of the Department of Defense and the Army met with representatives of the Navajo Tribe to discuss the Tribe's interest in obtaining all of the property". To our knowledge you did not meet with other interested parties.

RESPONSE: On May 31, 1991, there was an extensive public notice mailing announcing the availability of the EIS and public meeting. The notice was mailed to the city, county, and tribal offices, public libraries, and parties known to have an interest. A legal notice and press release were provided to six newspapers including the local newspaper, the Gallup Independent, three television and two radio stations on May 31, 1991. The

Notice of Availability was published in the Federal Register on May 24, 1991. The 45-day public comment period ran from May 25 to July 8, 1991.

Pages 21 and 22, Section 2.1.2.2, first sentence and first three bullets were changed as follows: "This section lists land disposal scenarios to include the possible preferred implementation alternative and other potential future uses for FWDA real property. These potential future uses were developed during the initial scoping process. All interested parties were provided the opportunity to suggest alternative uses such as the following:

- Return of the 6,000 woodland acres to the public domain and the Bureau of Land Management (BLM) administration.
- Transfer of the 6,000 woodland acres to the USDA or U.S. Forest Service (USFS).
- During the initial scoping process, Native Americans suggested conveyance of 6,000 woodland acres to a Native American tribe (e.g., Zuni, Navajo) contingent upon appropriate Congressional and other administrative action. At the request of the Navajo tribe, representatives of the Department of Defense (DOD) and the Army met with representatives of the Navajo tribe to discuss the tribe's interest in obtaining all of the base property. Tribal representatives were encouraged by DOD to present their preliminary economic development plan to Gallup and McKinley County officials as joint participants in the Fort Wingate Reuse Commission."

2. We feel that another scoping meeting should be held in Gallup with adequate notice given to the "PUBLIC" and all those on your mailing list, not a selected few.

RESPONSE: No additional public meetings will be conducted in conjunction with this EIS. The public will have the opportunity to review the final EIS. Additional public input will be solicited during the RI/FS process and the reuse analysis.

#### THE CITY OF GALLUP, DATED JULY 2, 1991

1. The "nature and extent of hazardous and toxic contamination at FWDA could have major impact on decisions regarding land reuse." Until the "studies to further define the extent of hazardous and toxic substance contamination and unexploded (emphasis provided) ordnance" and biological and cultural resource surveys are fully completed, we have no basis for final impact assessment or determination.

The existence of toxic and hazardous materials and the extent to which these materials may have had effect on the lands and water resources of the site should be studied and the results disclosed to the entities that have indicated an interest in the facility. "Since demilitarization activities are known to have released contaminants to the



soil, there is potential for groundwater contamination." In view of this and other similar areas of concern, impact assessment and determination should be accomplished including overall cleanup and remediation.

RESPONSE: The decision resulting from this EIS is whether or not there are significant environmental impacts associated directly with the ceasing of operations and preparation for the transfer of functions at FWDA. The follow-on reuse NEPA analysis and documentation will provide the basis for decisions for property disposal and reuse alternatives. This follow-on analysis and documentation will incorporate the Remedial Investigation/Feasibility Study (RI/FS) findings. Public involvement will be an integral part of the RI/FS process and reuse analysis.

2. No explanation is given for the action taken by the DOD to encourage the "Tribal representatives" to present their preliminary plan to Gallup and McKinley County officials.

RESPONSE: In response to this comment, please see response to McKinley County Wildlife Association, dated June 26, 1991, Comment 1, for changes to the text of Section 2.1.2.2.

3. Although the subject EIS concludes that the effects of closure of the FWDA are minimal, insufficient information is provided to determine the degree of presence of toxic and hazardous wastes and the degree to which contamination of the land, water, and environment has occurred. The EIS admits to the presence of such contaminants, and the inability to draw final conclusions in this particular EIS. The concern we have is what provisions are to be made for identifying, securing, and the final disposition of such materials.

RESPONSE: The Defense Environmental Restoration Program (DERP) process and Installation Restoration Program (IRP) is discussed on Pages 5 and 6, Section 1.5. The follow-on reuse NEPA analysis and documentation will provide the basis for decisions for property disposal and reuse alternatives. This follow-on analysis and documentation will incorporate the Remedial Investigation/Feasibility Study (RI/FS) findings. Public involvement will be an integral part of the RI/FS process and the reuse analysis.

Contaminated material will be properly identified, secured, and disposed of in accordance with all applicable regulations and laws.

THE NAVAJO NATION, HISTORIC PRESERVATION DEPARTMENT, DATED  
JUNE 19, 1991

1. Several meetings with representatives from various departments of the Tribe have revealed that the Tribe considers development of the base property as an industrial park but may not necessarily prefer that option.

RESPONSE: Page 22, Section 2.1.2.2. The sentence in the DEIS which read, "The tribe prefers development of an industrial park." has been deleted.

2. The black footed ferret also possibly occurs within the depot.

RESPONSE: Page 46, Section 3.1.2.3. The comment is noted and the following sentence added: "The black footed ferret (Mustela nigripes), a federally endangered species, possibly occurs within the depot."

3. The historic structure survey of the buildings at Fort Wingate was conducted seven years ago in 1984. The buildings may be potentially eligible for inclusion in the National Register of Historic Places since most of the buildings now fall within the 50 year requirement. Another evaluation for significance and eligibility should be conducted.

RESPONSE: The Programmatic Agreement (Appendix C) and the FWDA Memorandum of Agreement recognize the need to identify and evaluate all known historic properties (archeological as well as historical) to determine their significance and eligibility status. Coordination between the Army and the SHPO is on-going.

4. The statement regarding sacred sites claiming..."none are within FWDA." should be deleted since the next statement recognizes the fact that sacred sites may be present. Consultation with medicine men from the various tribes will be necessary to identify these sites.

RESPONSE: Page 54, Section 3.1.8, fourth paragraph. The second sentence has been rewritten to read: "None of the identified sacred sites is within FWDA." Page 120, Section 4.1.8, paragraph 3 outlines the procedures to be followed in identifying sacred and sensitive sites. Oral interviews with medicine men, tribal elders, and other knowledgeable persons are encompassed within ethnographic studies.

5. The current Commander on base is a commissioned officer.

RESPONSE: Page 58, Section 3.1.14.1. The last sentence has been revised to read: "The population residing on FWDA is limited to the FWDA Commander and a Department of the Army civilian."

6. The Navajo Nation currently has an agreement with the Army to operate a food distribution program in one of the base warehouses.

RESPONSE: This information appears on page 49, Section 3.1.3, second paragraph.

7. The impact of development of a curation/research facility is suggested to have a moderate to substantial beneficial impact on cultural resources. This should be reflected in Table ES-1.

RESPONSE: Page ES-6, Table ES-1, Column 3, Cultural Resources, has been changed to be consistent with the information referenced on page 119, Section 4.1.7. The text now reads: "Substantial Adverse to Substantial Beneficial." A footnote (3) has been added to read: "While the Army has no preferred alternative at this time, fourteen potential real property disposition alternatives are suggested in Section 2.1.2.2. Appropriate potential reuse alternatives and the associated impacts will be the subject of subsequent NEPA analysis and documentation."

8. As indicated in the EIS, several results of surveys conducted regarding asbestos content and the presence of radon in the buildings and fuel storage tank tests are still pending. Will these results be available before the final EIS is prepared?

RESPONSE: Page 57, Section 3.1.11, fourth paragraph. The last sentence of this paragraph in the DEIS has been replaced with the following: "A total of 48 buildings on FWDA will require asbestos abatement. Of these, 29 are known to contain friable asbestos; 19 others contain non-friable asbestos. Eighteen buildings contain both friable and non-friable asbestos."

Page 57, Section 3.1.11, fifth paragraph. The fifth sentence has been revised to read: "Leak testing of three underground fuel storage tanks was completed in September 1990. The three tanks and connecting lines passed the tightness test."

Page 57, Section 3.1.11, last paragraph. The second sentence dealing with radon has been revised as follows: "On-going surveys in the Administration Area should be completed in October, 1991."

9. As indicated on page 161, [Section] 5.4, the public will be notified of the hearings by press releases and notifications in the Federal Register. Was the public informed of the hearing conducted June 13th according to these guidelines? At the original scoping meeting, approximately 50 people attended. The small turnout at the most recent meeting may indicate that the hearing was not properly advertised by the local media sources.

Also, those who received copies of the EIS may not have had enough time to review the Statement from when they received it until before the hearing which may also be a factor in the small turnout. I would recommend that this be taken into consideration when scheduling the next public hearing.

RESPONSE: On May 31, 1991, there was an extensive public notice mailing announcing the availability of the EIS and public meeting. The notice was mailed to the city, county, and tribal offices, public libraries, and parties known to have an interest. A legal notice and press release were provided to six newspapers including the local newspaper, the Gallup Independent, three television stations and two radio stations on May 31, 1991. The Notice of Availability was published in the Federal Register on May 24, 1991. The 45-day public comment period ran from May 25 to July 8, 1991. The public will have the

opportunity to review the final EIS. Copies of the final EIS will be provided to all who commented and will be made available for general public review.

THE NAVAJO NATION, NAVAJO ENVIRONMENTAL PROTECTION  
ADMINISTRATION, DATED JULY 8, 1991.

RESPONSE: No response required.

THE NATURE CONSERVANCY, NEW MEXICO FIELD OFFICE, DATED JUNE  
24, 1991.

1. T&E species for FWDA are discussed on page 46. Additional plant species that have a reasonably high probability of occurrence on FWDA and should be cited in the EIS include the Acoma fleabane (Erigeron acomanis) which is a Federal category 2 Candidate species; the Zuni milkvetch (Astragalus accumbens), State sensitive; and the Chaco milkvetch (Astragalus micromerius), another State-sensitive plant.

RESPONSE: Page 46, Section 3.1.2.3, paragraph 4. The following sentences have been inserted between discussions of the Zuni fleabane and Wright's pincushion cactus. "Acoma fleabane (Erigeron acomanis), a Federal Category 2 candidate, occurs on gypsum sandstone cliffs and canyons in association with pinon-juniper habitat. Chaco milkvetch (Astragalus micromerius), a state-sensitive species, occurs on sandstone and gypsum sandstone cliffs in association with sagebrush and pinon-juniper habitat. Zuni milkvetch (Astragalus accumbens), a localized, endemic state-sensitive species, is abundant in the Zuni Mountains. It prefers well-developed, sandy clay soils associated with sedimentary outcrops within the lower pinon-juniper to ponderosa communities. The orchid, Piperia unalascensis, a proposed state endangered species is restricted to the Zuni Mountains in association with ponderosa pine and spruce-fir habitat."

2. On page 113 you state that the Zuni fleabane has been proposed for Federal Endangered status. Actually this fleabane (Erigeron rhizomatus) already is a Federally Threatened species.

RESPONSE: Page 113, Section 4.1.2.3, second paragraph, second sentence. During the preparation of this EIS, the status of the Zuni Fleabane changed from proposed to a listed Federal Endangered species. This change was included in the DEIS on page 46 but not on page 113. The first sentence on page 113 of the FEIS has been revised as follows: "For example, since appropriate soil and habitat occur within FWDA, it is highly likely that the Zuni fleabane, a federally endangered species, may be present and could be affected by new land disturbances associated with future uses."

**PUBLIC MEETING, UNIVERSITY OF NEW MEXICO, GALLUP BRANCH,  
GALLUP, NEW MEXICO, JUNE 13, 1991**

1. Mr. Jack Boyd, Economic Development, Navajo Nation, stated "I am concerned as to the process of, perhaps, the cleanup of the base, how much of it is going to be done, and what are all the contaminants that might be in the area, to what depth your organization has checked into this."

**RESPONSE:** The DERP process is discussed on pages 5 and 6, Section 1.5.1. Suspected contaminants are noted on page 55, Section 3.1.11. The follow-on reuse NEPA analysis and documentation will provide the basis for decisions for property disposal and reuse alternatives. This analysis and documentation will incorporate the Remedial Investigation/Feasibility Study (RI/FS) findings. Public involvement will be an integral part of the RI/FS process and the reuse analysis.

2. Mr. Hurley Benally, Church Rock Chapter: No response required.

3. Mr. Jack Boyd, Economic Development, Navajo Nation: Has an inventory been made on the bunkers or the facilities and underground utilities? Are they usable for industrial development or manufacturing? If an inventory has been made, it is accessible to the public?

**RESPONSE:** Inventories of the buildings, storage igloos, and underground utilities are available upon request. We cannot make a judgement as to their suitability for industrial development or manufacturing.

4. Ms. Patricia Lundstrom, Council of Governments Agency: Should there be adverse contaminants found and identified, will the Corps have funding available to actually clean that up, or how is that planned to be taken care of?


**RESPONSE:** It is the Army's objective to remediate any contamination on FWDA to a level that ensures no effect on public health and safety. This remediation will take place prior to disposal.

5. Mr. Chavez John, Office of Navajo Land Administration, Navajo Nation: I have a concern here regarding how the public notice was made of the public hearing for EIS. First of all, I didn't happen to see any notice in the newspaper to the public. . . What I would like to possibly suggest is maybe a continuance of this hearing at another later date, if that's possible. So more people could be involved, because mostly the people that are affected are basically at the chapter level.

**RESPONSE:** Please see the response to Comment 9, the Navajo Nation, Historic Preservation Department, dated June 19, 1991. No additional public meetings will be conducted in conjunction with this EIS, which covers the closure of FWDA. The public will have the opportunity to review the final EIS. Copies will be provided to all who commented on the draft EIS and will be made available to the general public for review.

6. The most true information that could be gotten regarding cultural heritage and archeological is from the elderly and from the people themselves that were associated with these people.

**RESPONSE:** The statement on Page 120, in Section 4.1.8 describes the need for archeological survey, testing, data recovery, and ethnographic interviews to identify archeological sites and sacred and sensitive sites, and provide for tribal input to mitigate resources endowed with cultural or religious value.



United States  
Department of  
Agriculture

Forest  
Service

Cibola  
National  
Forest

2113 Osuna Rd NE, Suite A  
Albuquerque, NM 87113  
(505) 761-4650

Reply To: 5400

Date: July 5, 1991


Mr. Arver Ferguson  
U.S. Army Corps of Engineers  
Fort Worth District  
819 Taylor St.  
Fort Worth, TX 76102-0300

Dear Mr. Ferguson:

We have reviewed the Draft Environmental Impact Statement for Base Realignment and Closure, Fort Wingate Army Depot, et al. The proposed action will not effect the management of the Cibola National Forest, therefore we will not comment on the closure proposal. We are concerned with the final disposition of the land and clean-up of any hazardous wastes, particularly the southern 6,000 acres. It is our understanding that future NEPA documents will deal with the land and real property disposition issue.

I have enclosed a brief history of Public Land Orders and Laws effecting Fort Wingate, in particular the southern 6,000 acres. You will note that this area, along with an additional 30,000 acres was part of the National Forest from 1925 through 1954. The 6,000 acres was returned to exclusive control of the military in 1954. The remaining 30,000 acres was given exclusive National Forest Status in 1960. Based on this history, we believe that there is a clear intent for all of the area included in the 1925 Order being given exclusive National Forest Status after closure of Fort Wingate Army Depot. Please make this information part of any records that will be utilized in the NEPA process that deals with disposal of the land.

Sincerely,

*For*   
C. PHIL SMITH  
Forest Supervisor

Enclosure

cc:  
Mt. Taylor RD w/encl.  
RO, Lands w/encl.

Caring for the Land and Serving People

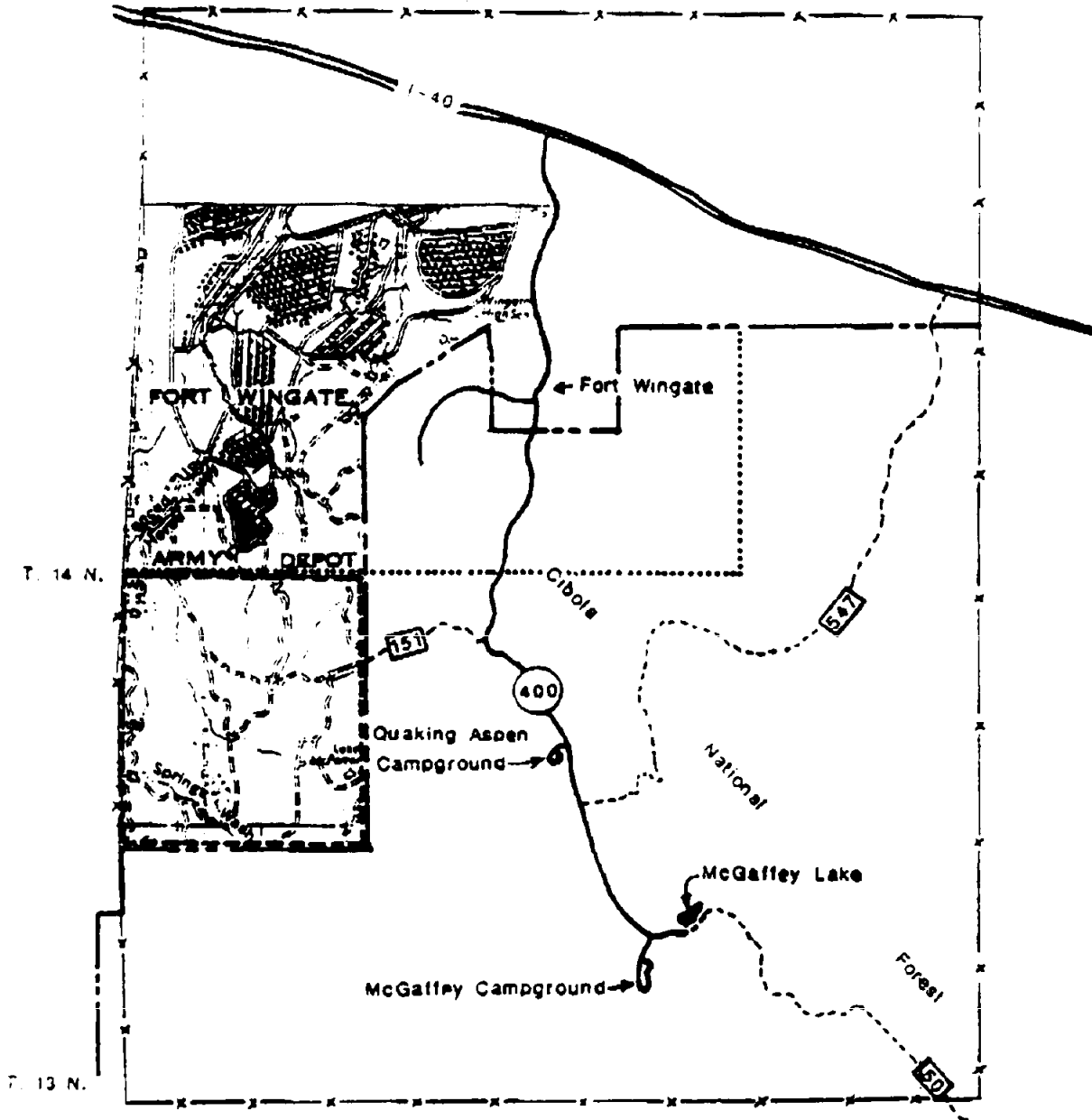


- Fort Wingate -

1. Executive Order of February 18, 1870, reserved a 10-mile square tract and set it aside for military use, and designated it as Fort Wingate. Approximately 64,000 acres.
2. Executive Order of March 21, 1881, further reserved and added to Wingate a 3-mile by 10-mile strip (19,188.97 acres) to the south of Fort Wingate and adjoining it, and designated it as a timber reservation for the purpose of supplying the Fort with timber. Odd numbered sections were included in grant to A. & P. RR. by Act of July 22, 1866. Total area approximately 83,188.97 acres.
3. Executive Order 1367 of May 31, 1911, and Act of August 10, 1912 (37 Stat. 286, this act merely to ratify President's action in the issuance of Executive Order 1367) made Fort Wingate a part of the Zuni National Forest to be administered and protected as other National Forest land, but subject to unhampered use by the War Department for military purposes. From subsequent correspondence it is taken that the Executive Order gave National Forest status to the land. Proclamation 1412, November 30, 1917.
4. It appears that the War Department decided to abandon the Fort. The Indian Service wanted the buildings and considerable land for an industrial school. Much was written back and forth concerning this proposal. It seems the Forest Service wanted a large area of the reservation for grazing a livestock herd in connection with the school. The Forest Service was in favor of transferring a substantial portion of the reservation to the Indian Service, but was not in agreement with their desire to have more than half the area transferred to their administration. The area of the reservation is approximately 83,000 acres at this time. It was finally decided that the War Department would retain some of the area, the Forest Service would retain an area under its administration, and the Indian Service would be transferred an area for their use in the establishment of the Burke Indian School.
5. Executive Order 4206 of April 20, 1925, established the Zuni District of the Montano National Forest which included a portion of the old Fort Wingate (████████████████████); also revoked Executive Order 1367 of May 31, 1911. Approximately 36,147.95 acres.
6. Act of May 29, 1928, transferred to Department of Interior (for Indian Service) approximately 9,502 acres of the reservation. This is the area north of the Atchison, Topeka and Santa Fe right-of-way.



7. In a letter dated September 29, 1950, from District Engineer, Albuquerque, District, Corps of Engineers to Department of Agriculture (Forest Service) withdrew approximately 709 acres of land from Executive Order 4208 for military purposes.
8. In October 18, 1950, approximately 99.57 acres of land was transferred to the Department of Interior pursuant to Public Land Order 630, January 13, 1950, which revoked in part Executive Order of February 18, 1870.
9. On November 13, 1950, approximately 11,981.4 acres of land was transferred to the BIA pursuant to Public Law 567 - 81st Congress, approved June 20, 1950.
10. On April 3, 1952, the War Department requested that approximately 5,956 acres of the reservation included in the Zuni District be returned to free and full use of the military to expedite an extensive construction program. Because of this, Public Land Order 999 (8) August 25, 1954, was issued which partly revoked Executive Order 4208 of April 20, 1925, which, in effect, returned the 5,956.5 acres to the old original Fort Wingate and placed the area again under exclusive military control. This action reduced to approximately 30,192 acres. The 5,956.5 acres of land were included in letters dated September 29, 1950, and April 3, 1952.
11. In July 25, 1956, the Department of the Army informed the Forest Service that they had no further need for jurisdiction over the part of Fort Wingate covered by Executive Order 4208 (less that covered by PLO 999 above). This area amounts to approximately 30,191.45 acres.
12. The Act of July 26, 1956 regulates the administrative jurisdiction of the land which is being transferred from or to the Department of the Army by the Department of Agriculture.
13. Public Land Order 2060 of March 1, 1960, gives National Forest status to 30,283 acres of land as described. Establishes Forest boundary.
14. Public Law 92-465, October 6, 1972, added what was 6,810 acres of B.I.A. lands to the National Forest. This land was part of the 11,981.4 acres transferred to the B.I.A. by P.L. 567, June 20, 1950.
15. In the Congressional Record - Senate. Mr. Montoya and Mr. Domenici introduced Bill 1872, and it was passed in the House as H.R. 7188 in June 4, 1975.



- x — x — Boundary of Fort Wingate after Executive Order of March 21, 1881. Executive Order 1367, dated May 31, 1911 made this area part of the Zuni National Forest, to be administered and protected as other National Forest System lands, but subject to unhampered use by the War Department for military purposes.
- ..... Executive Order 4208, dated April 20, 1925, revoked E.O. 1367 and designated that part of Fort Wingate, situated south and east of the dotted line shown above, as part of the Zuni District of the Manzano National Forest (now Cibola NF).
- - - - - Executive Order 999, dated August 25, 1954, partly revoked E.O. 4208 and returned 5,956.5 acres to exclusive control of the military. The Forest Service will recommend that these lands be transferred to the National Forest System when Fort Wingate Army Depot is closed.
- — — — — Public Land Order 2060, dated March 1, 1960, gave National Forest status to the land included in E.O. 4208, less the area included in E.O. 999. Public Law 92-465, dated October 6, 1972, transferred 6810 acres from the BIA to the National Forest System. These two actions resulted in 26,993 acres of former military lands being placed under exclusive control of the Forest Service.



BRUCE KING  
GOVERNOR

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JUDITH M. ESPINOSA  
SECRETARY

RON CURRY  
DEPUTY SECRETARY

July 2, 1991

Mr. Arver Ferguson, Jr.  
U.S. Army Corps of Engineers  
Fort Worth District  
(Attn: CESWF-PL-RE)  
819 Taylor St.  
Fort Worth, Texas 75102-0300

Dear Mr. Ferguson:

The attached comments were prepared by staff from the New Mexico Environment Department with regard to your Fort Wingate Depot Activity Closure, Draft Environmental Impact Statement (May, 1991).

Please let me know if you have further questions.

Sincerely,

  
Paul Cibas, Ph.D.  
Environmental Impact Review Coordinator

GC:vo

Attachment



Bruce King  
Governor

10  
Cedi

*State of New Mexico*  
**ENVIRONMENT DEPARTMENT**  
*Harold Runnels Building*  
1190 St. Francis Drive, P.O. Box 26110  
Santa Fe, New Mexico 87502  
(505) 827-2850

Judith M. Espinosa  
Secretary

Ron Curry  
Deputy Secretary

M E M O R A N D U M

TO: Jim Piatt, Chief, Surface Water Quality Bureau

FROM: Susan J. Hill, ~~Water~~ Water Resource Specialist

SUBJECT: Fort Wingate Depot Activity Closure (DEIS)

DATE: May 28, 1991

The closure of Fort Wingate Depot Activity, NMED file number 620 ER, would have minimal impact on surface water. There are no perennial watercourses on the facility. The Puerco River is ephemeral as it runs through the northernmost part of the Depot. Aquatic habitat is limited to the sewage treatment evaporation pond and two impoundments, Lake McFerren and Lake Knudsen.

Mitigation for the potential loss of wetlands associated with the lakes may be required, depending on the final selection of real property disposition which will be decided by 1995 September following an additional NEPA analysis. Potential real property alternatives include returning a portion of land to the Bureau of Land Management, the U.S. Forest Service, or a Native American tribe for recreational use.

Depending on final selection of real property disposition, the lakes may dry up or become silted in. Lake McFerren is a 2 acre lake which is stocked with catfish and trout on a put-and-take basis. Lake Knudsen is a shallow, often dry 20 acre playa lake and is not stocked. Neither impoundment is suitable for reproductive fish populations because they periodically dry up or fill with silt. Periodic dredging is required to remove silt. Unless these lakes are maintained, the loss of aquatic habitat would have an impact on flora and fauna dependent on this habitat.

In summary, the only impact to surface waters may be the loss of aquatic habitat associated with the lakes. Mitigation for these losses may be required under the policy of "no net loss of wetlands".

6/11/91

To: Mr. Gedi Cibas  
Administrative Services Division

From: Stephanie Stoddard  
Compliance Section, Hazardous and Radioactive Waste  
Bureau

Re: Fort Wingate DEIS review  
ED file No. 620 ER

There are several areas within FWDA which contain potentially contaminated sites. HRWB agrees with the preparers of the DEIS that "areas of known or suspected releases of hazardous or potentially hazardous materials would require additional investigation or remedial action before the property can be released for unrestricted use".

HRWB has received A RCRA Part B Permit for the OB/OD area.

June 26, 1991

Mr. Arver Ferguson  
U.S. Army Corp Of Engineers  
Fort Worth District  
819 Taylor Street  
Fort Worth, Texas 76102-0300

Dear Mr. Ferguson,

There was a "PUBLIC" Draft Environmental Impact Statement meeting for the closure of Fort Wingate Army Depot held on June 13, 1991 in Gallup, New Mexico, but the "PUBLIC" was not notified or invited. We as members of the McKinley County Wildlife Assn. received the Draft Environmental Impact Statement because we are on your mailing list of interested persons and organizations yet we did not receive a notice nor did several others that we have contacted. Even the Industrial Development Director of the City of Gallup told us that he 'heard' there was to be a meeting and had to call for a "notice" and received it only one and a half days before the meeting (copy enclosed). We feel that people were notified selectively so that thier comments would favor what we feel the Draft Environmental Impact Statement implies, under Section 2-1-2-2, it states "Representatives of the Department of Defence and the Army met with representatives of the Navajo Tribe to discuss the Tribes interest in obtaining all of the property". To our knowledge you did not meet with other interested parties. We feel that none of the land or the buildings should be conveyed by any means (Transfer, Sale, Exchange, and Etc.) to the Navajo Tribe or the B.I.A.. They settled thier claim through the Indian Claims Commission(Docket #229) and were paid 14.8 million dollars to extinguish all claims to FWDA (copy of Zuni Governor Lewis's Statement enclosed).

The Navajo Tribe has had an Industrial park on the east side of Gallup for some 35 or 40 years and have been unable to develop it. Thier track record on almost every industrial opportunity they have had handed down to them is dismal. Without continued Federal Funding they fail. The Navajo Tribe must not be the lead agency.

We support the transfer of the south 6,000 acres to the U.S. Forest Service or the New Mexico Department of Game & Fish to be set aside as a special wildlife management area. We support the Archeological Society of New Mexico's proposal (copy enclosed). We support the conveyance of the rest of FWDA to a joint venture industrial park group with the City of Gallup or the State of New Mexico as lead agency. This would maximize the job opportunities for all McKinley County residents including Indians on an equal employment basis.

2.

We feel that another scoping meeting should be held in Gallup with adequate notice given to the "PUBLIC" and all those on your mailing list, not a selected few.

Gallup and McKinley County need an economic boost and this facility could be developed for industry and tourism and create that boost.

Sincerely,



McKinley County W.C.A.  
R.E. Menapace President  
1420 Monterey Dr.  
Gallup, New Mexico 87301

Copies

Congressional Dellegates  
Secretary of the Interior  
New Mexico Conservators  
Governor Bruce King  
Hal Stratton  
And Others



DEPARTMENT OF THE ARMY  
 FORT WORTH DISTRICT, CORPS OF ENGINEERS  
 P. O. BOX 17300  
 FORT WORTH, TEXAS 76102-0300

REPLY TO  
 ATTENTION OF

May 31, 1991

**PUBLIC NOTICE**

**DRAFT ENVIRONMENTAL IMPACT STATEMENT  
 PUBLIC MEETING  
 FOR**

**BASE REALIGNMENT AND CLOSURE PROGRAM  
 HAWTHORNE ARMY AMMUNITION PLANT  
 FORT WINGATE DEPOT ACTIVITY  
 UMATILLA DEPOT ACTIVITY  
 NAVAJO DEPOT ACTIVITY**

**INTERESTED PARTIES ARE HEREBY NOTIFIED:**

In response to the recommendations of the Defense Secretary's Commission on Base Realignments and Closures and legislative requirements contained in the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526), Fort Wingate Depot Activity, NM (FWDA); Navajo Depot Activity, AZ (NADA); Umatilla Depot Activity, OR (UMDA); and Hawthorne Army Ammunition Plant, NV (HWAAP) will undergo conventional ammunition mission closure and/or realignment activities.

The purpose of this public notice is to announce that the U.S. Army Corps of Engineers will hold public meetings at the various locations and times listed below to receive comments on the Draft Environmental Impact Statement (DEIS).

Navajo Depot Activity  
 Location: Thorpe Park Armory  
 320 North Thorpe Drive  
 Flagstaff, Arizona  
 Public Meeting Date: June 11, 1991  
 Time: 7:00 p.m.

Fort Wingate Depot Activity  
 Location: University of New Mexico, Gallup Campus  
 Gurley Hall, Room 205-B  
 200 College Road  
 Gallup, New Mexico  
 Public Meeting Date: June 13, 1991  
 Time: 7:00 p.m.

Registered  
 6-11-91

*Is this adequate?*

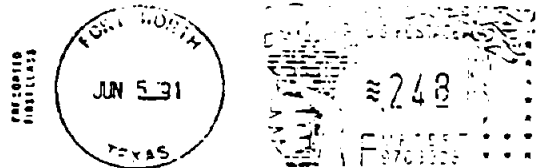




**DEPARTMENT OF THE ARMY**  
**US ARMY ENGINEER DISTRICT, FORT WORTH**  
**CORPS OF ENGINEERS**  
**PO BOX 17300**  
**FORT WORTH, TEXAS 76102-0300**

**OFFICIAL BUSINESS**

**CESWF-PL-RE (M)**



**Received**  
**6-11-91**

*Ft. Wingate Redevelopment Commission*  
*ATTN: Hugh Williams*  
*Box 1270*  
*Gallup, NM 87305*

A PROPOSAL TO CONVERT FORT WINGATE DEPOT TO THE NATIONAL  
ARCHEOLOGICAL REPOSITORY

CONCEPT: Convert the 742 munitions storage structures ("igloos") at Fort Wingate Army Depot to storage of archeological and historical collections. This facility would be operated by the Federal Government and would become the central repository for multi-agency storage of data recovered by Federal Agencies in the Southwestern US region and/or through out the United States.

NEED: The December 1987 General Accounting Office (GAO) report entitled Cultural Resources: Problems Protecting and Preserving Federal Archeological Resources (GAO/RCED-88-3) commissioned by Senators Wallop, Bingaman and Domenici recommended several measures to address the problem that "Agency Controls Over Artifacts and Monitoring Curatorial Facilities are Inadequate." The report further pointed out that:

"AGENCY CONTROLS OVER ARTIFACTS AND MONITORING  
OF CURATORIAL FACILITIES ARE INADEQUATE

- 1) Agency internal controls over artifacts are inadequate
  - a) Agencies Lack Records and Systems for Maintaining Accountability over Artifacts;
    - 1) Records of Artifacts Removed by Permittees are Incomplete and Are Not Verified;
    - 2) Initial receipts and subsequent transfers of artifacts by curatorial facilities are not recorded;
  - b) NPS lacks accountability over artifacts curated at agency facilities;
- 2) Agencies lack procedures for determining the suitability of curatorial facilities;
- 3) NPS proposed curation regulations may not fully address existing problems;
  - a) Agency internal controls over artifacts are not addressed;
  - b) There are potential problems enforcing regulation (for repositories);
  - c) Implementing the regulation will require funds and staff not currently available

CONDITIONS AT CURATORIAL FACILITIES ARE NOT ALWAYS  
ADEQUATE TO ENSURE COLLECTIONS ARE CURATED PROPERLY

- 1) Accountability for artifacts is not always adequate;
  - a) Records are sometimes inadequate;
  - b) Inventories are not always conducted of collections;
- 2) Physical conditions at facilities are not always adequate;
  - a) Availability of storage space at non-federal facilities is inadequate;
  - b) Physical security, environmental controls and fire protection at non-federal facilities are often a problem;
  - c) Conditions are not any better at NPS facilities;
- 3) Care provided artifacts is sometimes limited;

- a) Nonfederal facilities are increasing curation fees;
- b) Facilities face funding and staffing constraints;
- c) Current federal funding is limited;
- d) Curation fees are increasing;
- 5) Correcting deficiencies at NFS facilities will require additional funding."

SOLUTION: A solution to many of these problems would be the establishment of a "National [Regional] Archeological Repository." Wingate Army Depot would appear to provide all the necessary physical characteristics for such a repository. The following itemizes these characteristics.

1) Trained personnel exist for many needed skills-Existing personnel at the Wingate facility for security (including fire-protection), and warehousing/transport operations already exist. Specialized staff for museum curation would have to be added.

-BIA's interest in establishing a National BIA Fire training facility would be compatible with the protection of the repository.

2) Physical facility is ideal- The 742 "igloos" would be ideal for non-perishable materials (the bulk of archeological materials). Facilities would appear to be adequate for future needs. Although, as the GAO report indicates the extent of the federal agency collections is not currently known, the space available at Wingate would appear to be sufficient for continued expansion for several decades. The natural climate, high, cool and dry would be ideal for most non-perishable materials. If additional climate controlled facilities were needed, individual "igloos" could have climate control installed. The cost of new construction in city environments where most curation facilities are currently existing is prohibitive compared to the Wingate area.

3) Transportation system is excellent- The facility is ideally located on a major east-west Interstate and Railroad corridor. Large volume collections could be easily shipped by rail or truck. Temporary warehouse facilities are available. The availability of transportation also makes the location ideal for researchers and scholars who might want to use the collections. Gallup provides adequate hotel, motel, restaurant and housing services for archival users. The per diem costs are relatively low compared to large metropolitan areas.

4) Location provides adequate centralized accessibility- The Wingate facility is relatively centrally located in the Southwest region. A majority of the Agencies needing adequate repository facilities are in the west where there are large federally funded public works projects (dams) and vast public lands (Forest Service/BLM).

5) Compatibility with other simultaneous uses exists - The use of

the bunkers would be compatible with most other uses so far proposed for the existing facilities. The undeveloped southern end of the military reserve could be easily converted to wild-life-public conservation uses. The northern portion of the facility where the administrative buildings are would be largely unneeded for the repository function, except for offices, temporary warehousing and security/fire-protection facilities.

-The old historic Fort Wingate building (BIA# 46 which was added to the National Register of Historic Places in 1978) could be restored to a repository office building and provide collections examination space and study laboratories. This building could also serve as the location for a Regional Chacoan Culture Visitor's Center, a Navajo Code Talkers Museum and be added to the "Boots and Saddles" military posts legislation as an interpretive site.

-A major Chacoan Anasazi Site (named "Fenced-up-Horse Canyon"-Museum of New Mexico Laboratory of Anthropology # LA 16279) exists in the Military Reservation. This site probably deserves consideration for addition to the Chaco Site Protection System (PL 96-550) and any use of the military reservation will have to take preservation of this site into account.

6) Costs of re-use are less than new construction- The costs of re-using the facility would seem to be far cheaper than the costs of restoration/rehabilitation to a natural state or the costs of building new facilities to house the national federal repository.

7) Human remains could be stored separately with appropriate ethical controls- The Wingate facility might provide an ideal solution for storage/mausoleum facilities for human remains. Individual repositories could be allocated for human materials. Where there were descendants with claims to the materials, these materials could be stored with the controls over access desired by the governing bodies of the descendants.

8) Repatriation of specimens could be easily accomplished in the future as local facilities were developed- The biggest disadvantage of the facility as a National Repository probably relates to centralizing collections out of the States/Regions from which they derive. But it must be remembered that there are existing repositories (universally with limitations on expandability) which would not be abandoned as a result of establishing Wingate as a National Repository. What Wingate in fact may provide is relief on these repositories so long term curation can be planned in the localities from which the collections derive. Whenever an existing facility is inadequate for current needs, there is always a problem of temporary storage "somewhere" until replacement facilities can be designed and built. Wingate could provide such a "temporary" safe storage until local communities, Tribes, States and regional entities could plan their own repository facilities. Offsetting this disadvantage would be the advantage to researchers doing cross-regional comparisons of being able to come to one location to study similar materials from many re-

gions.

9) Funding could come from agencies contributing to the repository- As the GAO Report indicates funding of the agencies would have to be increased under any scenario which resolved our national repository problems. The Wingate National Repository facility could be operated on a cost-reimbursable basis for federal agencies which would be required to place collections in the repository, unless they had other existing certified repositories in which to place materials. By having a centralized repository there would be economy of scale for housing these collections. The Repository staff could also provide expertise on costs for new repositories and technical advice on the physical protection of specimens.

10) Availability to Non-Federal Agencies could be provided- States and Indian Tribes could have individual repositories made available to them as part of the State Historic Preservation Program funding under the National Historic Preservation Act. This could be handled by storage facilities available to the States/Tribes on a cost re-imbursible basis or by requiring a small percentage of State Historic Preservation funds be allocated to the repository. The second proposal might work best to force States to pay for something that they need but might not otherwise prioritize and fund. On a State basis there are approximately 15 "igloos" available for each of 50 states.

INFORMATION NEEDS: The GAO reports that the NPS estimated that they would need to invest \$22,486,000 in construction of additional storage facilities to house just NPS collections at 294 locations. The extent of the needs in other federal agencies remains unknown. All federal agencies need to assess their facility needs as NPS has done. The cost of building their own perpetual facilities versus the costs of transportation to a single facility such as the Wingate repository need to be assessed.

MULTIPLE USE: This concept does not provide a single use for the whole Wingate Facility. It is estimated that about 6000 acres at the southern end of the Depot would not be needed for the repository facility. This is the same region that is of the highest value for recreation and wildlife uses. Another 2000 acres at the current administrative site would probably not be required for exclusive repository use. These include barracks and warehouse buildings that in large part would not probably be needed for collections. However, a careful assessment of national archeological repository needs must be accomplished before these other areas of the Military Reservation are consigned to other uses.

STATEMENT OF ROBERT E. LEWIS  
GOVERNOR, PUEBLO OF ZUNI  
FORUM OF THE FUTURE OF FT. WINGATE ARMY DEPOT  
RED ROCK STATE PARK CONVENTION CENTER  
JUNE 11, 1989

The Honorable Bill Richardson and Friends: My name is Robert E. Lewis, Governor of the Zuni Indian Tribe. Thank you for this opportunity to appear on behalf of the Zuni people before this Forum. I am here to speak in favor of an active role to be played by the Zuni Indian Tribe regarding the future of Ft. Wingate.

The Zuni Indian Tribe understands that the Ft. Wingate Ordinance Depot, located near Gallup, New Mexico, is under active consideration for closure and subsequent conveyance to third parties by the Department of Defense. Ft. Wingate is Zuni country. The Zuni Tribe was the original owner of the land when it was taken by the United States for military purposes. We respectfully request that you recommend to the Department of Defense and to the Congress of the United States that the lands occupied by Ft. Wingate be returned to the Zuni Indian Tribe.

Ft. Wingate was established around a cluster of important springs in the Zuni Mountains. These springs are called Anshe Kyana in Zuni, Ojo Del Oso in Spanish, or Bear Springs in English. The ancient Zuni Indians considered Bear Springs to be in their territory and they fought to protect the area. Spanish and Mexican troops occasionally assisted the Zunis in driving off interlopers.

As Governor of the Zuni Indian Tribe, I am personally aware of the efforts being made by several entities to acquire the Ft. Wingate lands. I appreciate the Navajo's desire to add more land to their already enormous reservation, and I also can understand the interest of the leaders of the City of Gallup in enhancing the size of their city.

I am not here to cause trouble for those people, but I am here to plead for justice for my people of the Pueblo of Zuni. The Zuni people have inhabited the mountains and valleys of Ft. Wingate since time immemorial. The archaeological ruins and pottery made by the hands of our Zuni ancestors are everywhere present on the lands of Ft. Wingate. They declare from the ground that the lands belong to the Zuni people. We Zuni people have reverence for those who have gone before us. We cannot let their lands and ancient pathways go unnoticed.

Anyone familiar with the history of New Mexico knows that the Seven Cities of Cibola, discovered by the Spaniard Coronado, were occupied exclusively by the Zuni and by no others. Those cities were continuously inhabited by my people and later consolidated into the present-day Pueblo of Zuni. In reality, the decision of the Indian Claims Commission, which was made without benefit of hearing from the Zuni Tribe, held that the Pueblo of Zuni and its surrounding farms, hunting and gathering areas were occupied by Navajos to the exclusion of all other Indians including the Zunis.

The Navajo Tribe received full payment for any claim that they had to Ft. Wingate because the Indian Claims Commission held, in Docket Number 229, that the lands were taken by the United States in 1868. The receipt of 14.8 million dollars by the Navajo Tribe in the claims case had the effect of extinguishing all Navajo aboriginal claims to the Ft. Wingate area.

The Zuni Tribe received permission from Congress in 1978 to bring our claims case directly to the United States Claims Court where we could give the facts pertaining to the aboriginal claims of the Pueblo of Zuni. We filed our action in Docket 161-79L in 1979.

We proved to the Court that the Indian people first encountered in New Mexico by the Spaniards were the Zunis. Navajo people moved into western New Mexico under military pressure from the Spanish and Mexican governments. Under that military threat, Navajo refugees trespassed onto Zuni lands. In the 1850's and 1860's, the United States military forces fought against the Navajos and enlisted the help of the Zuni people. Kit Carson rounded up many of the Navajo people and took them to Ft. Sumner. By 1868,, after negotiations at Bosque Redondo, the Navajos were given a reservation to live on north of Gallup, New Mexico. The Zuni people provided food for the soldiers quartered at Ft. Wingate and also provided feed for their animals.

Archaeologists' findings were given to the United States Claims Court regarding the Ft. Wingate area. Experts concluded that the Navajo habitation sites located there are post-1868. That means that some Navajo families moved off of their reservation to live near Ft. Wingate, probably because of the supplies and trade which were available.

The United States Claims Court in Docket No. 161-79L held, in its two decisions of May 27, 1987, that the land upon which Ft. Wingate was established belonged to the Zuni Indian Tribe and was taken by the United States without compensation to the Zuni. The court also found that Major William Gilpin and Colonel Alexander Doniphan met at Ojo del Oso in 1846 and described the Ft. Wingate area as "the territory of the Zunis." (Docket No. 161-79L), Finding No. 3, Indian Claims; events and dates of taking of aboriginal land). The subsequent taking of Zuni land for military purposes at the Ft. Wingate site has subjected the United States to liability.

Rather than receive a payment of money, my people would prefer to have the United States return the land to the Zuni Indian Tribe. We would be willing to work with the City of Gallup, the County, the Navajo Tribe and all other interested



parties in providing for the use of the Ft. Wingate area in a manner which will bring the greatest benefit to all. Some of the land is in the high watershed or drainage area of the Zuni River and its tributaries which directly impacts our Zuni Pueblo and environs. These lands must be protected to avoid floods, further soil erosion and water pollution.

We respectfully request that you recommend to the Department of Defense and to the Congress of the United States that the Ft. Wingate property be returned to the Zuni Indian Tribe. I pledge that the Zuni people will protect and maintain the land and will work with all parties to insure that the highest and best uses will be made of the existing facilities in harmony with the long-term preservation of the land itself. Thank you.

# CITY OF GALLUP

NAME: \_\_\_\_\_  
COUNCILORS: LOUIS BONASTUDI  
CHARLES A. GRAVES  
PAT BUTLER  
TOM BAUCEDO

July 2, 1991

Mr. Arver Ferguson, Jr.  
U. S. Army Corps of Engineers  
Fort Worth District ATTN: CESWF-PL-RE  
819 Taylor Street  
Fort Worth, Texas 75102-0300

Dear Mr. Ferguson:

In accordance with instructions provided by correspondence dated May 15, 1991 initiated by Colonel William D. Brown, please consider this letter as comment to the "Draft Environmental Impact Statement" subject: Base Realignment and Closure Fort Wingate Depot Activity, (and others) said draft document dated May 1991.

The Fort Wingate Depot Activity (FWDA) is located approximately 32 miles east of the Arizona/New Mexico border in McKinley County, New Mexico. FWDA ships, receives, renovates, stores, and demilitarizes ammunition and components and stores Defense Logistics Agency strategic stocks. In addition to the support and mission activities, FWDA provides space for three tenants: (1) the U.S. Army Information Systems Command; (2) the U.S. Army Medical Department Activity Occupational Health Clinic; and (3) the U.S. Department of Agriculture. (ref. pp. ES-4)

It is acknowledged that the action evaluated in the subject environmental impact statement is the closure of several munitions depots which is to conform to requirements of the Defense Secretary's Commission on Base Realignment and Closure, and adopted in the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526). The purpose of the Act, as set forth in the statute's subheading, is to "provide procedures to facilitate the closure and realignment of obsolete or unnecessary military installations."

Although the EIS indicates compliance with the broad provisions of the act, the closure of facilities determined to be surplus to the needs of the Military, the elements affecting overall disposition beyond those identified to be specifically military, with which the public is concerned remain to be addressed:

Lands of the FWDA are being considered for return to the status of public domain. In addition the lands are also considered eligible for application by local communities.

1. In any event the "nature and extent of hazardous and toxic contamination at FWDA could have major impact on decisions regarding land reuse." Until the "studies to further define the extent of hazardous and toxic substance contamination and unexploded (emphasis provided) ordinance" and biological and cultural resource surveys are fully completed, we have no basis for final impact assessment or determination.

The existence of toxic and hazardous materials and the extent to which these materials may have had effect on the lands and water resources of the site should be studied and the results disclosed to the entities that have indicated an interest in the facility. "Since demilitarization activities are known to have released contaminants to the soil, there is potential for groundwater contamination." In view of this and other similar areas of concern, impact assessment and determination should be accomplished including overall cleanup and remediation.

2. Although the subject EIS is acknowledged to support the decision of the military to consider the facility for closure, and the attendant logistical considerations involved, our position is that due to the multiplicity of interests and the divergent application potential, public hearings pertinent to each phase outlined as referred to in the subject EIS should be conducted before any decision to close can be made final. Two cities, two counties, two Indian Tribes and a number of associations have indicated an interest in the disposition of the Fort Wingate Facility. No explanation is given for the action taken by the DOD to encourage the "Tribal representatives" to present their preliminary plan to Gallup and McKinley County officials. Such as we cannot speak for or to the interests of McKinley County, we do not exercise any jurisdiction or authority in any issues involving the Navajo or Zuni Tribes.

Plans for land reuse have been previously enunciated, perhaps the public would be best served, misunderstandings avoided, and cooperation encouraged if the impact issues related to utilization would be addressed as part of the closure EIS or immediately thereafter. This approach would minimize speculations and rumors which have contributed to a situation which is impeding cooperative discussion and planning.

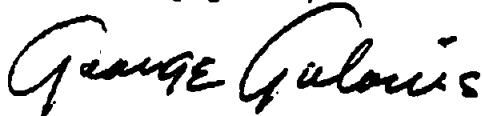
3. Although the subject EIS concludes that the effects of closure of the FWDA are minimal, insufficient information is provided to determine the degree of presence of toxic and hazardous wastes and the degree to which contamination of the land, water and environment has occurred. The EIS admits to the presence of such contaminants, and the inability to draw final conclusions in this particular EIS. The concern we have is what provisions are to be made for identifying, securing, and the final disposition of such materials.

## FWDA EIS COMMENTS - PAGE THREE

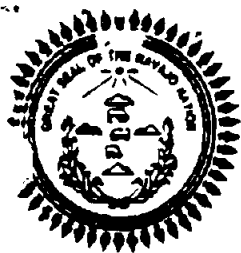
The City of Gallup has volunteered its personnel and offices to assist in providing a focal point for coordination with regard to the FWDA issue, however the task has become increasingly difficult considering the interests of the City in relationship to the interests of all those who may have competing interest or have entitlement. Our agenda remains the same, to promote to the greatest benefit possible, the highest and best use of a public resource. We are also prepared to promote and support our interest, and remain available to assist in whatever way is necessary to accomplish the appropriate disposition of the FWDA facility.

To facilitate contact with our offices, Mr. Anthony P. Lincoln, Director of Economic Development, with whom you have been communicating, is designated to receive whatever communication deemed appropriate to the issue of the Fort Wingate project. Your assistance in this matter is sincerely appreciated.

Very truly yours,



George Galanis, Mayor



# THE NAVAJO NATION

P. O. DRAWER 308 • WINDOW ROCK, ARIZONA 86515 • (602) 871-6352-

PETERSON ZAH  
PRESIDENT

June 19, 1991

MARSHALL PLUMMER  
VICE PRESIDENT

Arver Ferguson  
US Army Corp of Engineers, Fort Worth District  
819 Taylor Street  
Fort Worth, Texas 76102-0300

Dear Mr. Ferguson,

I have reviewed the Environmental Impact Statement for Fort Wingate Army Depot and am providing you with the following comments regarding the Statement:

1. Page 22, 2.1.2.2 \*Several meetings with representatives from various departments of the Tribe have revealed that the Tribe considers development of the base property as an industrial park but may not necessarily prefer that option.
2. Page 46, 3.1.2.3 \*The black footed ferret also possibly occur within the depot.
3. Page 53, 3.1.7 \*The historic structure survey of the buildings at Fort Wingate was conducted 7 years ago in 1984. The buildings may be potentially eligible for inclusion in the National Register of Historic Places since most of the buildings now fall within the 50 year age requirement. Another evaluation for significance and eligibility should be conducted.
4. Page 54, 3.1.8 \*The statement regarding sacred sites claiming "...none are within FWDA.", should be deleted since the next statement recognizes the fact the sacred sites may be present. Consultation with medicine men from the various tribes will be necessary to identify these sites.
5. Page 58, 3.1.14.1 \*The current Commander on base is a commissioned officer. *W. W. W.*
6. Page 60, 3.1.15 \*The Navajo Nation currently has an agreement with the Army to operate a food distribution program in one of the base warehouses.
7. Page 118, 4.1.7 \*The impact of development of a curation/research facility is suggested to have a moderate to substantial beneficial impact on cultural resources. This should be reflected in Table ES-1.
8. As indicated in the EIS, several results of surveys conducted regarding asbestos content and the presence of radon in the buildings and fuel storage tank tests are still pending. Will these results be available before the final EIS is prepared?

9. As indicated on page 161, 5.4, the public will be notified of the hearings by press releases and notifications in the Federal Register. Was the public informed of the hearing conducted June 13th according to these guidelines? At the original scoping meeting, approximately 50 people attended. The small turnout at the most recent meeting may indicate that the hearing was not properly advertized by the local media sources.

Also, those who received copies of the EIS may not have had enough time to review the Statement from when they received it until before the hearing which may also be a factor in the small turnout. I would recommend that this be taken into consideration when scheduling the next public hearing.

If you have any questions, please call me at 602-871-7135 or 6437.

Sincerely,



Candi Helms  
Architectural Historian  
Historic Preservation Department  
PO Box 2898  
Window Rock, Arizona  
86515

cc: Melvin Bautista, Navajo Nation Land Administration



THE  
NAVAJO  
NATION

P.O. BOX 308 • WINDOW ROCK, ARIZONA 86515 • (602) 871-4941

PETERSON ZAH  
PRESIDENT

MARSHALL PLUMMER  
VICE PRESIDENT

Telefax Number: 917/885-7539

July 08, 1991

Mr. Arver Ferguson  
U.S. Army Corps of Engineers  
Fort Worth District  
319 Taylor Street  
Fort Worth, Texas 76102-0300

Dear Sir:

Reference: DRAFT ENVIRONMENTAL IMPACT STATEMENT - BASE  
REALIGNMENT AND CLOSURE: Fort Wingate Depot Activity,  
Navajo Depot Activity, Umatilla Depot Activity, and  
Hawthorne Army Ammunition Plant, May 1991

The Navajo Environmental Protection Administration (NEPA) has  
reviewed the referenced document. NEPA has concerns regarding the  
Fort Wingate Depot Activity and the Navajo Depot Activity.

Be advised that we are reserving our comments pending our review  
of the Defense Environmental Restoration Program documents for the  
remediation of hazardous materials and waste at the Fort Wingate  
Depot Activity and the Navajo Depot Activity. Please provide this  
office with four (4) copies of this document as soon as it is  
available.

If you have any questions, please telephone me at 602/729-5282 or  
5283.

Sincerely,

NAVAJO ENVIRONMENTAL PROTECTION ADMINISTRATION

Louise A. Linkin, Director

cc: Anderson Morgan, Executive Director, Division of Natural  
Resources  
Jeffery Henry, Staff Assistant, Office of the President  
and Vice President for the Navajo Nation Council

# THE NATURE CONSERVANCY



New Mexico Field Office

107 Cienega Street • Santa Fe, New Mexico 87501 • (505) 988-3867

June 24, 1991

Mr. Arver Ferguson, Jr.  
U.S. Army Corps of Engineers  
Ft. Worth District (Attn: CESWF-PL-RE)  
819 Taylor St.  
Ft. Worth, TX 75102-0300

Dear Mr. Ferguson:

Thank you for providing the opportunity to review and comment on the Hawthorne Draft Environmental Impact Statement. Our comments are confined to statements pertaining to the closure of Fort Wingate Depot Activity (FWDA), New Mexico.

On page ES-13 you state that an intensive threatened and endangered species survey will be conducted on FWDA before actions are taken relating to the several disposal alternatives. We agree completely that this survey is necessary and would appreciate knowing the status of it.

1. T&E species for FWDA are discussed on page 46. Additional plant species that have a reasonably high probability of occurrence on FWDA and should be cited in the EIS include the Acoma fleabane (Erigeron acomanis) which is a Federal Category 2 Candidate species; the Zuni milkvetch (Astragalus accumbens), State sensitive; and the Chaco milkvetch (Astragalus micromerius), another State-sensitive plant.

2. On page 113 you state that the Zuni fleabane has been proposed for Federal Endangered status. Actually this fleabane (Erigeron rhizomatus) already is a Federally Threatened species.

Again, we wish to learn about the status of the T&E species survey for Fort Wingate and would appreciate having a copy of the survey report when it is complete.

Sincerely,

William W. Dunmire  
Public Lands Coordinator

WWD/bb



1 IN THE MATTER OF

2  
3 HAWTHORNE DRAFT EIS

4  
5 PUBLIC MEETING

6  
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10  
11 BE IT REMEMBERED that the above-entitled cause came on for  
12 public hearing at 7:11 p.m. on Thursday, June 13, 1991, at the  
13 University of New Mexico Gallup Campus, Gallup, New Mexico, 200  
14 College Road, Room B205, before Yvonne C. Gonzales, a Notary  
15 Public and Court Reporter within and for the County of  
16 Bernalillo, State of New Mexico.

17  
18 A P P E A R A N C E S

19 The Hearing Officer: Major Robert D. Besancon  
20 U.S. Army Corps of Engineers  
21 Fort Worth District  
22 Fort Worth, Texas 76102

23  
24  
25  
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I N D E X

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Page

INTRODUCTION

by Major Robert Besancon

3

PUBLIC COMMENTS

by Jack Boyd

7

by Hurley Benally

8

by Patricia Lundstrom

11

by Chavez John

12

by Dr. Gaurav Rajen

14

CONCLUSION

by Major Robert D. Besancon

15

1 MAJOR BESANCON: Good evening, ladies and gentlemen. I  
2 thank you for coming tonight. I'm Major Bob Besancon. I'm out  
3 of the Fort Worth Engineer District, United States Army Corps of  
4 Engineers. As some of you know, we were here in June of 1989  
5 and conducted a similar scoping meeting to get your comments and  
6 concerns at that time regarding the Fort Wingate depot activity.

7 These were included in the preparation of the Hawthorne  
8 Draft Environmental Impact Statement, or EIS. The Fort Worth  
9 District has been charged by the Army Materiel Command to  
10 prepare an EIS for the Hawthorne Realignment and Base Closure  
11 Package that was identified by the Secretary of the Defense's  
12 Base Closure and Realignment Commission.

13 This EIS includes the realignment of Umatilla depot activity  
14 located in Oregon, the base realignment and closure of Navajo  
15 depot activity in Arizona and Fort Wingate depot activity here  
16 in Gallup, New Mexico. All three of these installations will be  
17 transferring their ammunition storage missions to Hawthorne Army  
18 Ammunition plant in Nevada.

19 Before I continue, I would like to take a moment to  
20 introduce some of the official that we have here tonight. I  
21 apologize for the lighting, but if you'll raise your hand or  
22 acknowledge by standing up, I'd appreciate it. Patty Lundstrom  
23 who is representing the Northwest New Mexico Council of  
24 Governments, executive director. Michael Triplett also  
25 representing the Council of Governments. Patrick Butler from

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1 the City of Gallup, city councilor. John Chavez --

2 MR. JOHN: Chavez John.

3 MAJOR BESANCON: Chavez John. Excuse me. He's  
4 representing the Navajo Nation. Jack Boyd, the Economic  
5 Development Committee for the Navajo Nation. Hurley Benally,  
6 Church Rock Chapter House, and Rodney Bauer who is with the EPA  
7 Superfund.

8 I'd also like to introduce at this time some of the people  
9 that have been directly responsible for the preparation of the  
10 draft Environmental Impact Statement. In the back of the room,  
11 we have Major Renee O'Brien who is the AMC representative. Over  
12 here on our left, we have Sandy Rayl who is with the Albuquerque  
13 District and did a lot of the work on this particular portion.  
14 And to my left, we have Arver Ferguson who is the project  
15 manager from the Fort Worth District.

16 Before we begin receiving your comments, I would like to  
17 give you the history behind the base closure and realignment  
18 program. In December of 1988, the Defense Secretary's  
19 Commission on Base Realignment and Closure delivered its final  
20 report. The Base Realignment and Closure list was approved and  
21 forwarded to Congress by the Secretary of Defense in January of  
22 1989.

23 The Commission's recommendations have impacted over 100  
24 installations which will be closed or realigned under the  
25 provisions of Public Law 100-526, which was developed from the

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1 Commission's report and is referred to as the Defense  
2 Authorization Amendments and Base Closure and Realignment Act.  
3 This draft EIS was prepared in accordance with the National  
4 Environment Policy Act, which is commonly referred to as NEPA,  
5 and in conjunction with Public Law 100-526. NEPA was  
6 abbreviated somewhat by this public law.

7 At this time, I would like to read directly from the  
8 Commission's report regarding NEPA compliance. The law states  
9 "In applying the provisions of the Act, the Secretary shall not  
10 have to consider the need for closing or realigning a military  
11 installation which has been selected for closure or realignment  
12 by the Commission. The need for transferring functions to  
13 another military installation which has been selected as the  
14 receiving installation or alternative military installations to  
15 those selected."

16 Although the decisions were exempt from NEPA, the actual  
17 actions were not. That is the purpose of the meeting tonight.  
18 To document the impact that will result from implementing the  
19 decisions made in the public law.

20 Here shown are the major steps in the NEPA process. The  
21 notice of intent was published in the Federal Register in May of  
22 1989. A scoping meeting was conducted here in June of 1989.  
23 Data gathering and impact analysis was conducted from the  
24 scoping meeting to the production of the draft EIS. Public  
25 meetings, such as we're conducting tonight. We'll prepare a

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1 final EIS, and we'll have a record of decision.

2 After the end of the public comment period of the draft  
3 EIS, a final EIS will be prepared. There will also be an  
4 opportunity for public comment on the final EIS. The purpose of  
5 the EIS is to provide data that will be used to implement the  
6 base realignment and closure program. The EIS will not change  
7 the decision to realign or close operations at Umatilla, Navajo  
8 or Fort Wingate, which will eventually move to Hawthorne Army  
9 Ammunition plant, Nevada.

10 It will however act as a tool to mitigate and offset  
11 environmental, social, economic, or other possible impacts from  
12 the closure of the installations to include Wingate. The Army  
13 would be required to conduct separate NEPA analyses for real  
14 property disposition alternatives to agencies other than the  
15 Department of Defense.

16 The purpose of this meeting is for us to again receive your  
17 comments and concerns which are relative to the information  
18 presented in the draft EIS. I hope that everyone here has had  
19 an opportunity to review the draft EIS. However, I will provide  
20 you with a point of contact and an address where you can write  
21 to receive a copy. We have established a format for public  
22 meetings, which we will follow tonight.

23 When you came in, you should have been given a card to fill  
24 out and sign. This card not only provides us a means for  
25 updating our mailing list, but it also provides you an

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1 opportunity to indicate whether or not you wish to make a  
2 statement. If you did not receive a card, please indicate so  
3 and we'll provide you a card at this time.

4 We will now open the meeting to comments from the public  
5 who wish to speak. Anyone who wishes to express an opinion or  
6 comment and provide their input to this draft EIS will be given  
7 an opportunity. You should be aware that your comments will be  
8 recorded by our court reporter. The transcript will be  
9 considered in the preparation of our final EIS.

10 I suggest that you please limit your presentations in order  
11 that everyone will have a chance to present their statements.  
12 If you did not wish to give an oral presentation, we will be  
13 happy to accept any written comments or concerns that you may  
14 have. The formal comment period will be kept open until July 8,  
15 1991, to receive written comments. At this time, we would like  
16 to begin with your statements and comments.

17 As I call your name, please step forward, introduce  
18 yourself and make your statement. We'll first begin our public  
19 statements with those public officials that are here tonight and  
20 wish to make a statement. Jack Boyd, Economic Development,  
21 Navajo Nation.

22 MR. BOYD: Thank you. I was kind of hoping to wait to the  
23 end, but this is all right. I did not have the opportunity to  
24 read the last EIS statement, so I'm not familiar with all the  
25 contents of it. But I am concerned as to the process of,

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1 perhaps, the cleanup of the base, how much of it is going to be  
2 done, and what are all the contaminants that might be in the  
3 area, to what depth your organization has checked into this.

4 And along with it, the -- if the inventory has been done on the  
5 bunkers or the facilities, such as underground utilities, if  
6 they are usable for continuous use, in case part of it can be  
7 used for any type of industrial function or perhaps a  
8 development to where we can do -- or someone can do  
9 manufacturing in the area. This type of inventory.

10 And if so, if an inventory is made, if it's accessible. I  
11 have not seen anything in that nature as far as the  
12 infrastructure. And I think that's about -- basically most of  
13 my major concerns at this point. I'd like to reserve a little  
14 time to comment again later, if possible. Thank you.

15 MAJOR BESANCON: Thank you, Mr. Boyd. Hurley Benally?

16 MR. BENALLY: Benally.

17 MAJOR BESANCON: Would you pronounce your last name for me?

18 MR. BENALLY: Benally.

19 MAJOR BESANCON: Benally. Excuse me. Okay.

20 MR. BENALLY: Thank you. So to address the Native American  
21 concern in this issue -- my name is Hurley Benally. I'm from  
22 the Church Rock Chapter, which is just next to that Fort Wingate  
23 Army depot. I'm one of the chapter officials in the area, being  
24 the secretary-treasurer of that community and -- well, I'm just  
25 going to read a statement that our Chapter passed in 1989. I

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1 just want this to go on the record. This is our concern from  
2 the community of Church Rock, our Native American Navajos that  
3 live in the area; not only Church Rock, but there's Iyanbito,  
4 Bear Spring, and Red Rock surrounding our area.

5 And this is our wish and our concern as Native Americans.  
6 We're requesting the United States Congress to transfer the  
7 title of the Fort Wingate Military Reservation to the Navajo  
8 Nation in trust as an addition to the Navajo Reservation for the  
9 use and benefit of the Navajo people.

10 I am just going to summarize this, our resolution, just a  
11 brief statement. Our people in the area live in the area, and  
12 also -- they used to live within the Fort Wingate Army Depot  
13 many years ago. We consider this our aboriginal land of the  
14 Navajo people, which has been recognized since the Spanish  
15 presence in the area. And it's been documented.

16 Also occupying the region at the time of the American entry  
17 into the region was a band of Navajo Indians lead by Chief  
18 Mariano, who used this section as an agricultural and watering  
19 place. Lake Mariano, which is north, was named for this chief,  
20 and his grandparents are still living in the area. Also Bear  
21 Spring, which is "shash B'toh," is a traditional sacred site for  
22 the Navajo people.

23 In the past when the War Department has determined that  
24 certain areas of the Fort Wingate Military Reservation were no  
25 longer needed have been returned to their original owner, and in

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1 | this case is the Navajo Nation; or has been transferred to the  
2 | Bureau of Indian Affairs for the benefit of the Navajo Nation  
3 | per the Act of May 19, 1928, which is 45 Statute 899, and the  
4 | Act of June 20, 1950, 64 Statute 248.

5 |       And the land is -- at the present time the land surrounding  
6 | the Fort Wingate Military Reservation, as I said earlier, is  
7 | occupied and used by the Navajo people. Many of them use the  
8 | land surrounding as a residential area and agriculture and  
9 | ranching. The Navajo people have a great and urgent need for  
10 | the land in question for commercial, industrial, residential,  
11 | educational development and other purposes. It is for this  
12 | reason that the Navajo people is actively seeking the Fort  
13 | Wingate Military Reservation.

14 |       Now therefore be it resolved that the Church Rock Chapter  
15 | hereby requests that the United States Congress transfer title  
16 | of the Fort Wingate Military Reservation for use by and the  
17 | benefit of the Navajo Nation and its people.

18 |       The Church Rock Chapter further requests from the Eastern  
19 | Agency Councils, Tribal Legal Department, Chairman of the -- or  
20 | the President of the Navajo Nation and the Navajo Tribal  
21 | Councils to make every effort to obtain the title to the Fort  
22 | Wingate Military Reservation for the use and benefit of the  
23 | Navajo people.

24 |       This is a statement that comes from the Church Rock Chapter  
25 | as being one of the official resolutions. I just want to put

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1 this on the record for this Environment Draft Impact Statement.

2 I thank you all. Thank you very much.

3 MAJOR BESANCON: Thank you for your input and comments. At  
4 this time, I do not have any others that have indicated that  
5 they wish to make a statement. Are there any others, other than  
6 Mr. Boyd, who has indicated that he may desire to come back up  
7 again? Anyone else who would like to make a statement?

8 MS. LUNDSTROM: Well, do you want me to come up there?

9 MAJOR BESANCON: Yes.

10 MS. LUNDSTROM: All right. Thank you. I feel a little  
11 awkward this evening making a statement since I haven't had an  
12 opportunity to read the document yet. And that concerns me a  
13 little bit because we've always been on the mailing list as the  
14 agency, the Council of Governments Agency. We haven't received  
15 the draft. But one comment that I'd like to make is should  
16 there be adverse contaminants found and identified, what have  
17 you, will the Corps of Engineers have funding available to  
18 actually clean that up, or how is that planned to be taken care  
19 of? That would be the comment that I'd have. Thank you.

20 MAJOR BESANCON: In our forum for the public meeting, we  
21 don't respond directly to the questions. We will get with  
22 you -- be happy to get with anyone after the meeting to address  
23 the issues that you have raised. I mentioned earlier that I  
24 would give you an address to receive copies of the draft EIS and  
25 final EIS when it is prepared. If you will write Mr. Ferguson

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1 at this address, he will be happy to provide you with a copy.

2 Is there anyone else who wants to make a statement?

3 MR. JOHN: Yes. My name is Chavez John. I'm with the  
4 Office of Navajo Land Administration, Navajo Nation. I have a  
5 concern here regarding how the public notice was made on the  
6 public hearing for EIS. First of all, I didn't happen to see  
7 any notice in the newspaper to the public.

8 Second of all, there's a lot of activities going on right  
9 now. And I tried to make notice to the chapters that one of  
10 these speakers indicated, the Bear Spring Chapter, the Church  
11 Rock Chapter and Iyanbito Chapter, to send their officials and  
12 their representatives to this particular meeting. But I got the  
13 letter of notice -- I think it was Monday.

14 So I sort of have a concern if -- what I would like to  
15 possibly suggest is maybe a continuance of this hearing at  
16 another later date, if that's possible. So more people could be  
17 involved, because mostly the people that are affected are  
18 basically at the chapter level.

19 And another concern that I have is there has been no  
20 questionnaires or anything of that nature regarding the  
21 environmental impact within the Fort Wingate on these  
22 surrounding chapters. I indicated before to the Historic  
23 Preservation people from Tooele that the most information, the  
24 most true information, that could be gotten regarding cultural  
25 and heritage and archaeological is from the elderly and from the

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5. | 1 people themselves that were associated with these people.

2       So I would like to make that suggestion, to have, at least,  
3 a continuance. And also we got two copies of the Environmental  
4 Impact Statement. I didn't get a chance to Xerox the whole  
5 thing, so other people could get a chance to review it. We have  
6 several offices that are associated with what's contained in the  
7 Environmental Impact Statement.

8       We have the Navajo EPA, the Navajo Superfund office, of  
9 course, land administration. We have the Historic Preservation,  
10 Fish and Wildlife and other programs that would comment on the  
11 EIS, but they haven't had the opportunity to read the EIS.

12 Thank you.

13       MAJOR BESANCON: Thank you, Mr. John. The mailing list for  
14 the public notice is rather lengthy. I'll let you come up and  
15 look at it if you desire, but it is available here. Number two,  
16 I guess, is a reminder that the public comment period on the  
17 draft EIS is open to the 8th of July. And you have until that  
18 time to provide any comments that you wish to provide.

19       MS. MARSICANO: There's also a copy available at the public  
20 library.

21       MR. BOYD: These comments can be mailed to Mr. Ferguson at  
22 that address?

23       MAJOR BESANCON: That is correct. Same as if you want a  
24 copy, same address. Are there any other comments? Again I'd  
25 like to thank you for coming out tonight. We appreciate your

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1 involvement in this process. Yes, sir?

2 DR. RAJEN: I'm sorry. I didn't realize you were going to  
3 close the meeting.

4 MAJOR BESANCON: I'm going to close it.

5 DR. RAJEN: I would like to make a statement.

6 MAJOR BESANCON: Please identify yourself.

7 DR. RAJEN: My name is Dr. Rajen, Dr. Gaurav Rajen. I work  
8 for the Navajo Superfund Program. I'm a hydrologist. As  
9 Mr. Chavez John now mentioned, we didn't get the information on  
10 the EIS until very late. And, you know, we will definitely be  
11 making comments on the EIS. What I'd like to say as a person,  
12 you know, who is concerned about the possibility of hazardous  
13 waste in Fort Wingate, which Mr. Boyd mentioned.

14 I'd like to address that in the sense that it seems to me  
15 there is a very high possibility, once you have explosives, if  
16 you have petroleum contaminated pits, of which we have heard  
17 that there are some -- we suspect there is a high potential --  
18 I'm not saying that it is there -- there is a high potential for  
19 contamination.

20 One of the points I'd like to raise is that the  
21 Environmental Protection Agency has a list of federal facilities  
22 which are investigated for the potential to pose a threat to  
23 human health and the environment. Fort Wingate is not in this  
24 docket as of now. But if it does get into the docket, there is  
25 a structured way for communities in the area to have a review of

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1 cleanup activities at such federal facilities.

2 So, you know, I'd like to raise this possibility that, you  
3 know, Fort Wingate could be looked upon as a candidate site.  
4 Maybe placed on the docket. And there would be, you know, a  
5 potential for concerned citizens and communities in the area to  
6 have a review of the cleanup activities. Thank you.

7 MAJOR BESANCON: Okay. Thank you. Mr. Boyd, did you want  
8 to speak again?

9 MR. BOYD: Thank you anyway, but I think most of my  
10 questions or the comments that I would have made have been more  
11 or less answered, and some of the -- I'd have to review the EIS  
12 and then, you know, retain the option to comment to Mr. Ferguson  
13 whenever we have the opportunity to review it. Thank you.

14 MAJOR BESANCON: Last chance for anyone to speak. Again I  
15 thank you for your participation tonight. Appreciate your  
16 coming to the meeting.

17

18 (The Proceedings were concluded at 7:38 p.m.)

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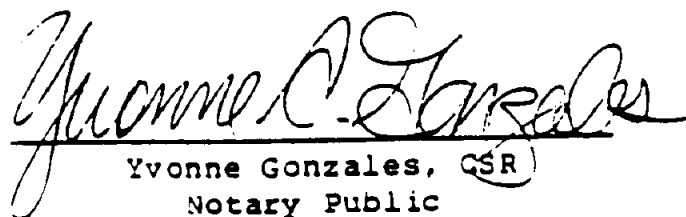
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ALBUQUERQUE NEW MEXICO 87102 TEL EDWONE 242688

## C E R T I F I C A T E

1  
2  
3 I, Yvonne Gonzales, a Certified Shorthand reporter, do  
4 hereby certify that the Proceedings of the above-entitled cause  
5 were reported by me stenographically on June 13, 1991, and that  
6 the within transcript, numbered Pages 1 through 15, is a true  
7 and accurate transcription of my shorthand notes.

8 I further certify that I am neither an attorney nor counsel  
9 for, nor related to or employed by any of the parties to the  
10 action, and that I am not a relative or employee of any attorney  
11 or counsel employed by the parties hereto, or financially  
12 interested in the action.  
13  
14

15  
16   
17 Yvonne Gonzales, GSR  
Notary Public

18  
19 My Commission expires:

20 3/20/93  
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## COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS

### NAVAJO DEPOT ACTIVITY

This section identifies the written and oral comments received on the Draft Environmental Impact Statement (EIS), specific to NADA, and responds to those comments.

### WRITTEN COMMENTS - RESPONSES AND DRAFT EIS REVISIONS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE,  
KAIBAB NATIONAL FOREST, KAIBAB AND COCONINO FOREST  
SUPERVISORS, DATED JULY 2, 1991.

1. We find the DEIS to be incomplete, inaccurate and inadequate because it (1) fails to recognize the legal status of lands within NADA and the statutory limitations imposed on the transfer and management of NADA lands; and, (2) fails to meet the requirements of the National Environmental Policy Act (NEPA) with particular regard to the objective analysis and full disclosure of potential real property disposal (reuse) alternatives, and analysis and disposition of hazardous materials known to be present at NADA.

RESPONSE: The Army has made every reasonable effort to ensure that the EIS analysis and documentation is complete, accurate and is legally sufficient. Revisions have been made to the document in response to comments received during the public comment period for the Draft EIS. The EIS has been prepared in compliance with P.L. 100-526 and NEPA. The decision resulting from this EIS regarding NADA is whether or not there are significant environmental impacts associated with ceasing of Army operations, the transfer of functions from NADA, and the transfer of NADA to the AZNG. If, in the future, the military purpose is discontinued at NADA, the lands subject to PLO 59 will be returned to the USFS following disposition of hazardous materials at NADA in compliance with NEPA and other applicable laws. Page ES-7, paragraph 3, third and fourth sentences have been replaced with: "The AZNG mission is a continuation of use for military purposes specified in PLO 59. If, in the future, the military purpose is discontinued at NADA, the lands subject to PLO 59 will be returned to the USFS following disposition of hazardous materials at NADA in compliance with NEPA and other applicable laws."

2. The Forest Service strongly believes it was not the Commission's intent to simply turn the installation over to the Arizona National Guard (AZNG) without a thorough and complete EIS that analyzes various alternatives for the disposition of NADA lands.

RESPONSE: This document addresses the impacts of closure of active Army activities at NADA in accordance with the Commission's recommendations for base closure and

realignment. The Army has determined that the document is legally sufficient, in compliance with NEPA, and adequate to take the proposed action. The follow-on reuse NEPA analysis and documentation and IRP actions will provide the basis for decisions for property disposal and reuse alternatives. It is expected that AZNG continued usage of NADA will remain unchanged; however, any future change or reuse is subject to NEPA analysis.

3. The basic intent behind the base closures recommended by the Commission is federal cost savings. A simple transfer of NADA jurisdiction operational funding from federal sources, is contradictory to the basic intent of federal cost savings and inconsistent with the reversionary stipulation of the original public land order that created NADA.

RESPONSE: Cost savings indicated in the Commission's report have been validated by the General Accounting Office. Continuation of the license with the AZNG is consistent with Public Land Order 59.

4. In addition, there are some very serious environmental issues that must be carefully analyzed to ensure that any change in the jurisdiction of NADA is in the public interest and consistent with law. The transfer of NADA to the AZNG without a thorough environmental analysis of all issues has serious implications on the future public uses of National Forest lands which comprise NADA, and the responsibility and timing for the reclamation of contaminated areas within NADA.

RESPONSE: The AZNG jurisdiction and use has remained essentially the same since 1982, and is consistent with law. The projected use does not change after the transfer to AZNG. Environmental issues expressed during this EIS process have been considered consistent with P.L. 100-526, NEPA, and other applicable law. If the AZNG were to discontinue use, the follow-on reuse NEPA analysis and documentation and IRP actions will provide the basis for decisions for property disposal and reuse alternatives.

5. In 1942, Public Land Order (PLO) 59 reserved approximately 28,400 acres of public lands within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. PLO 59 contains a reversionary clause that stipulates restoration of NADA lands to National Forest status when they are no longer needed for military purposes. The 28,400 acres of land described in PLO 59 comprise the bulk of NADA. Other than one superficial statement on page ES-5, the DEIS neglects to mention the status of NADA lands, but more importantly, fails to recognize the implications of PLO 59 to various real property disposal and reuse options upon base closure directed by the Base Closure Realignment Act, PL 100-526.

RESPONSE: The Executive Summary and Section 3.2.15 have been revised to better address the status of NADA lands for the proposed action and any future real property reuse actions if the military purpose is terminated. The revisions are as follows: On page ES-7, Navajo Depot Activity, Arizona, the following paragraph has been added: "In 1942, Public Land Order (PLO) 59 reserved approximately 28,400 acres of public lands

within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. In 1950, PLO 661 amended PLO 59 to substitute the Department of the Army for the War Department. PLO 59 contains a reversionary clause that stipulates restoration of NADA lands to National Forest status when they are no longer needed for military purposes. The 28,400 acres of land described in PLO 59 comprise the bulk of NADA. The Arizona National Guard (AZNG) assumed operational control of the Depot from the Army on June 1, 1982." On page ES-5 of the DEIS, the first two sentences of the fifth paragraph have been deleted. On page 77, Section 3.2.15, the following paragraph was inserted before the existing paragraph of the DEIS: "In 1942, Public Land Order (PLO) 59 reserved approximately 28,400 acres of public lands within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. In 1950, PLO 661 amended PLO 59 to substitute the Department of the Army for the War Department. PLO 59 contains a reversionary clause that stipulates restoration of NADA lands to National Forest status when they are no longer needed for military purposes. The 28,400 acres of land described in PLO 59 comprise the bulk of NADA."

6. Our letter of June 12, 1989, entered into the record at the June 12, 1989 scoping meeting held at the Thorpe Park Armory in Flagstaff, Arizona, describes the status of NADA lands under PLO 59 and its implications to the jurisdictional control of NADA lands upon base closure.

"In accordance with PLO 59, the jurisdiction of the Secretary of Agriculture over these lands is subordinate to the jurisdiction of the Secretary of Defense to the extent necessary to effectuate the purposes of the military reservation. However, when these lands are no longer needed for military purposes, PLO 59 directs the restoration of NADA lands to full National Forest status.

In May 1988, the Secretary of Defense established a Commission to evaluate military installations within the United States for realignment and closure. In their report, the Commission states that, "The military value of the (NADA) installation is lower than others in this same category. The ammunition and supply functions can be more effectively managed at less cost at another location." This finding by the Commission has, in our judgement, triggered the reversionary clause of PLO 59."

RESPONSE: Closing of NADA active mission does not trigger the reversionary clause. The land and facilities comprising NADA are still required for National Guard purposes, a reserve component mission of the Army. The Commission recognized this continuing reserve component mission in its recommendation.

7. Section 2.2.2.1, Preferred Implementation Alternative, on page 29 of the DEIS contains a statement relating to real property reuse, "The Army prefers to amend the license with the State of Arizona to provide a term consistent with the expiration of the current land withdrawal and restate the primary purpose as training and support of the AZNG by the end of September 1995." This "preferred alternative" implies extending an

agreement between the DOA and AZNG for the operation of NADA beyond the September 1995 base closure data mandated by PL 100-526. Modifying or extending existing agreements between the DOA and AZNG, or taking any action which infers AZNG control of NADA through the DOA, is incongruous with the intent of PL 100-526 and, lacking any pre-emptive legislation to PLO 59 and PL 100-526, exceeds the authority of the DOA. It also assumes that the State of Arizona is willing to accept the long-term liabilities of the hazardous materials identified by the DOA at NADA.

RESPONSE: See Comment 6. The Army believes the best method for accomplishing the Commission's recommendation is to make the license consistent with the terms of PLO 59. The Army retains its liabilities for the hazardous materials identified at NADA which are of Army origin. If, in the future, military purposes cease, then NEPA analysis and appropriate remedial actions will be carried out by the Army pursuant to applicable law and PLO 59 before any land transfer actions occur.

8. Section 204(c)(2) of PL 100-526 requires compliance with the provisions of the NEPA to all implementing actions recommended by the Commission, including the analysis of real property disposal alternatives as acknowledged on page ES-1 of the DEIS. Although mandated by PL 100-526, the DEIS on page 9, under Scoping Issues, states that, "Issues and concerns relevant to the proposed mission closure or realignment action are addressed in this DEIS; however, some of the issues raised, such as potential remediation, real property disposition, and reuse of installation property, are beyond the scope of this DEIS and are discussed only in general terms. These concerns which relate to real property disposition and reuse will be discussed in separate NEPA documentation." Real property disposal and reuse alternatives for NADA, triggered by the base closure mandated by PL 100-526, perfectly meet the definition of connected actions under the Council of Environmental Quality (CEQ) regulations for implementing the NEPA, 40 CFR 1508.25(a)(1) and, therefore, must be fully analyzed in the base closure DEIS.

RESPONSE: See Comment 2.

9. The need for thoroughly analyzing disposal and reuse alternatives is implicit in the list of issues identified for NADA on page 158 of the DEIS under Section 5.1.2. The majority of issues identified during scoping are directly related to the disposition and management of NADA lands. The need for analyzing the disposition of NADA lands, and alternatives that represent a reasonable range of jurisdictional patterns of NADA lands, are described in the series of letters to the U.S. Army Corps of Engineers from the Forest Service (see attached letters dated October 12, 1989, September 27, 1989, December 8, 1989 and September 14, 1990). None of these letters are included in Appendix A of the DEIS.

RESPONSE: See Comment 2. Although they were fully considered during the EIS process, the referenced letters were not included in Appendix A of the Draft EIS. The letters which are attached to the USFS letter are now included in Appendix A of the FEIS.

10. Curiously, the DEIS, however, recommends full transfer and management of NADA to AZNG, one of only several property disposal and reuse options identified by the Forest Service, state and local governmental entities and the public. Presumably, this transfer is predicated on the AZNG's anticipated mission of "training" which supersedes the previous ordnance storage mission curtailed by PL 100-526. Statements in the DEIS recommending the transfer and control of NADA to the AZNG, without the objective analysis and disclosure of other disposal options, violate the procedural requirements of the NEPA, and circumvent the basic spirit and intent of the NEPA, that being to "insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken" (40 CFR 1500.1(b)). Moreover, lacking the analysis of disposal alternatives or identifying the environmental impacts of the AZNG's new mission, the base closure EIS becomes nothing more than a schedule for the removal, transfer and demolition of the remaining ordnance stocks at NADA.

RESPONSE: The EIS supports the mandated transfer to the AZNG. Any new activities associated with AZNG's mission would require separate environmental impact analyses consistent with NEPA and other applicable laws. Currently, there is no change of the AZNG mission at NADA.

11. The description of the affected environment in Chapter 3 and the discussion of environmental and socioeconomic consequences in Chapter 4 of the DEIS lacks objectivity and quantification and, consequently, fails to provide sufficient information for making an informed decision. For example, statements are made under Section 3.2.2.3 on pages 63 and 64 of the DEIS that suitable habitat for a variety of threatened, endangered and sensitive plant and animal species exists on lands within NADA. However, no surveys of NADA lands were conducted in association with the base closure EIS to confirm or disprove the presence of these species, much less evaluate the impacts to these species.

RESPONSE: The information on threatened and endangered species is adequate to address the proposed action. The proposed action itself will not have any impact on threatened and endangered species and will have minimal affects on hazardous and toxic materials. The AZNG jurisdiction and use has remained essentially the same since 1982, and is consistent with law. After the transfer to AZNG, the projected use does not change. Environmental issues expressed during this EIS process have been considered consistent with P.L. 100-526, NEPA, and other applicable laws. If the AZNG were to discontinue use, the follow-on reuse NEPA analysis and documentation and IRP actions will provide the basis for decisions for property disposal and reuse alternatives.

12. Conclusive statements are made on page 127 of the DEIS under Section 4.2.3, Land and Airspace Use, regarding the joint Forest Service and AZNG administration of lands within NADA without any supporting data or analysis. No compelling reasons have been given in the DEIS that substantiate the need for the exclusive use, control and occupancy of all lands within NADA by the AZNG. The continued exclusive use of all lands within NADA by the AZNG is at the expense of other public land uses of NADA and is contrary to the recently executed Master Agreement between the Secretary of

Defense, Secretary of Agriculture and State National Guard units. The AZNG's new inferred mission of training and use of the area for bivouac exercises, map reading courses and small arms firing ranges, simply does not justify the total control and jurisdiction of over 28,000 acres of National Forest System lands as implied in the DEIS.

"Joint administration by the AZNG and USFS is considered by the AZNG to be operationally incompatible. The continuing mission of the AZNG requires use of lands for bivouac and training areas, map reading courses, and small arms firing ranges. The AZNG also uses the extensive road network for convoy and tactical field training. The AZNG currently manages NADA lands under the multiple use concept providing for operationally compatible levels of use for forestry, recreation, and wildlife habitat. This alternative would result in impacts similar to those discussed below for separate AZNG and USFS land use administration and is not discussed further."

The Forest Service position on the joint occupancy and use of lands within NADA was described in the September 27, 1989 letter to the U.S. Army Corps of Engineers from the Coconino and Kaibab Forest Supervisors.

"One alternative involves the reinstatement of undeveloped and restorable lands along the perimeter of NADA to full National Forest status and management. The jurisdictional pattern of NADA lands under this alternative is shown on the attached map. The AZNG would continue to maintain primary use and control of the developed interior portion of NADA through either a special use permit, memorandum of understanding or land exchange. The temporary use of lands outside the adjusted exterior NADA boundary by AZNG can be accommodated under existing agreements. This alternative recognizes the importance of NADA as a National Guard training center, allows for the continued control of primary installations by AZNG, and provides for public use and enjoyment of areas not needed for exclusive use and continuous occupancy by the AZNG."

The joint management alternative, as described above, meets the intent of PL 100-526, is consistent with the reversionary clause of PLO 59, is consistent with the Master Agreement and is in basic conformance with the findings presented on page S-3 in the Enhanced Preliminary Assessment Report, prepared by EBASCO for the U.S. Army Toxic and Hazardous Materials Agency. The map of potentially contaminated areas on page 72 of the DEIS, however, does not comport with the current use of the extreme southern portion of NADA. Based on our field review of NADA and conversations with AZNG officials, portions of the "potentially contaminated" area along the southern boundary of NADA are open to unrestricted livestock grazing and recreation use by the AZNG and civilian employees. In any event, the Forest Service has never expressed any desire to assume the management of contaminated or developed lands within the interior portions of NADA. Restoration of perimeter or "buffer" lands within NADA to National Forest status, with AZNG retention of "developed" lands within NADA under some

separate authorizing agreement or through a land exchange is a viable alternative that must be analyzed in detail in the DEIS.

**RESPONSE:** The joint administration alternative is not considered feasible at this time. Page 128, Section 4.2.3 has been revised to provide a full discussion of why the joint administration is not considered feasible. The revision is as follows: To the DEIS, the first sentence of the third paragraph was deleted. The following text was inserted before the third paragraph: "Return of the land to the USFS, or joint administration by the AZNG and the USFS is operationally incompatible for the following reasons:

(a) The "buffer" areas the U.S. Forest Service has expressed an interest in are required by the AZNG as field training areas.

(b) Numerous training activities such as night convoys under black-out conditions, bivouac sites, tactical training using blank ammunition, pyrotechnics, CS gas, and simulators (i.e. artillery) of different types are conducted in the buffer zone. Besides presenting potential hazards to the public, training activities would be severely impacted by the reversion of the "buffer" zone to the USFS or "joint administration".

(c) The "buffer" zone currently contains live-firing ranges, demolition training ranges, and demolition/burning areas. Any uncontrolled public access or joint use would present an extreme liability and safety problem for the U. S. Army, the AZNG, and the State of Arizona. This is particularly true in the "buffer" zone where fences and barriers do not exist. NADA can enforce range controls over units and troops training at the Depot; however, "joint administration" would necessitate curtailment of necessary operational and training activities."

13. The most significant environmental issues associated with NADA base closure actions involve potential impacts to threatened, endangered and sensitive (TES) plant and animal species, and potential contamination of soil, and surface and groundwater resources from the storage, handling, use and disposal of a variety of hazardous substances and wastes. As stated earlier, the TES plant and animal species issue can not be analyzed without current, accurate surveys of their occurrence with NADA or without an understanding of how the AZNG's new mission may impact these species.

**RESPONSE:** The foreseeable uses of NADA will not change the current effects on threatened, endangered, sensitive, and other species. NEPA analyses will be undertaken as required for any new AZNG missions and/or transfer of lands upon termination of military purposes at NADA.

14. The Enhanced Preliminary Assessment Report (EPAR) is a comprehensive description of the current situation at NADA with regard to the contamination issue. However, the discussions of hazardous wastes and their disposal, particularly under Sections 3.2.11 and 4.2.11, do not accurately portray the alarming findings of the EPAR. Discussions in the 100-plus page EPAR, ranging from potential soil contamination from leaking underground fuel storage tanks to potential contamination of the regional aquifer

and surface waters that flow into Volunteer Canyon drainage from solid and dissolved explosives-related compounds and metals, are described only superficially in the DEIS. Based on the limited availability and accessibility of the EPAR, individuals that rely on the DEIS as their primary source of information are given a misleading portrayal of the contamination situation at NADA. Furthermore, statements throughout the EPAR imply that the detailed investigation and implementation of appropriate remedial actions of areas of known and suspected contamination can be indefinitely deferred by transferring control of NADA to the AZNG thereby relieving the DOA of any short-term liabilities and costs for dealing with identified hazardous materials contamination at NADA. Deferral of remedial actions is not in the public interest, is contradictory to PL 100-526, and would appear to place serious liabilities on the State of Arizona.

RESPONSE: The Enhanced Preliminary Assessment was used as the basis of the analysis presented and is incorporated by reference. The Enhanced Preliminary Assessment is available for public review upon request. Also, see the letter from the Arizona Army National Guard dated July 5, 1991, in this Appendix. The letter discusses recent studies that have been completed of soils and groundwater at contaminated sites (deactivation furnace, ash pile and TNT washout lagoons). Data indicate that no significant environmental contamination has occurred at these sites and that there is no threat to human health. As previously stated, the Army will retain long-term liability for NADA (see response 5C above). Sections 3.2.11 and 4.2.11 have been revised to reflect your concerns. The revisions are as follows: page 74, paragraph 2, has been replaced with the following: "The extent of groundwater contamination is not known. Potential exposure of contaminants to the groundwater exists, and was high during the previous operational period which ended in 1967 based on the results of the 1981 soil analyses (USATHAMA, 1990). Several groundwater studies have been conducted in the ammunition workshop area in recent years. The most recent one was completed by the U. S. Army Environmental Hygiene Agency (AEHA) in February 1991. AEHA concluded that the deactivation furnace and TNT washout lagoon sites are not a threat to human health and the environment." On page 74, Section 3.2.11, first paragraph, the last sentence now reads: "A contract was awarded in September 1990 to conduct the borings. Field work is to be completed in the summer of 1991." On page 134, Section 4.2.11, first paragraph, after "and percolation." was inserted the following: "Several groundwater studies have been conducted in the ammunition workshop area in recent years. The most recent one was completed by the U.S. Army Environmental Hygiene Agency (AEHA) in February, 1991. AEHA concluded that the deactivation furnace and TNT washout lagoon sites are not a threat to human health and the environment."

15. Throughout the scoping process for the EIS, we have extended invitations to work with the U.S. Army Corps of Engineers and the AZNG to explore various jurisdictional patterns of NADA to meet the intent of PL 100-526 and PLO 59 and best serve the needs of the public, the AZNG and the Forest Service.

However, this can only be achieved through an open, objective EIS process. In our judgement, the magnitude of the inadequacies of this DEIS require correction of process



errors and preparation and re-submission of the DEIS. We are prepared to seek legal remedies if the concerns in this letter are not addressed.

**RESPONSE:** The participation by the USFS in this EIS has been welcome and beneficial. The Army has considered the concerns expressed in this letter, previous correspondence from the USFS, and in discussions with the USFS. Proposed changes in land use will be analyzed in accordance with NEPA.

**UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT, ARIZONA STATE OFFICE, LANDS AND RENEWABLE RESOURCES, DATED JUNE 28, 1991.**

1. The Navajo Depot was established by Executive Order from United States Forest Service administered lands and is currently surrounded by existing Forest Service administered lands. Public Land Order Number 59, dated November 12, 1942, states that; "it is intended that the lands herein reserved shall be restored to the status possessed by them immediately prior to the issuance of this order, when they are no longer needed by the War Department for military purposes."

It is our understanding that the proposal is to transfer the land from Department of the Army to the State National Guard. The proposed use of the area may change from that of a storage supply area to that of a training area. In any case, it will continue to be utilized for military purposes; therefore, remaining as withdrawn Federal land. Additionally, if the withdrawal were to be revoked, the land would return to National Forest status.

In view of the above, the Bureau of Land Management will not be affected by the proposed action with the possible exception of processing a change of use or a transfer of jurisdiction of the withdrawal. We have no substantive comments to make on the contents of the draft statement.

**RESPONSE:** Your comments are noted. No response required.

**ARIZONA STATE PARKS, STATE HISTORIC PRESERVATION OFFICER, DATED JUNE 10, 1991.**

1. I realize that it is very difficult to summarize a culture history for an area in a few paragraphs, but the Cultural Resources section (3.2.7) for NADA seems overly brief. For instance, no mention is made of the prehistoric Cohonina, the group that used to occupy the NADA area. It is appropriate to mention the Sinagua, but this group was essentially east and northeast of the Cohonina. There is also no mention of the lumber industry in the area nor is there mention of the potential for historic homesteads. Section 3.2.7 also indicates that none of the historic buildings have been evaluated for the National Register of Historic Places. For your information, this office has evaluated

a number of the buildings at NADA for the National Register in consultation with the facility.

**RESPONSE:** Page 70, Section 3.2.7, third paragraph, has been revised to include the information provided in the comment letter. The third sentence now reads: "The Arizona SHPO has evaluated several buildings at NADA for National Register eligibility in consultation with the installation. In a letter from Arizona State Parks, dated June 10, 1991 (see Appendix A), information was provided that indicated the prehistoric Cohonina group used to occupy the NADA area as well as the Sinagua group, but essentially east and northeast of the Cohonina. This letter also mentioned the existence of the lumber industry in the area and the potential for historic homesteads." Historical and archeological surveys will be implemented pursuant to the Memorandum of Agreement between the Department of the Army, the Arizona National Guard, and the Arizona State Historic Preservation Officer, in compliance with Section 106 of the National Historic Preservation Act.

2. Section 4.2.7 indicates that if the Arizona National Guard (AZNG) takes over the facility, there would be no resulting direct effects to cultural resources. This statement may not be accurate. On-going troop training, in addition to planned new troop training activities, would potentially directly effect National Register eligible cultural resources. The Programmatic Agreement (PA) that is being developed for the facility acknowledges this possibility. In the same vein, the draft EA states that if the facility is returned to the U.S. Forest Service, there would be no resulting direct effects to cultural resources. If the facility becomes Forest Service property, it will be subject to fuel wood sales and such sales could directly affect cultural resources. Finally, we do not agree that if NADA is sold to a non-Federal entity, then only potentially minimal adverse effects could occur. In such an event, there could be destructive adverse effects to cultural resources.

**RESPONSE:** Page 134, Section 4.2.7, second paragraph, was replaced with the following: "The Programmatic Agreement being developed for NADA recognizes that current training activities potentially affect cultural resources eligible for the National Register. As long as the facility continues under the jurisdiction of the AZNG and the Programmatic Agreement requirements are fulfilled, there would be no increased direct effects on cultural resources from the proposed action. When the withdrawn lands are no longer required for military purposes, they will be returned to the USFS administration. After requirements of the Programmatic Agreement are fulfilled, there would be no resulting direct affects to cultural resources, except perhaps in timber sale or thinning areas. However, if those lands held in fee title by the DA are sold to a non-Federal entity, then potentially minimal adverse effects could occur. Before release of the property, additional NEPA documentation would be necessary to comply with Section 106 of the NHPA."

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY, OFFICE OF WASTE PROGRAMS DATED MAY 28, 1991.

1. Page 68, paragraph 3, makes reference to Arizona Department of Water Quality Regulations. There is no such agency. Groundwater and surface water quantity and quality in the state of Arizona are regulated by the Arizona Department of Water Resources and ADEQ, respectively.

RESPONSE: The text on page 68, Section 3.2.5, paragraph 2, in the last sentence has been revised to read "Groundwater and surface water quantity and quality in the state of Arizona are regulated by the Arizona Department of Water Resources and ADEQ, respectively."

STATE OF ARIZONA, GAME AND FISH DEPARTMENT, DATED JULY 8, 1991.

1. The Department believes that the DEIS does not adequately evaluate the real property reuse alternatives, and that it is inappropriate for the DEIS not to treat in depth the possibility of other uses, including the return of portions of the Navajo Army Depot Facility to the U.S. Forest Service. In the absence of a thorough environmental analysis of the reuse alternatives, a final decision based on this document would certainly be called into question.

The subjects addressed in the DEIS were most often addressed superficially. There was a lack of detailed information about existing resources and potential resource impacts to support the conclusions contained in the document. For instance, the conclusion that there is no difference in the wildlife resource impacts of using the Navajo Army Depot as a training facility, using it as a storage depot, or transferring it back to the Forest Service, is clearly in error.

RESPONSE: This document addresses the impacts of closure of active Army activities of NADA in accordance with the Commission's recommendations for base closure and realignment. The Army has determined the document is legally sufficient, in compliance with NEPA, and adequate to take the proposed action. If, in the future, the military purpose is discontinued at NADA, the lands subject to PLO 59 will be returned to the USFS following disposition of hazardous materials at NADA in compliance with NEPA and other applicable laws.

THE HOPI TRIBE, CULTURAL PRESERVATION OFFICE, DATED JULY 2, 1991.

1. Our apprehension with this draft EIS lies with section 3.2.8, Native American Concerns. We were disturbed to read that "there are no topographical features, sites, or vegetable or mineral resources at NADA that are know to be critical for the practice of traditional religion," when to our knowledge, the Hopi tribe has not been contacted concerning this area.

We expect consultation with the various Native American groups to identify the traditional cultural properties (TCP) or sacred areas located in the area under study. If this consultation process has been initiated or is anticipated, then it should have been documented in the draft EIS. Moreover, it is our contention that a proper assessment of the impacts of a federal undertaking cannot be performed without consulting the appropriate Native American groups for the identification of the TCP's, scared areas, and the treatment of prehistoric and historic sites.

RESPONSE: Page 71, Section 3.2.8, has been revised, adding the following sentence to the end of the paragraph: "Historical and archeological surveys, in coordination with the Hopi Tribe, will be implemented pursuant to the Memorandum of Agreement between the Department of the Army and the Arizona State Historic Preservation Officer, in compliance with Section 106 of the National Historic Preservation Act."

RICHARD G. SMITH, DATED JUNE 18, 1991.

1. As I understand the system, the Secretary's Defense Commission recommendations applied to all Active Armed Services Branches under the Department of Defense (DOD). I conclude, perhaps incorrectly, that the Commission deemed NADA's storage capability obsolete or unnecessary for all active Armed Service Branches. To think otherwise, would seem to me, to constitute a realignment rather than closure. To support my conclusion, NADA has in the past routinely stored ammunition/materials from all Armed Services Branches. It is a fact that because of NADA's Base Closure situation, the Depot received orders and has executed the shipment of Air Force 750 pound bombs to Hawthorne. This example indicated to me that closure of NADA is recognized by some Defense Officials as meaning absolutely no presence, "manpower, materials, and supplies" of all active Armed Service Branches.

I realize that the Defense Secretary's Commission Report contains the statement: "The Commission recommends Navajo for closure and anticipates its eventual transfer to the Arizona National Guard." First, I don't consider the phrase "anticipates its eventual transfer..." directive in nature, but merely a suggested consideration.

RESPONSE: As described in this EIS, the proposed "closure" action at NADA consists of the realignment/transfer of its conventional ammunition storage mission to HWAAP ending active Army presence of NADA. The AZNG will continue the military purpose for use of NADA lands by continuing to perform its current functions.

2. Having served the Department of Army for nearly thirty years, the last decade at NADA, I am troubled by the possibility that the AZNG may directly or indirectly be considering actions which appear to me to circumvent or violate the Act (Public Law 100-526). In the Flagstaff, Arizona Daily Sun newspaper, 9 June 1991, the issue was raised that under the current license by which the AZNG uses and occupies the Depot, the Guard "shall not use the premise as a permanent or temporary repository for toxic or hazardous materials not generated on premises." I personally reviewed an unclassified

proposed license change, developed by the AZNG, that used the language: the premises may be used as a permanent or temporary repository for toxic or hazardous materials not generated on the premises. The AZNG also stated in the above mentioned news article that the most recent proposal to amend the license adds the phrase, "except for such materials stored or utilized in the furtherance of Department of Defense missions offered to and accepted by Navajo Depot." If the Public Law 100-526 prohibits the presence (manpower, materials, and supplies) of all active Armed Service Branches, what mission, other than training, can the Defense Department offer Navajo? Surely the Defense Department does not believe the AZNG has the expertise to operate a toxic waste dump in the line of training.

**RESPONSE:** The proposed action is consistent with PL 100-526 and within the authority of DA. The AZNG and the State of Arizona will continue to operate the installation and will share responsibilities for liabilities for the management of hazardous materials during periods of operations under pertinent license agreements. The current license is consistent with Army policy. The AZNG will not operate a toxic waste dump at NADA.

3. Continuing to refer to the newspaper article, it states: (AZNG Major) "Galkowski said the Guard was pursuing contracts with military branches other than the Army to store materials, but he would not say what kind of contracts." Again, if the AZNG were to conduct contract business with active Defense Branches, it appears to me to circumvent or violate Public Law. In the past, the AZNG attempted to enter into a direct contract with a civilian defense contractor. It is my understanding that this effort failed because of Titles 32 or 10 of United States Code. I submit the argument that the AZNG is prohibited, by Public Law, from storing ammunition/materials for active Armed Service Branches, and because of Titles, United States Code, cannot enter into contracts with civilian defense contractors. I further submit that the AZNG's authorization to utilize NADA is in a purely training capacity as a state entity under Title 32, United States Code.

**RESPONSE:** The Army plans to turn the facility over to the AZNG. Once this occurs the legal requirement of operating the facility, including contracting for services, storing ammunition/materials for active service branches, and all other future activities will be the decision and responsibility of the AZNG.

4. If my arguments are valid, then based on past AZNG training operations (years 1982-1990), the AZNG most certainly should not be given authorizations to control the total 28,300 acres of Navajo. Under current conditions, regular Army presence, approximately 14,000 acres containing the 778 ammunition igloo magazines were off limits to training units other than ammunition units and units performing facility maintenance and repair. If the Public Law removes ammunition storage, other than basic guard unit requirements, then the 14,000 acres become available for all guard training units.

RESPONSE: Training now is conducted in all areas of NADA including the magazine and buffer-zone areas and will continue while NADA is licensed to the AZNG.

5. In summary of my first segment, I believe the EIS is deficient in that it should identify all disposal alternatives and precise future uses. As a start you should consider the alternative of authorizing the AZNG control of the current administrative area, ammunition restricted area (14,000 acres), plus known contaminated areas; and relinquishing control of the Buffer Zone (approximately 10,000 to 12,000 acres) to Department of Agriculture, U.S. Forest Service, for public use.

RESPONSE: The entire installation is required for the training mission. If, in the future, the military purpose is discontinued at NADA, the lands subject to PLO 59 will be returned to the USFS following disposition of hazardous materials at NADA in compliance with NEPA and other applicable laws.

6. It appears to me that a number of legal issues remain unresolved that relate directly to the Army's preferred alternative. How can the Army make an informed judgement without knowing what the AZNG is allowed to do or is planning? Par 4.2.3, 3rd par., page 127, is far too general, it does not quantify land amounts with particular operations, and it does not consider the availability of 14,000 acres if the ammunition mission is prohibited. As evidenced by EIS, Par 4.2.2.1, page 126, "Future AZNG training activity above current levels would require additional NEPA documentation." I interpret this statement to mean that the regular Army does not know what the AZNG activities will be; or perhaps they do not care.

RESPONSE: The EIS supports the mandated transfer to the AZNG. Any new activities associated with AZNG's mission would require separate environmental impact analyses consistent with NEPA and other applicable laws. Currently, there is no change of the AZNG mission at NADA.

7. I do not want my road access situation removed from EIS Unresolved Issues.

Col. Willis, in his letter to the Forest Supervisor (Enclosure 2), stated: "Provided this further investigation confirms our expectation that no contamination exists, we intend to prepare a Report of Availability requesting a road easement be granted to Mr. Smith." I expect the Army to be true to its word. I have received word that the "further investigations" are nearing favorable conclusion. However, should the "further investigations" conclude real or imaginary contamination, one must assume, because of proximity, my land is contaminated also. Until I am granted a road easement through NADA, I request that the issue remain unresolved.

RESPONSE: The issue of access to Mr. Smith's private property remains unresolved. The Army and landowner are working to resolve this separate, but related issue.

KERRY McCracken, McCracken Realty, Dated July 1, 1991.

1. My experience with AZNG troops in training has been very negative. They have harassed the livestock with low flying helicopters carrying nets full of munitions and dropped so low over my house that there were real fears they might catch one of the nets on the tall snag outside and crash. They have had thousands of acres within the depot to practice in and yet they have consistently used my field as extended training ground. When I expressed this at the June meeting, I was told by one major that the AZNG thought that was State Land. Obviously, there is a house on the property, horses and children, conditions not usually prevalent on state land. Every map of the area clearly shows my 120 acres as private.

RESPONSE: As stated in this letter, the AZNG was conducting activities over the property unaware that the property was privately owned and occupied. Current operations have been relocated to avoid the McCracken property.

2. I would appreciate more respect, and therefore feel that the only way there will be any control is if the alternative of joint control with the USFS is favored, or of course clearly the best alternative would be complete control of the buffer zone by the USFS.

RESPONSE: See UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE, KAIBAB AND COCONINO FOREST SUPERVISORS, DATED JULY 2, 1991, Comment 12.

3. As to the draft EIS and my review thereof, I find a lack of proper research and factual knowledge of the area affected, throughout the document. It appears to have been prepared with a clear bias towards AZNG takeover.

RESPONSE: See UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE, KAIBAB AND COCONINO FOREST SUPERVISORS, DATED JULY 2, 1991, Comment 1.

4. The draft EIS does not address several extremely pertinent issues. The first issue is ultimate disposition of lands. AZNG use will destroy the buffer zone and contaminate it further over time. There is no assumption (even though one is stated in 42.2.1) that AZNG training levels will remain the same. The fact is they have increased considerably over the last five years. Any kind of human impact is adverse to wildlife and ecosystems. The NADA buffer zone is extremely unique in that there is an abundance of surface water and wetland habitat not seen in most of the Flagstaff area. These conditions are extremely conducive to use by elk, deer, eagles, ducks and geese and a number of other species. A pair of bald eagles wintered between my pond and the adjacent marshlands on NADA this winter. We have seen spotted owls on our place, badgers, large flocks of wild turkeys (a species whose numbers are decreasing rapidly), Canadian Geese, large numbers of blue herons and many other species which cross into NADA freely, as they are generally not respecters of barb wire.

**RESPONSE:** See UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE, KAIBAB AND COCONINO FOREST SUPERVISORS, DATED JULY 2, 1991, Comments 2, 4 and 11.

5. My specific concern with use of the wetland areas within the buffer zone is that heavy metal contamination is not only possible, but very probable. AZNG, in order keep their troops sharp, must fire munitions. As stated in EIS on p. 131, "An eventual minimum benefit could be realized as the production of contaminating agents ceases following termination of present AZNG activities." Shell casings, fragmented missile and bomb casings will contaminate a delicate and rare ecosystem.

**RESPONSE:** The effects of the preferred action on wetlands has been determined to be minimal. The current use is not expected to change under the proposed action. Responsibility for wetlands management will remain with the DA as long as these lands are held for military purposes. If, in the future, military purposes cease, then NEPA analysis and appropriate remedial actions will be carried out by the Army pursuant to applicable law before any land transfer actions occur.

6. Prior to AZNG takeover complete biological resource studies of the buffer zones need to be done. Complete surveys of wetland habitats, population surveys of elk, deer and other big game species, historical and archeological studies must be implemented before any proper decisions can be made as to future use. To gloss over these issues is to cheat the people of Arizona out of their future.

**RESPONSE:** NADA is currently licensed to the AZNG which is planning for surveys. For example, the AZNG is planning a wildlife survey in cooperation with the Arizona Game and Fish department during FY92.

7. The draft states that there are no known endangered species on NADA, however no inventory of wildlife has been done. It is unknown whether or not there are endangered plant species because no inventory has been done. Why not?

**RESPONSE:** See Comment 6. Appendix A of the Draft EIS contains a letter from the US Fish and Wildlife Service (S. Spiller), dated August 11, 1989, which states that "Our data indicates that no listed, proposed or candidate species are likely to be found on the Depot." The proposed action (ceasing active Army functions and relocating from NADA) will not cause any change in land use or habitat which would affect threatened and endangered species.

8. The draft states that there are no important historical sites on NADA, but no research has been done to verify that. The existence of the Overland Wagon Road is well known and documented by other parties as an important East-West Route of much historical significance. Does its significance end upon entering NADA? Have the numerous old homesteads on the property even been identified? The EIS notes only one Smith homestead in Volunteer Canyon, and yet there are several more homesteads within the depot clearly visible from the civilian side of the buffer zone. Part of the



homestead I now own was condemned and added to the depot. On our side of the line we have found a profusion of relics, including such items as camel shoes (or so identified by a local historian), logging train wheels, purple glass, gold coins, axes and other 19th century tools. We have also noted what appears to be grave sites, logging railroad beds and old mill sites.

The EIS has no mention of archeological sites within the depot, and yet when building our road, less than a half mile away, we were required to do archeological studies, which identified several sites. We were also required to preserve these sites. It is very difficult to preserve an archeological site in a practice war zone.

**RESPONSE:** See Response 6. The Army, the National Council of Historic Preservation Officers and other parties have entered into a Programmatic Agreement which requires cultural resource surveys to be completed by September 30, 1995. (See Appendix C).

9. The remaining issue within the EIS deals with land use. In all fairness to the public, hunting by the public should be permitted, or no hunting should be permitted. It is arbitrary to let only guardsman hunt on NADA.

**RESPONSE:** Both guardsmen and the public may hunt on the installation with Arizona Game and Fish Department and installation permits. See Section 3.2.3.

10. As to the future disposition of Real Estate within NADA, it is certainly the intent of the law to return the buffer zone to the USFS, and much of the interior, once the Army has cleaned up their mess, if indeed that is possible. Wherry housing could be sold off to low income families, and thereby increase Coconino County's tax base and help mitigate the economic impact of closure of the depot, while providing solid affordable housing for local families. The water and sewer systems could certainly operate under special use permit.

**RESPONSE:** The license to the AZNG will continue. If, in the future, the military purpose is discontinued at NADA, the lands subject to PLO 59 will be returned to the USFS following disposition of hazardous materials at NADA in compliance with NEPA and other applicable laws.

11. Please consider the beneficial impacts created by the alternative which places the USFS back in charge of NADA. They are in a position to properly manage and control the resource without further devastation of the area. In lieu of that, joint control would maintain some semblance of order and management. To allow the AZNG complete control of NADA is tantamount to taking a wounded hen out of a coyote's mouth and leaving it to the safe keeping of a chicken eating dog.

**RESPONSE:** This comment and those of the USFS have been considered. Please see the comments and responses to the USFS letter in this Appendix.

**COMMENTS RECEIVED AT NADA PUBLIC MEETING REGARDING**  
**THE DRAFT EIS, RESPONSES AND EIS REVISIONS**

**COL JAMES BURNS, STATE OF ARIZONA, ARIZONA NATIONAL GUARD.**

1. The EIS mentioned an unresolved issue concerning access to a private parcel of property adjacent to NADA. It is the position of the Arizona National Guard that this is not an issue in this EIS because any real property disposal alternatives other than continuation of the current operational control by the Arizona National Guard will require additional review by the National Environmental Policy Act. At that time, the access issue should probably be considered in the National Environmental Policy Act process. The access issue is currently being reviewed by the Forest Service and NADA but as of today the issue has not been resolved.

**RESPONSE:** The issue of access to private property remains unresolved. The Army and landowner are working to resolve this separate, but related issue.

2. As part of the preferred alternative the EIS states that the termination of the mission support contract with the Arizona National Guard in Fiscal Year '94 would result in the reduction of the NADA work force by 120 Arizona State employees. It is our understanding that the Army is attempting to expedite the termination by as much as one year or more. This is a concern to the Arizona National Guard because those 120 employees do not have any job relocation assistance available to them, and most of them are National Guardsmen who would not be able to attain comparable employment in the Flagstaff area. It is our concern that the Army will not keep the employee's best interests in mind in terminating the support mission contract ahead of schedule. The goal of the Arizona National Guard is to orchestrate an orderly transition into training and other missions which have a potential for employing those employees displaced as a result of the loss of the Army mission. Without a coordinated transition and if the termination of the mission support agreement occurs prior to the EIS Fiscal Year '94 time frame, socioeconomic impacts would be greater than anticipated.

**RESPONSE:** There has been no approved change to the schedule presented and assessed in the Draft EIS. However, as stated in the introduction to Chapter 2, there may be some unanticipated modifications to the BRAC action. Although the timing may change, the magnitude of the socioeconomic impacts would remain as analyzed under the current schedule.

**R. DENNIS LUND, UNITED STATES DEPARTMENT OF AGRICULTURE,  
FOREST SERVICE, KAIBAB AND COCONINO NATIONAL FORESTS.**

1. Kaibab and Coconino Racketeers were disappointed that the Draft Environmental Impact Statement failed to include any of our previous correspondence or statements

during the scoping sessions; and the document does fail to address any of the issues and concerns that we raised regarding both land jurisdiction and the disposal of the hazardous waste materials at the head of Sycamore Wilderness Area and Volunteer Canyon.

**RESPONSE:** These issues and concerns were fully considered during this EIS process. Although they were considered and remain part of the public record, the referenced letters were not included in Appendix A of the Draft EIS. Please review the comments and responses to the letter provided by the USFS, dated July 2, 1991, and included in this Appendix.

**KERRY MCCRACKEN.**

1. My concerns are with the preferred alternative to address the future as far as the hazardous waste and where the responsibility lies for the hazardous waste disposal.

**RESPONSE:** Please refer to the comments and responses to the follow-up letter provided by McCracken Realty, Flagstaff, AZ, dated July 1, 1991, and included in this Appendix. The AZNG and the State of Arizona will share responsibilities for liabilities for the management of hazardous materials during periods of operations under pertinent license agreements. However, long-term responsibilities will remain with the HQDA/DOD as long as these lands are held for military purposes. In addition to its training mission, the AZNG intends to continue its support mission of providing and maintaining storage facilities and functions for the DOD and other Federal agencies. If, in the future, military purposes cease, then NEPA analysis and appropriate remedial actions will be carried out by the Army pursuant to applicable law before any land transfer actions occur.

2. Every year the Guard starts forest fires throughout the Depot. I do have a place directly adjacent that could burn down.

**RESPONSE:** NADA has cooperative agreements for fire protection and emergency responses with various local, county state and Federal agencies. AZNG will continue to protect its lands in accordance with Army policy.

**CHERI MCCRACKEN.**

1. Basically what I would like is a chance to look over the Environmental Impact Statement.

**RESPONSE:** Ms. McCracken was provided with a copy of the EIS.

## CHANGES FROM INTERNAL REVIEW

Page 15, fifth paragraph. Replace second sentence with: "Open detonation of explosives takes place in open pits as specified in Standing Operating Procedures in accordance with safety, noise suppression, environmental regulations, and permits."

Page 67, Section 3.2.3, third paragraph has been revised to read: "Approximately 65 acres of land and 13 buildings, primarily in the old hospital area, are used by the AZNG as a Weekend Training Site (WETS) under the terms of a license originally granted on December 2, 1975. The buildings are mainly used as barracks for training throughout the year. The entire buffer zone is also used for field training and the Ammunition Storage Area is used to train a variety of service and support units and individuals. NADA provides fire protection, snow removal, water, and sewer services for a 69 unit rental housing complex (Wherry Housing) located on NADA and leased to the Bruskin Agency."

Page 69, Section 3.2.5, first paragraph has been changed to read: "At the ammunition workshop area and the demolition area, thick layers of clay form an impervious barrier to downward percolation. High concentrations of TNT were found in the soil of the demolition area, in the former TNT retention pit. Other locations in the ammunition workshop and demolition areas had low concentrations of TNT in the soil. Some contaminated sediments may be transported to Volunteer Canyon with surface runoff, though so far there is no evidence of this. Potential for surface and groundwater contamination from the solid waste and debris landfill areas is considered low. Several groundwater studies have been conducted in the ammunition workshop area in recent years. The most recent one was completed by the U. S. Army Environmental Hygiene Agency (AEHA) in February 1991. AEHA concluded that the deactivation furnace and TNT washout lagoon sites are not a threat to human health and the environment. Data from groundwater sampling done by USAEHA in the Deactivation Furnace and TNT Washout Lagoon sites indicates that the sites are not threats to human health and the environment. As of yet there are no known releases of explosive contaminants to groundwater at NADA. However, since demilitarization activities are known to release these contaminants to the soil, there is potential for groundwater contamination. Monitoring must continue and mitigation measures applied as required to minimize this potential contamination."

Page 70, Section 3.2.6, first paragraph. Replace the last sentence with: "NADA is currently monitoring noise levels associated with open detonation to confirm the computer-generated contours. This noise survey, conducted with AEHA assistance, will be completed in the fall of 1991."

Page 71, section 3.2.7, first paragraph. Add the following to the end of the paragraph: "NADA is coordinating with the U. S. Army Corps of Engineers to conduct Phase 1 of a Cultural Resource Management Plan to address with these concerns."

Page 71, Section 3.2.9, first paragraph. The third sentence was replaced with: "In coordination with ADEQ and the City of Flagstaff, NADA currently plans to use the City's landfill for sewage sludge disposal."

Page 134, Section 4.2.7, first paragraph. Add the following sentence to the end of the paragraph: "NADA is coordinating with the U. S. Army Corps of Engineers to conduct Phase 1 of a Cultural Resource Management Plan to address these concerns."



United States  
Department of  
Agriculture

Forest  
Service

Kaibab  
National Forest

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1950/2760/5590

Date: July 2, 1991

Mr. Arver Furguson  
Environmental Resources Section, Planning Division  
U.S. Army Corps of Engineers  
819 Taylor Street  
Fort Worth, Texas 76102-0300

**CERTIFIED MAIL - RRR**  
P 191 368 827

Dear Mr. Furguson:

This letter is in response to the Draft Environmental Impact Statement (DEIS), dated May 1991, for the base realignment and closure of Fort Wingate Depot Activity, Navajo Depot Activity and Umatilla Depot Activity, with transfers to Hawthorne Army Ammunition Plant. Our interest lies with the DEIS as it relates to the Navajo Depot Activity (NADA). NADA is unique from other military bases targeted for closure by the Commission. The vast majority of lands comprising NADA are lands of the Coconino and Kaibab National Forests that were temporarily withdrawn for use as a military installation. Stipulations in the 1942 public land order that created NADA require that the lands be restored to National Forest status and management when they are no longer needed for federal military purposes by the Department of Army (DOA). We find the DEIS to be incomplete, inaccurate and inadequate because it (1) fails to recognize the legal status of lands within NADA and the statutory limitations imposed on the transfer and management of NADA lands, and; (2) fails to meet the requirements of the National Environmental Policy Act (NEPA) with particular regard to the objective analysis and full disclosure of potential real property disposal (reuse) alternatives, and analysis and disposition of hazardous materials known to be present at NADA.

2. We recognize that the Commission report states "it anticipates the eventual transfer (of NADA) to the Arizona National Guard". However, the mechanism for effecting this transfer and the various jurisdictional alternatives to accomplish this are not defined in the Commission's report. The Forest Service strongly believes it was not the Commission's intent to simply turn the installation over to the Arizona National Guard (AZNG) without a thorough and complete EIS that analyzes various alternatives for the disposition of NADA lands. The basic intent behind the base closures recommended by the Commission is federal cost savings. A simple transfer of NADA jurisdiction to the AZNG, a facility that has historically received the majority of operational funding from federal sources, is contradictory to the basic intent of federal cost savings and inconsistent with the reversionary stipulation of the original public land order that created NADA. In addition, there are some very serious environmental issues that must be carefully analyzed to ensure that any change in the jurisdiction of NADA is in the public interest and consistent with law. The transfer of NADA to the AZNG without a thorough environmental analysis of all issues has serious implications on the future public uses of National Forest lands which comprise NADA, and the responsibility and timing for the reclamation of contaminated areas within NADA.

Although related, our specific comments on the DEIS are organized under three broad headings; land status and statutory intent, compliance with the NEPA and environmental issues.

Land Status and Statutory Intent

5. In 1942, Public Land Order (PLO) 59 reserved approximately 28,400 acres of public lands within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. PLO 59 contains a reversionary clause that stipulates restoration of NADA lands to National Forest status when they are no longer needed for military purposes. The 28,400 acres of land described in PLO 59 comprise the bulk of NADA. Other than one superficial statement on page ES-5, the DEIS neglects to mention the status of NADA lands, but more importantly, fails to recognize the implications of PLO 59 to various real property disposal and reuse options upon base closure directed by the Base Closure Realignment Act, PL 100-526.

Our letter of June 12, 1989, entered into the record at the June 12, 1989 scoping meeting held at the Thorpe Park Armory in Flagstaff, Arizona, describes the status of NADA lands under PLO 59 and its implications to the jurisdictional control of NADA lands upon base closure.

6. "In accordance with PLO 59, the jurisdiction of the Secretary of Agriculture over these lands is subordinate to the jurisdiction of the Secretary of Defense to the extent necessary to effectuate the purposes of the military reservation. However, when these lands are no longer needed for military purposes, PLO 59 directs the restoration of NADA lands to full National Forest status.

In May 1988, the Secretary of Defense established a commission to evaluate military installations within the United States for realignment and closure. In their report, the Commission states that, "The military value of the (NADA) installation is lower than others in this same category. The ammunition and supply functions can be more effectively managed at less cost at another location." This finding by the Commission has, in our judgement, triggered the reversionary clause of PLO 59."

7. Section 2.2.2.1, Preferred Implementation Alternative, on page 29 of the DEIS contains a statement relating to real property reuse, "The Army prefers to amend the license with the State of Arizona to provide a term consistent with the expiration of the current land withdrawal and restate the primary purpose as training and support of the AZNG by the end of September 1995." This "preferred alternative" implies extending an agreement between the DOA and AZNG for the operation of NADA beyond the September 1995 base closure date mandated by PL 100-526. Modifying or extending existing agreements between the DOA and AZNG, or taking any action which infers AZNG control of NADA through the DOA, is incongruous with the intent of PL 100-526 and, lacking any pre-emptive legislation to PLO 59 and PL 100-526, exceeds the authority of the DOA. It also assumes that the State of Arizona is willing to accept the long-term liabilities of the hazardous materials identified by the DOA at NADA.



Compliance with the NEPA

The Executive Summary on page ES-1 of the DEIS lists the requirements imposed on the DOA based on the Commission's recommendations under PL 100-526.

"The Commission's recommendation to close a particular installation generally requires the Army to (1) relocate, to the sites identified by the Commission, all military activities specifically recommended for relocation; (2) realign, in a militarily efficient and economical manner, any remaining active Army units for which the Commission did not identify specific receiving locations; (3) abide by other directive Commission recommendations regarding the particular closure; and (4) dispose of military properties and facilities rendered excess or surplus by the closure in accordance with applicable law. As used in this document, disposal of real property means return to prior Federal agency administration or transfer, sale, or lease to other Federal, state, county or tribal agencies, or private interests."

8. Section 204(c)(2) of PL 100-526 requires compliance with the provisions of the NEPA to all implementing actions recommended by the Commission, including the analysis of real property disposal alternatives as acknowledged on page ES-1 of the DEIS. Although mandated by PL 100-526, the DEIS on page 9, under Scoping Issues, states that, "Issues and concerns relevant to the proposed mission closure or realignment action are addressed in this DEIS; however, some of the issues raised, such as potential remediation, real property disposition, and reuse of installation property, are beyond the scope of this DEIS and are discussed only in general terms. These concerns which relate to real property disposition and reuse will be discussed in separate NEPA documentation." Real property disposal and reuse alternatives for NADA, triggered by the base closure mandated by PL 100-526, perfectly meet the definition of connected actions under the Council of Environmental Quality (CEQ) regulations for implementing the NEPA, 40 CFR 1508.25(a)(1) and, therefore, must be fully analyzed in the base closure DEIS.

9. The need for thoroughly analyzing disposal and reuse alternatives is implicit in the list of issues identified for NADA on page 158 of the DEIS under Section 5.1.2. The majority of issues identified during scoping are directly related to the disposition and management of NADA lands. The need for analyzing the disposition of NADA lands, and alternatives that represent a reasonable range of jurisdictional patterns of NADA lands, are described in the series of letters to the U.S. Army Corps of Engineers from the Forest Service (see attached letters dated October 12, 1989, September 27, 1989, December 8, 1989 and September 14, 1990). None of these letters are included in Appendix A of the DEIS.

10. During the public scoping meeting held at the Thorpe Park Armory in June 1989, and at every subsequent meeting concerning the base closure EIS, the U.S. Army Corps of Engineers and the AZNG have stated that the ultimate disposition of NADA lands would be addressed in the base closure EIS. Yet, the DEIS concludes that the analysis of property disposal and reuse alternatives is beyond the scope of the EIS and may require separate analysis and disclosure under the NEPA. Curiously, the DEIS, however, recommends full transfer and management of NADA to AZNG, one of only several property disposal and reuse options identified by the Forest Service, state and local governmental entities and the public. Presumably, this transfer is predicated on the AZNG's anticipated mission of "training" which supersedes

10. the previous ordnance storage mission curtailed by PL 100-526. Statements in the DEIS recommending the transfer and control of NADA to the AZNG, without the objective analysis and disclosure of other disposal options, violate the procedural requirements of the NEPA, and circumvent the basic spirit and intent of the NEPA, that being to "insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken" (40 CFR 1500.1(b)). Moreover, lacking the analysis of disposal alternatives or identifying the environmental impacts of the AZNG's new mission, the base closure EIS becomes nothing more than a schedule for the removal, transfer and demolition of the remaining ordnance stocks at NADA.

11. The description of the affected environment in Chapter 3 and the discussion of environmental and socioeconomic consequences in Chapter 4 of the DEIS lacks objectivity and quantification and, consequently, fails to provide sufficient information for making an informed decision. For example, statements are made under Section 3.2.2.3 on pages 63 and 64 of the DEIS that suitable habitat for a variety of threatened, endangered and sensitive plant and animal species exists on lands within NADA. However, no surveys of NADA lands were conducted in association with the base closure EIS to confirm or disprove the presence of these species, much less evaluate the impacts to these species.

"The Southern spotted owl, (Strix occidentalis lucida), a Federal candidate 2 species, occurs in both national forests and may be present within Volunteer Canyon on NADA."

"The Arizona leather flower, (Clematis hirsutissima arizonica) is a Federal candidate 2 species found on the shaded side slopes of hills in ponderosa pine habitat. Several distinct populations are known in the Coconino National Forest and samples were collected at NADA in 1979. It is unknown if the species is present on the depot at this time; no recent surveys of the area have been completed."

"The Arizona cinquefoil, (Potentilla multifoliata), is a USFWS sensitive species which occurs in riparian areas of southern Coconino County and adjacent parts of Yavapai County. The plant is found in riparian habitat in Volunteer Canyon (including a portion of NADA surveyed in 1980) and an area adjacent to the NADA boundary northeast of Mooney Mountain. However, it is not known if the plant is still present at NADA."

Similar inconclusive descriptions of the existing environment are found under Section 3.2.11, Hazardous Wastes and Their Disposal, on page 73 of the DEIS.

"The extent of groundwater contamination is not known. Potential exposure of contaminants to the groundwater is moderate at the present time, but was high during the previous operational period which ended in 1967 based on the results of the 1981 soil analyses."

Without accurate, detailed information about the existing resource condition, no determination of impacts or assessment of needed remedial treatments can be made from implementing the actions analyzed in the EIS.

Conclusive statements are made on page 127 of the DEIS under Section 4.2.3, Land and Airspace Use, regarding the joint Forest Service and AZNG administration of lands within NADA without any supporting data or analysis. No compelling reasons have been given in the DEIS that substantiate the need for the exclusive use, control and occupancy of all lands within NADA by the AZNG. The continued exclusive use of all lands within NADA by the AZNG is at the expense of other public land uses of NADA and is contrary to the recently executed Master Agreement between the Secretary of Defense, Secretary of Agriculture and State National Guard units. The AZNG's new inferred mission of training and use of the area for bivouac exercises, map reading courses and small arms firing ranges, simply does not justify the total control and jurisdiction of over 28,000 acres of National Forest System lands as implied in the DEIS.

12.

"Joint administration by the AZNG and USFS is considered by the AZNG to be operationally incompatible. The continuing mission of the AZNG requires use of lands for bivouac and training areas, map reading courses, and small arms firing ranges. The AZNG also uses the extensive road network for convoy and tactical field training. The AZNG currently manages NADA lands under the multiple use concept providing for operationally compatible levels of use for forestry, recreation, and wildlife habitat. This alternative would result in impacts similar to those discussed below for separate AZNG and USFS land use administration and is not discussed further."

The Forest Service position on the joint occupancy and use of lands within NADA was described in the September 27, 1989 letter to the U.S. Army Corps of Engineers from the Coconino and Kaibab Forest Supervisors.

"One alternative involves the reinstatement of undeveloped and restorable lands along the perimeter of NADA to full National Forest status and management. The jurisdictional pattern of NADA lands under this alternative is shown on the attached map. The AZNG would continue to maintain primary use and control of the developed interior portion of NADA through either a special use permit, memorandum of understanding or land exchange. The temporary use of lands outside the adjusted exterior NADA boundary by AZNG can be accommodated under existing agreements. This alternative recognizes the importance of NADA as a National Guard training center, allows for the continued control of primary installations by AZNG, and provides for public use and enjoyment of areas not needed for exclusive use and continuous occupancy by the AZNG."

The joint management alternative, as described above, meets the intent of PL 100-526, is consistent with the reversionary clause of PLO 59, is consistent with the Master Agreement and is in basic conformance with the findings presented on page S-3 in the Enhanced Preliminary Assessment Report, prepared by EBASCO for the U.S. Army Toxic and Hazardous Materials Agency. The map of potentially contaminated areas on page 72 of the DEIS, however, does not comport with the current use of the extreme southern portion of NADA. Based on our field review of NADA and conversations with AZNG Officials, portions of the "potentially contaminated" area along the southern boundary of NADA are open to unrestricted livestock grazing and recreation use by the AZNG and civilian employees. In any event, the Forest Service has never expressed any desire to assume the management of contaminated or developed lands within the interior portions of NADA. Restoration of perimeter or "buffer" lands within

12. NADA to National Forest status, with AZNG retention of "developed" lands within NADA under some separate authorizing agreement or through a land exchange is a viable alternative that must be analyzed in detail in the DEIS.

### Environmental Issues

13. The most significant environmental issues associated with NADA base closure actions involve potential impacts to threatened, endangered and sensitive (TES) plant and animal species, and potential contamination of soil, and surface and groundwater resources from the storage, handling, use and disposal of a variety of hazardous substances and wastes. As stated earlier, the TES plant and animal species issue can not be analyzed without current, accurate surveys of their occurrence within NADA or without an understanding of how the AZNG's new mission may impact these species.

14. The Enhanced Preliminary Assessment Report (EPAR) is a comprehensive description of the current situation at NADA with regard to the contamination issue. However, the discussions of hazardous wastes and their disposal, particularly under Sections 3.2.11 and 4.2.11, do not accurately portray the alarming findings of the EPAR. Discussions in the 100-plus page EPAR, ranging from potential soil contamination from leaking underground fuel storage tanks to potential contamination of the regional aquifer and surface waters that flow into Volunteer Canyon drainage from solid and dissolved explosives-related compounds and metals, are described only superficially in the DEIS. Based on the limited availability and accessibility of the EPAR, individuals that rely on the DEIS as their primary source of information are given a misleading portrayal of the contamination situation at NADA. Furthermore, statements throughout the EPAR imply that the detailed investigation and implementation of appropriate remedial actions of areas of known and suspected contamination can be indefinitely deferred by transferring control of NADA to the AZNG thereby relieving the DOA of any short-term liabilities and costs for dealing with identified hazardous materials contamination at NADA. Deferral of remedial actions is not in the public interest, is contradictory to PL 100-526, and would appear to place serious liabilities on the State of Arizona.

In conclusion, the "preferred alternative" in the DEIS, modification of the existing license with the AZNG, infers an agreement between the DOA and AZNG for the continued use and occupancy of NADA which constitutes a continued DOA interest in NADA. This is inconsistent with the intent of PL 100-526 to close the military installation and reduce federal expenditures, and is in direct violation of PLO 59. The authority for regulating the use and occupancy of NADA lands beyond September 1995 rests with the Secretary of Agriculture.

The range of alternatives analyzed in the DEIS is insufficiently narrow and in violation of the CEQ's regulations for implementing the NEPA. Property disposal alternatives, triggered by the base closure, meet the definition of connected actions and must be analyzed in detail in the DEIS. The description of the existing environment and analysis of effects in the DEIS, particularly with regard to the contamination of soil and water resources, lacks objectivity and quantification, and thus provides insufficient information for making an informed decision. Unsubstantial conclusive statements are made in the DEIS about the desirability of other property disposal alternatives. These statements are based solely on opinion, with

little regard to statutory limitations and intent, and public demand for National Forest resources in northern Arizona.

15. The Forest Service acknowledges the presence of the AZNG and its need for the continued use of portions of NADA for training purposes. Throughout the scoping process for the EIS, we have extended invitations to work with the U.S. Army Corps of Engineers and the AZNG to explore various jurisdictional patterns of NADA to meet the intent of PL 100-526 and PL 59 and best serve the needs of the public, the AZNG and the Forest Service. However, this can only be achieved through an open, objective EIS process. In our judgement, the magnitude of the inadequacies of this DEIS require correction of process errors and preparation and re-submission of the DEIS. We are prepared to seek legal remedies if the concerns in this letter are not addressed.

Sincerely,

*William M. Lannan*

WILLIAM M. LANNAN  
Forest Supervisor, Kaibab National Forest

  
FRED TREVEY  
Forest Supervisor, Coconino National Forest

Enclosures

cc: Larry W. Triphahn, CO, NADA  
Washington Office, Lands  
Regional Office, Lands & Minerals  
Chalender and Peaks RD's  
Arizona Governor's Office  
NADA Mailing List



United States  
Department of  
Agriculture

Forest  
Service

Kaibab  
National Forest

200 S. 6th Street  
Williams, AZ 86046

1950 5590

Date: June 12, 1989

Colonel Tadahiko Ono, District Engineer  
Los Angeles District, Corps of Engineers  
PO Box 2711  
Los Angeles, California 90053-2325

Dear Colonel Ono:

The USDA, Forest Service is very interested in the disposition of lands within the Navajo Army Depot (NAD) for their capability to produce and provide wildlife, recreation, fire protection, timber and range values for the long-term benefit of the American people.

In 1942, Public Land Order 59 reserved approximately 28,000 acres of public lands within the Coconino and Kaibab National Forests for the use of the War Department for military purposes. In accordance with PLO 59, the jurisdiction of the Secretary of Agriculture over these lands is subordinate to the jurisdiction of the Secretary of Defense to the extent necessary to effectuate the purposes of the military reservation. However, when these lands are no longer needed for military purposes, PLO 59 directs the restoration of NAD lands to full National Forest status.

In May 1988, the Secretary of Defense established a commission to evaluate military installations within the United States for realignment and closure. In their report, the Commission states that, "The military value of the (NAD) installation is lower than others in this same category. The ammunition and supply functions can be more effectively managed at less cost at another location." This finding by the Commission has, in our judgment, triggered the reversionary clause of PLO 59.

Public demand for National Forest resources has reached unprecedented dimensions in northern Arizona. In light of the Commission's report recommending closure of the NAD facility and the ever increasing demand for National Forest resources, it is difficult to justify the continued exclusive use of the entire 28,000 acres of NAD for military purposes. While the Forest Service recognizes that there are different opinions over the jurisdictional control of NAD lands, the future use and administration of these lands is a legitimate issue that must be addressed in the environmental impact statement (EIS). The EIS should evaluate various land uses and jurisdictional patterns of NAD lands to most effectively meet the diverse needs of the public, and those of federal and State agencies.



Caring for the Land and Serving People

FS-4200-2004-000



The Forest Service recognizes the presence of the Arizona National Guard (ANG) and its need for the continued use of portions of NAD for training purposes. This need was also recognized by the Commission which, in their report, anticipated the eventual transfer of NAD to ANG. If it is determined that the lands within NAD have reverted to National Forest status, the Forest Service will work with the ANG and State to make portions of the area available to them.

We appreciate the opportunity to comment on the EIS the Department of Army is preparing for the closure and disposition of NAD.

Sincerely,

/s/ R. Dennis Lund (for)

LEONARD A. LINDQUIST  
Forest Supervisor, Kaibab National Forest

/s/ S. Duane Butler (for)

NEIL R. PAULSON  
Forest Supervisor, Coconino National Forest

cc: Coconino National Forest  
RO, Division of Lands and Minerals





United States  
Department of  
Agriculture

Forest  
Service

Kaibab  
National Forest

800 S. 6th Street  
Williams, AZ 86046

1950 5590

Date: September 27, 1989

Lee Hackeling  
300 North Los Angeles Street  
Los Angeles, California 90053  
ATTN: CESPL-PD-RQ

Dear Ms. Hackeling:

The Forest Service appreciates the opportunity to participate in the EIS the Department of Army is preparing for the closure of Navajo Army Depot. As discussed with you by phone we are in the process of formally requesting designation as a Cooperating Agency as per 36 CFR 1501.6. As a part of that request we are requesting additional time for input into alternative development and analysis. However, we are aware of the extremely tight time deadlines you are directed to work under. Therefore we are sending you a preliminary description of two alternatives for the disposition of NAD lands for consideration in the EIS.

One alternative involves the reinstatement of undeveloped and restorable lands along the perimeter of NAD to full National Forest status and management. The jurisdictional pattern of NAD lands under this alternative is shown on the attached map. The Arizona National Guard (ANG) would continue to maintain primary use and control of the developed interior portion of NAD through either a special use permit, memorandum of understanding or land exchange. The temporary use of lands outside the adjusted exterior NAD boundary by ANG can be accommodated under existing agreements. This alternative recognizes the importance of NAD as a National Guard training center, allows for the continued control of primary installations by ANG, and provides for public use and enjoyment of areas not needed for exclusive use and continuous occupancy by the ANG.

A second alternative is simply to exchange all lands within the exterior boundaries of NAD for Arizona State Trust lands located within National Forests in Arizona. ANG would maintain exclusive occupancy and control of all lands and facilities encompassed by NAD. This exchange alternative may require special State legislation.

The Forest Service believes that both of these alternatives are congruous with the intent of the Commission's recommendation to close NAD and the reversionary clause of PLO 59, the original Order that created NAD.

We would also like to elaborate on the tremendous potential of NAD to serve as a center for the Arizona Conservation Corps. NAD's proximity to several National Forests and National Parks provides a unique opportunity to emphasize the multiple use concept in this worthwhile human resource program. A wide array of conservation and maintenance projects could be developed that would provide benefits for the ANG, the Forest Service, the



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FS-6200-22M-4/89





and planning

2

National Park Service and the public at large. With cooperative funding, abandoned structures within the NAD complex could easily be converted to residence quarters and offices. This program has received considerable attention and support of both State and Federal legislators.

During our last meeting, you requested that we compile a list of individuals and organizations that may have an interest in the closure and disposition of NAD. A copy of that mailing list is enclosed.

We appreciate your efforts to involve the Forest Service in the preparation of the EIS.

Sincerely,

/s/ R. Dennis Lund (for)

LEONARD A. LINDQUIST  
Forest Supervisor, Kaibab National Forest

/s/ Alan DeFler (for)

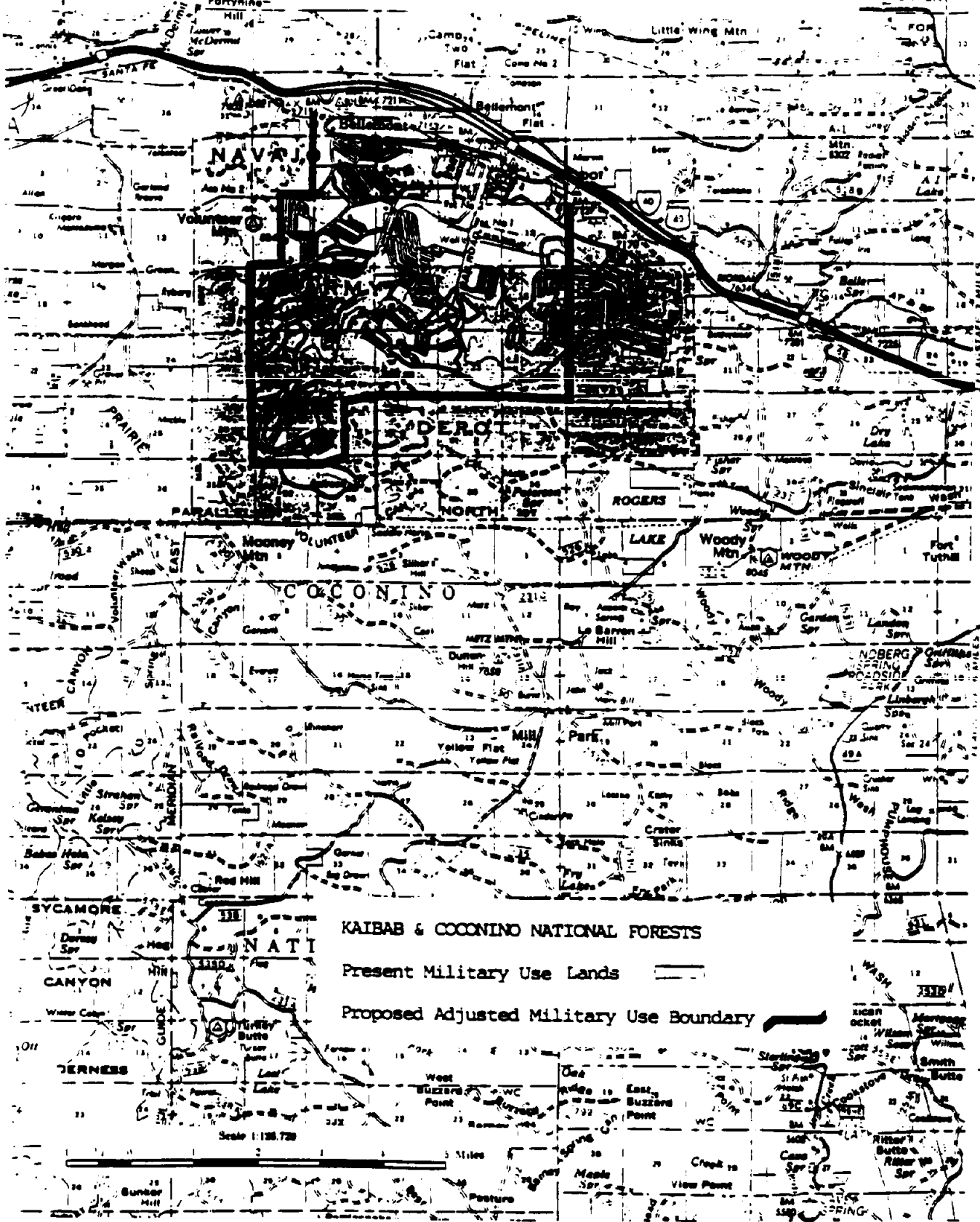
NEIL R. PAULSON  
Forest Supervisor, Coconino National Forest

Enclosures

cc: RO, Division of Lands & Minerals



# NAVAJO ARMY DEPOT BOUNDARY ADJUSTMENT ALTERNATIVE



T. 21 N

T. 20 N

T. 19 N

R. 4 E.

R. 5 E.

R. 6 E.

KAIBAB & COCONINO NATIONAL FORESTS

Present Military Use Lands

Proposed Adjusted Military Use Boundary

Scale 1:125,000

5 Miles

United States  
Department of  
Agriculture

Forest  
Service

Kaibab  
National Forest

800 S. 6th Street  
Williams, AZ 86046

1950/5590

Date: October 12, 1989

Mr. Arver Furguson  
Environmental Resources Section, Planning Division  
U.S. Army Corps of Engineers  
819 Taylor St.  
Fort Worth, TX 76102-0300

Dear Mr. Furguson:

The Forest Service requests cooperating agency designation (40 CFR 1501.6) for preparation of the Environmental Impact Statement for closure alternatives for the Navajo Army Depot (NAD). As you are no doubt aware, Navajo Army Depot is National Forest land which was withdrawn by Public Land Orders 59, 176, and 661, with the stipulation that it would revert to National Forest when the military purpose for which it was withdrawn was discontinued. Therefore, we believe it is entirely appropriate for the Forest Service to participate as a cooperating agency in the portion of the analysis and EIS regarding NAD.

We have been in contact with Lee Hackeling and Jennifer Mulvihill of your agency regarding input to the EIS. By letter of September 27 we provided some preliminary input for alternative development. However, as stated in that letter, the amount of time was inadequate to provide anything but general and preliminary information. As we understand it, the Draft EIS is scheduled to be issued in June 1990; however the description of alternatives and their analysis must be submitted to your office by mid-October. Even with time for compilation with other portions of the EIS, reviews, and printing, this appears to be a very unbalanced distribution of preparation time.

We understand that the Army unit which has expertise in hazardous materials will be evaluating NAD areas which have been used for demolition and disposal for their current safety hazards, degree of environmental degradation and potential for reclamation. However, that evaluation is not scheduled to be completed until April 1990 and is not planned for inclusion in the Draft EIS, but rather the Final EIS. Accordingly, this information, which we believe to be critical for adequately formulating and evaluating alternatives, would not be available for the Draft EIS and the public would not have this information available for use in commenting on the Draft EIS.

In addition to designation as a cooperating agency, we request a modification to the schedule for preparation of the EIS so that the results of the hazardous materials evaluation can be incorporated into alternative development and analysis in the Draft EIS.

We have met with NAD Commander Triphahn and members of his staff, as well as other members of the Arizona National Guard. On October 5, Commander Triphahn, Executive Officer Galkowski, and Liason Officer Smith provided us with a tour of NAD, which was our first opportunity to physically view any portion of the area. We appreciate their cooperation in helping us to better understand the current situation at NAD.


We look forward to working with you as a cooperating agency.

Sincerely,

LEONARD A. LINDQUIST  
Forest Supervisor, Kaibab National Forest

  
NEIL R. PAULSON  
Forest Supervisor, Coconino National Forest

cc: Regional Forester  
NAD Mailing List





United States  
Department of  
Agriculture

Forest  
Service

Kaibab  
National Forest

300 S. 6th Street  
Williams, AZ 86046

1950/5590

Date: December 8, 1989

Arver Furguson  
Environmental Resources Section, Planning Division  
U.S. Army Corps of Engineers  
819 Taylor Street  
Fort Worth, Texas 76102-0300

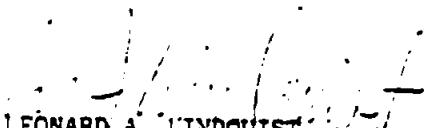
Dear Mr. Furguson:

In a letter to you dated October 12, 1989 (copy attached), we requested cooperating agency designation for the EIS addressing the disposition of the Navajo Army Depot (NAD). The Forest Service is seeking cooperating agency status because the lands within NAD are National Forest System lands that were withdrawn for military purposes under Public Land Order 59 in 1942. PLO 59 directs the restoration of NAD lands to full National Forest status when these lands are no longer needed for military purposes. We believe the scheduled closure of NAD by Public Law 100-526, the Base Closure and Realignment Act, has triggered the reversionary clause of PLO 59.

The October 12th letter also requests a modification of the schedule for preparation of the EIS to enable the results of the hazardous materials evaluation (scheduled for April 1990) to be incorporated into alternative development and analysis in the Draft EIS.

To date, we have not received a response to these requests, and we are anxious to cooperate in whatever way we can in the analysis of the NAD situation and preparation of the EIS. Your attention in these matters is greatly appreciated.

Sincerely,

  
LEONARD A. LINDQUIST  
Forest Supervisor, Kaibab National Forest

NEIL R. PAULSON  
Forest Supervisor, Coconino National Forest

cc: Regional Forester



Caring for the Land and Serving People

FS-6100-200-4 100

United States  
Department of  
Agriculture

Forest  
Service

Kaibab  
National Forest

800 S. 6th Street  
Williams, AZ 86046

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Date: September 14, 1990

2540/2760

Mr. Robert Sejkora  
Arizona Attorney General's Office - WRAT  
1275 W. Washington  
Phoenix, AZ 85007

Dear Mr. Sejkora:

Enclosed is the information you requested by telephone on September 13, pertaining to National Forest lands associated with the Navajo Army Depot (NAD). The 1914 maps enclosed show some water developments were in place in the area of the Depot prior to 1919. Also enclosed are copies of the land status maps for the Kaibab National Forest for those townships that NAD is located in. The reservation date or date of acquisition is shown on the tabular record for each parcel noted on the plat. We do not have access to land status books for those portions of NAD that are located on the Coconino National Forest. We suggest that you contact the Coconino for questions on specific parcels.

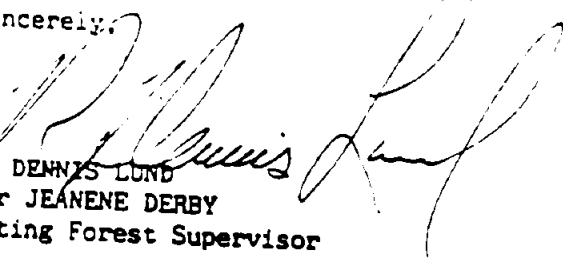
We appreciate your efforts in filing for water rights but it is unclear why the WRAT would be filing for water rights within the NAD since the area does not contain State lands. While a small portion of NAD is private or Department of Defense Lands, the majority is National Forest land that was temporarily withdrawn for use by the War Department under PLO 59 in 1942. PLO 59 requires a return to full National Forest Status when these lands are no longer needed for military purposes. We have enclosed a forest map that shows the NAD area. National forest lands are shown in brown and Department of Defense Lands and private lands are shown in white. This information is described in detail on the land status map and attached tabular record.

If you have discovered water on National Forest Lands (Coconino or Kaibab Forests) that qualifies for pre-1919 or other types of filings, please notify us as soon as possible so that we may file in a timely manner. Similarly, filings needed on Department of Defense lands should be brought to the attention of the Corps of Engineers.

OFFICIAL FILE COPY

Please contact Bob Kenworthy (635-2681) with any questions.

Sincerely,



R. DENNIS LUND  
for JEANENE DERBY  
Acting Forest Supervisor

Enclosure

cc:Arizona Department of Water Resources, ATTN: Mr. Joe Stuart  
Coconino NF  
D.Smith  
Department of the Army, Navajo Army Depot  
Department of the Army, Corps of Engineers



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY

TOOELE ARMY DEPOT

TOOELE, UTAH 84074-5000

January 15, 1991

RECEIVED  
COCONINO  
JAN 22 1991

Legal Office

Duane Butler  
Acting Forest Supervisor  
Coconino National Forest  
2323 E. Greenlaw Lane  
Flagstaff, Arizona

Dear Mr. Butler:

This responds to your letter of January 3, 1991, requesting input on Richard Smith's request for access to his property. You indicate the Kaibab National Forest has agreed to issue Mr. Smith a road easement across the Kaibab National Forest provided access is granted across the Navajo Army Depot Activity.

The Army procedure for granting an easement across Army property is to prepare a "Report of Availability" which is forwarded to our higher headquarters for approval and referral to the Corps of Engineers for legal action. Army regulations prohibit granting access over property which is contaminated with explosives or toxic materials. While a preliminary investigation has not disclosed any evidence of contamination, further investigation has been recommended after the snow melts this Spring.

Provided this further investigation confirms our expectation that no contamination exists, we intend to prepare a Report of Availability requesting a road easement be granted to Mr. Smith. We hope to have this prepared by April 15, 1990, and anticipate further Army review may take an additional three months.

Sincerely,

Roy R. Willis  
Colonel, OrdD  
Commander

CF:

NADA, ATTN: MAJ Galkowski

Mr. Richard G. Smith, 70 Long Bow, Williams, AZ 86046

Enclosure 2

Encl 2



William B. McGrath  
 Major General, U.S. Army  
 Chief of Staff  
 U.S. Army Materiel Command

William A. Stofft  
 Brigadier General, General Staff  
 Director of Management

Roy R. Willis  
 Colonel, U.S. Army  
 Commander, Tooele Army Depot

DOD Office of Inspector General

Fred Trevey  
 Forest Supervisor  
 Coconino National Forest

Flagstaff, Arizona Daily Sun

DECISION NOTICE  
and  
FINDING OF NO SIGNIFICANT IMPACT

USDA Forest Service  
Southwestern Region  
Coconino National Forest  
Peaks Ranger District  
Coconino County, Arizona

Mr. R. G. Smith Private Property Access

An Environmental Assessment of Mr. R. G. Smith Private Property Access is available for review at the Coconino National Forest Supervisor's Office, 2323 E. Greenlaw Lane, Flagstaff, Arizona 86004, and the Peaks Ranger District, 5075 N. Highway 89, Flagstaff, Arizona 86004.

Mr. Smith's 56.8 acre parcel of private land is located on the southern boundary of Navajo Army Depot ("NAD" or "the Depot"). NAD is an approximately 28,000 acre military depot established in 1942 by Public Land Order (PLO) 59. The PLO withdrew the area from National Forest management and gave the military administrative responsibility for the area. When the Depot was established this parcel of private land was inside its boundary. In 1989 the Depot changed the boundary to exclude the parcel of private land; however, the Depot still adjoins the property on three sides. The south side, which is adjacent to the Coconino National Forest, is along Volunteer Canyon, a rugged and precipitous drainage at this point. Because of the extremely rugged nature of this portion of Volunteer Canyon, there has never been vehicular access across it. Mr. Smith purchased the property in December 1986, and while employed at the depot he was able to access his property through the depot. Mr. Smith recently retired from the depot. Therefore, he has requested access across National Forest land.

Nine alternatives or variations of alternatives were considered for Mr. Smith's access:

- Alternative A - No Action
- Alternative B - Purchase of Smith property
- Alternative C1 - 1.3 Miles of Foot/Horse/2-wheel Motorcycle Trail
- Alternative C2 - 1.3 Miles of ATV Trail
- Alternative D1 - Road access, then 0.25 miles of Foot/Horse/MC Trail
- Alternative D2 - Road access, then 0.25 miles of ATV Trail
- Alternative E - 2-wheel drive access through NAD (west)
- Alternative F - 2-wheel drive access through NAD (east)
- Alternative G - 4-wheel drive access through National Forest (south), 0.25 miles new road construction

On November 4, 1988, Forest Supervisor Neil Paulson signed a decision notice selecting Alternative C2, which authorized a 48-inch wide ATV access trail from road 526. On May 25, 1989, Deputy Regional Forester R. Forrest Carpenter affirmed Supervisor Paulson's decision. On December 8, 1989, Reviewing Officer Larry Henson remanded the case back for additional work and a new decision. Mr. Henson's remand was

DECISION NOTICE  
and  
FINDING OF NO SIGNIFICANT IMPACT

USDA Forest Service  
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Peaks Ranger District  
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Enclosure 1

*Encl 1*

based on a recent decision to close the depot and the fact the Regional Forester did not exhaust all avenues to secure permission for access across the base. The remand stated "Our assessment should identify the alternative that will result in the least impacts, overall regardless of ownership of the lands on which the impacts occur."

The original environmental assessment did consider two alternatives through the depot (alternatives E and F ). The environmental assessment found both of these alternatives would have less environmental effects than the selected alternative. The environmental analysis found alternative E the best access from an environmental and engineering standpoint. However, the Commanding Officer of NAD submitted a letter stating that it was not feasible to grant access through the depot. He based his decision on security, safety and environmental reasons. Based on this letter the ID team felt alternatives E and F were outside the decision authority of the Forest Service.

Since the remand the ID team has made a ground review of alternative E with representatives of the depot and Mr. Smith. That meeting did identify the need to make a small change in Alternative E where it leaves the depot. Also, since the remand the Coconino National Forest has written a letter to Colonel Willis, Department of the Army, Tooele, Utah requesting his input into the access case. In Mr. Willis' response to this letter, he stated the Army is preparing a "Report of availability" and if no contamination is found on the easement area, the report would request a road easement be prepared for Mr. Smith. Also, the Forest Supervisor of the Kaibab National Forest agreed to issue an easement, on an existing road, through the Kaibab National Forest to the NAD Boundary.

DECISION

It is my decision to select alternative E. The environmental analysis found this alternative to be the best alternative from a environmental and engineering standpoint. The letter from Mr. Willis makes this a realistic alternative.

Alternative A was not selected because it would not meet Mr. Smith's objective of having vehicular access to his property.

Alternative B was not selected because Mr. Smith has indicated that he is not a willing seller at this time.

Alternatives C1 and C2 were not selected because they would cause greater environmental impacts than the selected alternative and would not give Mr. Smith the road access he requested.

Alternatives D1 and D2 were not selected because they were in conflict with road management objectives and would result in much greater impacts on wildlife between road 526 and the rim of Volunteer Canyon.

Alternative F was not selected because the road had to cross Volunteer Canyon which would cause greater environmental impacts than alternative E.

Alternative G was not selected because of the impacts that road construction and use in this location would have on soil erosion and sediment production, water quality, riparian habitat on downstream National Forest, habitat of the Mexican spotted owl (a species proposed for listing as threatened), and habitat of Potentilla multifoliolata, a sensitive plant species.

#### FINDINGS

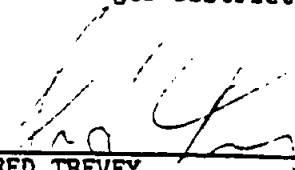
This action is consistent with management direction for standards and guidelines in the Forest Plan.

I have determined that this is not a major Federal action and would not significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not needed. This determination was made considering the following factors: 1) The proposed access is on an existing road. 2) There are no known effects to critical habitat for proposed endangered, threatened or sensitive species, or cultural and historic values. Effects on human health and safety are not significant. 3) The physical and biological effects are limited to this immediate geographic area which has no special uniqueness such as park lands, and the action does not set precedent for other projects that may have significant effects. 4) There are no known effects on the human environment that are highly uncertain or that involve unique or unknown risks and, based on scoping and analysis, the presence and magnitude of the environmental effects of this action are not likely to be highly controversial. 5) There are no known significant irretrievable or irreversible commitments of resources, and the action does not threaten violation of federal, state, or local law or requirements imposed for protection of the environment.

#### IMPLEMENTATION AND APPEALS

This decision is subject to appeal in accordance with 36 CFR 217. A written notice of appeal and statement of reasons must clearly state that it is a Notice of Appeal being filed pursuant to 36 CFR 217. Appeals must be filed with: David F. Jolly, Regional Forester, 517 Gold Avenue SW, Albuquerque, New Mexico 87102 within 45 days after the date of advertisement of this decision in the Arizona Daily Sun. This project will not be implemented for seven calendar days following the publication of the legal notice of Decision.

For further information, contact Clyde Thompson, District Ranger at the Peaks Ranger District (602) 526-0866.

  
\_\_\_\_\_  
FRED TREVEY  
Forest Supervisor

4/26/91  
\_\_\_\_\_  
Date



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
ARIZONA STATE OFFICE  
3707 N. 7TH STREET  
P.O. BOX 16563  
PHOENIX, ARIZONA 85011



IN REPLY REFER TO:

1795 (931)

June 28, 1991

Mr. Arver Ferguson, Jr.  
U.S. Army Corps of Engineers  
Fort Worth District (ATTN: CESWF-PL-RE)  
819 Taylor Street  
Fort Worth, Texas 75102-0300

Dear Mr. Ferguson:

Thank you for the opportunity to comment on the May 1991 Base Realignment and Closure Draft Environmental Impact Statement. Arizona's comments and concerns are limited to activities related to the Navajo Depot.

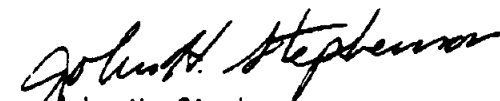
The Navajo Depot was established by Executive Order from United States Forest Service administered lands and is currently surrounded by existing Forest Service administered lands. Public Land Order Number 59, dated November 12, 1942, states that; "It is intended that the lands herein reserved shall be restored to the status possessed by them immediately prior to the issuance of this order, when they are no longer needed by the War Department for military purposes."

It is our understanding that the proposal is to transfer the land from Department of the Army to the State National Guard. The proposed use of the area may change from that of a storage supply area to that of a training area. In any case, it will continue to be utilized for military purposes; therefore, remaining as withdrawn Federal land. Additionally, if the withdrawal were to be revoked, the land would return to National Forest status.

In view of the above, the Bureau of Land Management will not be affected by the proposed action with the possible exception of processing a change of use or a transfer of jurisdiction of the withdrawal. We have no substantive comments to make on the contents of the draft statement.

Again, thank you for the opportunity to comment.

Sincerely,

  
John H. Stephenson  
Acting Deputy State Director  
Lands and Renewable Resources



# ARIZONA STATE PARKS

800 W. WASHINGTON  
SUITE 415  
PHOENIX, ARIZONA 85007  
TELEPHONE 602-542-4174

FIFE SYMINGTON  
XXXXXXXXXXXX  
ROSEMOFFORD  
GOVERNOR

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M. JEAN HASSELL  
STATE LAND COMMISSIONER

KENNETH E. TRAYOUS  
EXECUTIVE DIRECTOR

COURTLAND NELSON  
DEPUTY DIRECTOR

June 10, 1991

Arver Ferguson, Jr.  
U.S. Army Corps of Engineers  
Fort Worth District  
Attn: CESWF-PL-RE  
819 Taylor Street  
Ft. Worth, Texas 75102-0300

RE: Navajo Army Depot Activity (NADA), Draft Environmental Assessment (EA), DOD-Army

Dear Mr. Ferguson:

Thank you for sending us a copy of the Hawthorne draft EA that includes information on NADA. I have reviewed portions of this document and have the following comments only as respects NADA:

1. I realize that it is very difficult to summarize a culture history for an area in a few paragraphs, but the Cultural Resources section (3.2.7) for NADA seems overly brief. For instance, no mention is made of the prehistoric Cohonina, the group that used to occupy the NADA area. It is appropriate to mention the Sinagua, but this group was essentially east and northeast of the Cohonina. There is also no mention of the lumber industry in the area nor is there mention of the potential for historic homesteads. Section 3.2.7 also indicates that none of the historic buildings have been evaluated for the National Register of Historic Places. For your information, this office has evaluated a number of the buildings at NADA for the National Register in consultation with the facility.
2. Section 4.2.7 indicates that if the Arizona National Guard (AZNG) takes over the facility, there would be no resulting direct effects to cultural resources. This statement may not be accurate. On-going troop training, in addition to planned new troop training activities, would potentially directly effect National Register eligible cultural resources. The Programmatic Agreement (PA) that is being developed for the facility acknowledges this possibility. In the same vein, the draft EA states that if the facility is returned to the U.S. Forest Service, there would be no resulting direct effects to cultural resources. If the facility becomes Forest Service property, it will be subject to fuel wood sales and such sales could directly affect cultural resources. Finally, we do not agree that if NADA is sold to a non-Federal entity, then only potentially minimal adverse effects could occur. In such an event, there could be destructive adverse effects to cultural resources.

We appreciate the opportunity to review the draft EA and hope that the above comments are helpful. If you have any questions, please do not hesitate to contact me.

Sincerely,

Robert E. Gasser  
Compliance Coordinator

for Shereen Lerner, Ph.D.  
State Historic Preservation Officer



## ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

FIFE SYMINGTON, GOVERNOR  
RANDOLPH WOOD, P.E., DIRECTOR

May 28, 1991  
RPU91,293

E-4260.6.2

Arver Ferguson, Jr.  
U.S. Army Corps of Engineers  
Fort Worth District (ATTN: CESWF-PL-RE)  
819 Taylor Street  
Fort Worth, TX 75102-0300

Dear Mr. Ferguson:

Thank you for providing the Arizona Department of Environmental Quality (ADEQ) with the opportunity to comment on the Draft Environmental Impact Statement, Base Realignment and Closure (DEIS) which includes information for the closure of the Navajo Depot Activity (NADA) in Arizona. ADEQ has provided state oversight of the Installation Restoration Program activities at NADA and is aware of the many environmental problems and threats posed by past activities there. The DEIS briefly discusses environmental contamination problems and states that more information on these issues, as they relate to the closure, will be provided in future National Environmental Policy Act (NEPA) documentation. This being the case, I have only the following comment on this DEIS.

1. Page 68, paragraph 3, makes reference to Arizona Department of Water Quality regulations. There is no such agency. Groundwater and surface water quantity and quality in the state of Arizona are regulated by the Arizona Department of Water Resources and ADEQ, respectively.

I am looking forward to reviewing the future NEPA documents mentioned in the DEIS. If you have any comments you wish to make directly to me, instead of through your public comment process, please contact me at (602)257-2171.

Sincerely,

Handwritten signature of Jeffrey P. Kulon in cursive.

Jeffrey P. Kulon  
Environmental Health Specialist  
Office of Waste Programs



THE STATE



OF ARIZONA

## GAME & FISH DEPARTMENT

2221 West Greenway North, Phoenix, Arizona 85022-4313 (602) 942-5000

Governor  
Mike Symington

Commissioners:  
Philip W. Anderson, Esq., Chairman  
Arnon K. Whiting, Kendrick  
Larry Taylor, Yuma  
Elizabeth T. Woods, Tucson  
Thomas G. Woods, Jr., Phoenix

Director  
Diane L. Smade

Deputy Director  
Thomas W. Spalding

July 8, 1991

Mr. Arver Ferguson  
U.S. Army Corps of Engineers  
Fort Worth District  
819 Taylor Street  
Fort Worth, Texas 76102-0300

Dear Mr. Ferguson:

Re: Draft Environmental Impact Statement (DEIS);  
Base Realignment and Closure - Navajo Army Depot

The Arizona Game and Fish Department appreciates the chance to review the above-referenced DEIS prepared by the U.S. Army Corps of Engineers for facility closure and realignment, and we would like to provide the following comments regarding the closure of the Navajo Army Depot in northern Arizona.

The Department believes that the DEIS does not adequately evaluate the real property reuse alternatives, and that it is inappropriate for the DEIS not to treat in depth the possibility of other uses, including the return of portions of the Navajo Army Depot Facility to the U.S. Forest Service. In the absence of a thorough environmental analysis of the reuse alternatives, a final decision based on this document would certainly be called into question.

The subjects addressed in the DEIS were most often addressed superficially. There was a lack of detailed information about existing resources and potential resource impacts to support the conclusions contained in the document. For instance, the conclusion that there is no difference in the wildlife resource impacts of using the Navajo Army Depot as a training facility, using it as a storage depot, or transferring it back to the Forest Service, is clearly in error.

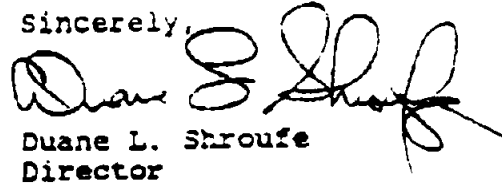
The Department strongly recommends that this DEIS be rewritten to include a greater range of alternatives and a more complete analysis of environmental impacts.

Mr. Arver Ferguson

July 8, 1991

Thank you for the opportunity to review and comment on this DEIS.

Sincerely,



Duane L. Shroufe  
Director

DLS:RM:lkl

cc: Supervisor, Kaibab National Forest  
Supervisor, Coconino National Forest  
Arizona State Clearinghouse, AZ 91-80-0019

70 Long Bow  
Williams, Arizona 86046  
18 June 1991

Mr. Arver Ferguson, Jr.  
U.S. Army Corps of Engineers  
Fort Worth District (Attn: CESWF-PL-RE)  
819 Taylor Street  
Fort Worth, Texas 75101-0300

Dear Mr. Ferguson:

The purpose of this letter is to provide comments to the Hawthorne Draft Environmental Impact Statement (EIS) as it applies to Navajo Army Depot Activity. This letter will consist of two segments. The first segment will address general statements contained in the EIS; statements that the Arizona Army National Guard provided the news media; and personal knowledge I have of Navajo Army Depot Activity (NADA). The second segment will detail a direct personal issue.

As Col. Brown's cover letter generally stated, and Chapter 1, Purpose 1.1, page 1 stated: "Manpower positions, materials, and supplies from...NADA...would be eliminated, disposed of through attrition, or transferred to various other U.S. Army Materiel Command Facilities." It was stated that this action resulted from recommendations of the Defense Secretary's Commission, and adopted in the Defense Authorization Amendments and Base Closure and Realignment Act (Public Law 100-526). Also stated in the EIS, Executive Summary, Page ES-1, was that the purpose of the act is to "provide procedures to facilitate the closure and realignment of obsolete or unnecessary military installations."

As I understand the system, the Secretary's Defense Commission recommendations applied to all Active Armed Services Branches under the Department of Defense (DOD). I conclude, perhaps incorrectly, that the Commission deemed NADA's storage capability obsolete or unnecessary for all active Armed Service Branches. To think otherwise, would seem to me, to constitute a realignment rather than closure. To support my conclusion, NADA has in the past routinely stored ammunition/materials from all Armed Services Branches. It is a fact that because of NADA's Base Closure situation, the Depot received orders and has executed the shipment of Air Force 750 pound bombs to Hawthorne. This example indicated to me that closure of NADA is recognized by some Defense Officials as meaning absolutely no presence, "manpower, materials, and supplies" of all active Armed Service Branches.

1. I realize that the Defense Secretary's Commission Report contains the statement: "The Commission recommends Navajo for closure and anticipates its eventual transfer to the Arizona National Guard." First, I don't consider the phrase "anticipates its eventual transfer...", directive in nature, but merely a suggested consideration. Secondly, I firmly believe that had Arizona Army National Guard (AZNG) declined to accept NADA, the consideration would have terminated at that point.

2. Having served the Department of Army for nearly thirty years, the last decade at NADA, I am troubled by the possibility that the AZNG may directly or indirectly be considering actions which appear to me to circumvent or violate the Act (Public Law 100-526). In the Flagstaff Arizona Daily Sun newspaper, 9 June 1991, the issue was raised that under the current license by which the AZNG uses and occupies the Depot, the Guard "shall not use the premise as a permanent or temporary repository for toxic or hazardous materials not generated on premises." I personally reviewed an unclassified proposed license change, developed by the AZNG, that used the language: the premises may be used as a permanent or temporary repository for toxic or hazardous materials not generated on the premises. The AZNG also stated in the above mentioned news article that the most recent proposal to amend the license adds the phrase, "except for such materials stored or utilized in the furtherance of Department of Defense missions offered to and accepted by Navajo Depot." If the Public Law 100-526 prohibits the presence (manpower, materials, and supplies) of all active Armed Service Branches, what mission, other than training, can the Defense Department offer Navajo? Surely the Defense Department does not believe the AZNG has the expertise to operate a toxic waste dump in the line of training.

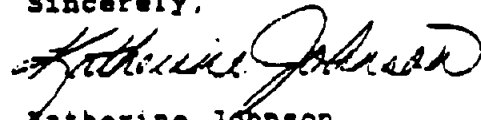
3. Continuing to refer to the newspaper article, it states: (AZNG Major) "Galkowski said the Guard was pursuing contracts with military branches other than the Army to store materials, but he would not say what kind of contracts." Again, if the AZNG were to conduct contract business with active Defense Branches, it appears to me to circumvent or violate Public Law. In the past, the AZNG attempted to enter into a direct contract with a civilian defense contractor. It is my understanding that this effort failed because of Titles 32 or 10 of United States Code. I submit the argument that the AZNG is prohibited, by Public Law, from storing munition/materials for active Armed Service Branches, and because of Titles, United States Code, cannot enter into contracts with civilian defense contractors. I further submit that the AZNG's authorization to utilize NADA is in a purely training capacity as a state entity under Title 32, United States Code.

4. If my arguments are valid, then based on past AZNG training operations (years 1982-1990), the AZNG most certainly should not be given authorizations to control the total 28,300 acres of Navajo. Under current conditions, regular Army presence, approximately

page 2  
letter to William D. Brown  
RE: Draft EIS

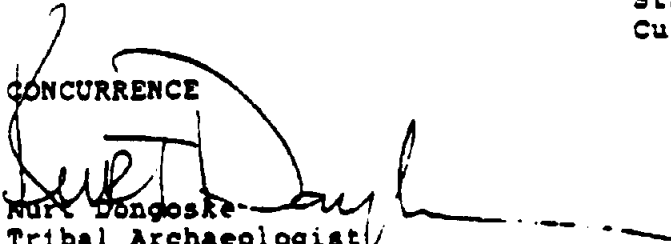
If you have any questions concerning the Hopi Cultural Preservation Office's comments on the draft EIS, or need further clarification concerning the Hopi position, please contact our office at (602) 734-2441, extension 238 or 205.

Sincerely,



Katherine Johnson  
Staff Archaeologist  
Cultural Preservation Office

CONCURRENCE



Nurt Dongoske  
Tribal Archaeologist  
Cultural Preservation Office



THE  
NAVAJO  
NATION

P.O. BOX 308 • WINDOW ROCK, ARIZONA 86515 • (602) 871-4941

PETERSON ZAM  
PRESIDENT

MARSHALL PLUMMER  
VICE PRESIDENT

Telefax Number: 817/885-7539

July 08, 1991

Mr. Arver Ferguson  
U.S. Army Corps of Engineers  
Fort Worth District  
819 Taylor Street  
Fort Worth, Texas 76102-0300

Dear Sir:

Reference: DRAFT ENVIRONMENTAL IMPACT STATEMENT - BASE  
REALIGNMENT AND CLOSURE: Fort Wingate Depot Activity,  
Navajo Depot Activity, Umatilla Depot Activity, and  
Hawthorne Army Ammunition Plant, May 1991

The Navajo Environmental Protection Administration (NEPA) has  
reviewed the referenced document. NEPA has concerns regarding the  
Fort Wingate Depot Activity and the Navajo Depot Activity.

Be advised that we are reserving our comments pending our review  
of the Defense Environmental Restoration Program documents for the  
remediation of hazardous materials and waste at the Fort Wingate  
Depot Activity and the Navajo Depot Activity. Please provide this  
office with four (4) copies of this document as soon as it is  
available.

If you have any questions, please telephone me at 602/729-5282 or  
5283.

Sincerely,

NAVAJO ENVIRONMENTAL PROTECTION ADMINISTRATION

Louise A. Linkin, Director

xc: Anderson Morgan, Executive Director, Division of Natural  
Resources  
Jeffery Henry, Staff Assistant, Office of the President  
and Vice President for the Navajo Nation Council

Mr. Peter Ferguson

July 8, 1991

Thank you again for the opportunity to comment on the DEIS.  
If you have any questions, please contact Jon Klingel  
(827-9912) of this Department.

Sincerely,



Richard McClaskey  
Acting Director

RM/JTK/nla

cc: Dan Pursley (NW Area Supervisor, NMGF)  
Randy Isler (NW Area Game Manager, NMGF)  
Mike Johnson (Albuquerque District Supervisor, NMGF)  
Roger Mace (Gallup District Officer, NMGF)  
Wain Evans (Assistant Director, NMGF)  
Dan Sutcliffe (Game Mgmt. Division Chief, NMGF)  
Santiago Gonzales (Game Mgmt. Asst. Division Chief, NMGF)  
Andrew Sandoval (HBL Division Chief, NMGF)  
Robert Jenks (Environmental Section Chief, NMGF)  
Lisa Fisher (Habitat Specialist, NMGF)

THE HOPI TRIBE



CL  
DD  
DE  
XO

Vernon Masayeva  
CHAIRMAN

Pepper C. Dillion  
VICE-CHAIRMAN

William D. Brown  
District Engineer  
Fort Worth District, Corps of Engineers  
P.O. Box 17300  
Fort Worth, Texas 76102-0300

July 2, 1991

RE: Response to Draft Environmental Impact Statement, Base  
Realignment and Closure

Dear Mr. Brown:

The Hopi Office of Cultural Preservation has received and reviewed a copy of the Draft Environmental Impact Statement, Base Realignment and Closure for Fort Wingate Depot Activity, Navajo Depot Activity, Umatilla Depot Activity, and Hawthorne Army Ammunition Plant.

Our apprehension with this draft EIS lies with section 3.2.8, Native American Concerns. We were disturbed to read that "there are no topographical features, sites, or vegetable or mineral resources at NADA that are known to be critical for the practice of traditional religion," when to our knowledge, the Hopi tribe has not been contacted concerning this area.

We expect consultation with the various Native American groups to identify the traditional cultural properties (TCP) or sacred areas located in the area under study. If this consultation process has been initiated or is anticipated, then it should have been documented in the draft EIS. Moreover, it is our contention that a proper assessment of the impacts of a federal undertaking cannot be performed without consulting the appropriate Native American groups for the identification of the TCP's, sacred areas, and the treatment of prehistoric and historic sites.



4. 14,000 acres containing the 778 ammunition igloo magazines were off limits to training units other than ammunition units and units performing facility maintenance and repair. If the Public Law removes ammunition storage, other than basic guard unit requirements, then the 14,000 acres become available for all guard training units.

5. In summary of my first segment, I believe the EIS is deficient in that it should identify all disposal alternatives and precise future uses. As a start you should consider the alternative of authorizing the AZNG control of the current administrative area, ammunition restricted area (14,000 acres), plus known contaminated areas; and relinquishing control of the Buffer Zone (approximately 10,000 to 12,000 acres) to Department of Agriculture, U.S. Forest Service, for public use.

6. It appears to me that a number of legal issues remain unresolved that relate directly to the Army's preferred alternative. How can the Army make an informed judgement without knowing what the AZNG is allowed to do or is planning? Par 4.2.3, 3rd par., page 127, is far too general, it does not quantify land amounts with particular operations, and it does not consider the availability of 14,000 acres if the ammunition mission is prohibited. As evidenced by EIS, Par 4.2.2.1, page 126, "Future AZNG training activity above current levels would require additional NEPA documentation." I interpret this statement to mean that the regular Army does not know what the AZNG activities will be; or perhaps they do not care.

It is inconceivable to me that the regular Army can have a preferred alternative without knowing future AZNG intentions -- unless there is another Army or Arizona State agenda. I am amazed that the Army's EIS preferred alternative does not articulate why it is preferred.

The EIS is to inform the public. The public has not been served.

As I stated earlier, this second segment deals with a direct personal issue. On page ES-13, Unresolved Issues, it states: "The owner's access to one parcel of private property adjacent to NADA is an unresolved issue." I am that property owner.

The property, as you know, is bordered on the west, north and east by NADA, and south by the U.S. Coconino National Forest. I applied several years ago for a road easement from the Forest Service. After much correspondence, the Forest Supervisor issued a decision (Enclosure 1) selecting a road alternative traveling through National Forest land and NADA land. It is my understanding that the alternative selected was coordinated with Col Roy R. Willis, Commander, Tooele Army Depot.

The AZNG has subsequently appealed the Forest Supervisor's decision based in part that Col Willis had no authority in the decision process permitting access through NADA. In addition, it was the Commander NADA and USPFO, State of Arizona, that had the ultimate authority.

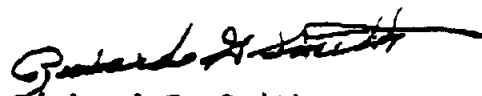
I would remind the AZNG that the current license agreement between Department of Army and the AZNG states that the Secretary of Army or his duly authorized representative, Commander, Tooele Army Depot has management control over NADA. I would also remind the AZNG that the Support Agreement between the USPFO of Arizona and the Commander, Tooele Army Depot, states that real estate actions must be processed through the DESCOM chain of command. Col Willis is in that chain. I realize that these are changing times, but I have difficulty believing that the AZNG Commander of NADA has greater authority than the Secretary of Army or his duly authorized representative, Commander, Tooele Army Depot.

I raise these issues because at the Public Meeting held in Flagstaff, 11 June 1991, concerning the draft EIS, the AZNG expressed their wishes to remove my road access from EIS consideration. I do not want my road access situation removed from EIS Unresolved Issues.

7. Col Willis, in his letter to the Forest Supervisor (Enclosure 2), stated: "Provided this further investigation confirms our expectation that no contamination exists, we intend to prepare a Report of Availability requesting a road easement be granted to Mr. Smith." I expect the Army to be true to its word. I have received word that the "further investigations" are nearing favorable conclusion. However, should the "further investigations" conclude real or imaginary contamination, one must assume, because of proximity, my land is contaminated also. Until I am granted a road easement through NADA, I request that the issue remain unresolved.

In closing, allow me to remind you that I have not received the Corps' response to my certified letter, dated 11 May 1990, concerning this very issue.

Respectfully,



Richard G. Smith  
(602) 635-2393

Encl: 2

CF: Lewis D. Walker  
Deputy Assistant Secretary of the Army

Continued

based on a recent decision to close the depot and the fact the Regional Forester did not exhaust all avenues to secure permission for access across the base. The remand stated "Our assessment should identify the alternative that will result in the least impacts, overall regardless of ownership of the lands on which the impacts occur."

The original environmental assessment did consider two alternatives through the depot (alternatives E and F). The environmental assessment found both of these alternatives would have less environmental effects than the selected alternative. The environmental analysis found alternative E the best access from an environmental and engineering standpoint. However, the Commanding Officer of NAD submitted a letter stating that it was not feasible to grant access through the depot. He based his decision on security, safety and environmental reasons. Based on this letter the ID team felt alternatives E and F were outside the decision authority of the Forest Service.

Since the remand the ID team has made a ground review of alternative E with representatives of the depot and Mr. Smith. That meeting did identify the need to make a small change in Alternative E where it leaves the depot. Also, since the remand the Coconino National Forest has written a letter to Colonel Willis, Department of the Army, Toco, Utah requesting his input into the access case. In Mr. Willis' response to this letter, he stated the Army is preparing a "Report of availability" and if no contamination is found on the easement area, the report would request a road easement be prepared for Mr. Smith. Also, the Forest Supervisor of the Kaibab National Forest agreed to issue an easement, on an existing road, through the Kaibab National Forest to the NAD Boundary.

#### DECISION

It is my decision to select alternative E. The environmental analysis found this alternative to be the best alternative from an environmental and engineering standpoint. The letter from Mr. Willis makes this a realistic alternative.

Alternative A was not selected because it would not meet Mr. Smith's objective of having vehicular access to his property.

Alternative B was not selected because Mr. Smith has indicated that he is not a willing seller at this time.

Alternatives C1 and C2 were not selected because they would cause greater environmental impacts than the selected alternative and would not give Mr. Smith the road access he requested.

Alternatives D1 and D2 were not selected because they were in conflict with road management objectives and would result in much greater impacts on wildlife between road 526 and the rim of Volunteer Canyon.

Alternative F was not selected because the road had to cross Volunteer Canyon which would cause greater environmental impacts than alternative E.

Alternative G was not selected because of the impacts that road construction and use in this location would have on soil erosion and sediment production, water quality, riparian habitat on downstream National Forest, habitat of the Mexican spotted owl (a species proposed for listing as threatened), and habitat of Potentilla multifoliolata, a sensitive plant species.

**FINDINGS**

This action is consistent with management direction for standards and guidelines in the Forest Plan.

I have determined that this is not a major Federal action and would not significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not needed. This determination was made considering the following factors: 1) The proposed access is on an existing road. 2) There are no known effects to critical habitat for proposed endangered, threatened or sensitive species, or cultural and historic values. Effects on human health and safety are not significant. 3) The physical and biological effects are limited to this immediate geographic area which has no special uniqueness such as park lands, and the action does not set precedent for other projects that may have significant effects. 4) There are no known effects on the human environment that are highly uncertain or that involve unique or unknown risks and, based on scoping and analysis, the presence and magnitude of the environmental effects of this action are not likely to be highly controversial. 5) There are no known significant irretrievable or irreversible commitments of resources, and the action does not threaten violation of federal, state, or local law or requirements imposed for protection of the environment.

**IMPLEMENTATION AND APPEALS**

This decision is subject to appeal in accordance with 36 CFR 217. A written notice of appeal and statement of reasons must clearly state that it is a Notice of Appeal being filed pursuant to 36 CFR 217. Appeals must be filed with: David F. Jolly, Regional Forester, 517 Gold Avenue SW, Albuquerque, New Mexico 87102 within 45 days after the date of advertisement of this decision in the Arizona Daily Sun. This project will not be implemented for seven calendar days following the publication of the legal notice of Decision.

For further information, contact Clyde Thompson, District Ranger at the Peaks Ranger District (602) 526-0866.

  
 \_\_\_\_\_  
 FRED TREVEY  
 Forest Supervisor

  
 \_\_\_\_\_  
 Date



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY

TOOELE ARMY DEPOT  
TOOELE, UTAH 84074-6000

January 15, 1991

RECEIVED  
COCONINO NT  
JAN 22 1991

Legal Office

Duane Butler  
Acting Forest Supervisor  
Coconino National Forest  
2323 E. Greenlaw Lane  
Flagstaff, Arizona

Dear Mr. Butler:

This responds to your letter of January 3, 1991, requesting input on Richard Smith's request for access to his property. You indicate the Kaibab National Forest has agreed to issue Mr. Smith a road easement across the Kaibab National Forest provided access is granted across the Navajo Army Depot Activity.

The Army procedure for granting an easement across Army property is to prepare a "Report of Availability" which is forwarded to our higher headquarters for approval and referral to the Corps of Engineers for legal action. Army regulations prohibit granting access over property which is contaminated with explosives or toxic materials. While a preliminary investigation has not disclosed any evidence of contamination, further investigation has been recommended after the snow melts this Spring.

Provided this further investigation confirms our expectation that no contamination exists, we intend to prepare a Report of Availability requesting a road easement be granted to Mr. Smith. We hope to have this prepared by April 15, 1990, and anticipate further Army review may take an additional three months.

Sincerely,

*Roy R. Willis*  
Roy R. Willis  
Colonel, OrdD  
Commander

CF:  
NADA, ATTN: MAJ Galkowski  
Mr. Richard G. Smith, 70 Long Bow, Williams, AZ 86046

Enclosure 2

McCRACKEN REALTY  
397 MALPAIS LANE  
FLAGSTAFF, ARIZONA 86001  
PHONE 602-774-2208

ATTN: Arver Ferguson  
Environmental Resources Planning Division  
Army Corps of Engineers  
Sir:

July 1, 1991

Re: Base Realignment and Closure  
NADA prepared May 1991

I am an adjacent landowner of the NAD on the northeast. My property fronts the buffer zone for approximately  $\frac{1}{2}$  mile and my home is approximately 800 feet off the boundary. First let me state that I have never been personally informed about any of the scoping meetings held in 1989 and only found out about the June, 1991 meeting through the newspaper. In my considerable experience in Real Estate I find this not only unusual, but unacceptable as well. In reading the current draft EIS I find no mention of my ranches existence.

1. My experience with AZNG troops in training has been very negative. They have harassed the livestock with low flying helicopters carrying nets full of munitions and dropped so low over my house that there were real fears they might catch one of the nets on the tall snag outside and crash. They have had thousands of acres within the depot to practice in and yet they have consistently used my field as extended training ground. When I expressed this at the June meeting, I was told by one major that the AZNG thought that was State Land. Obviously, there is a house on the property, horses and children, conditions not usually prevalent on state land. Every map of the area clearly shows my 120 acres as private. I would appreciate more respect, and therefore  
2. feel that the only way there will be any control is if the alternative of joint control with the USFS is favored, or of course clearly the best alternative would be complete control of the buffer zone by the USFS.

3. As to the draft EIS and my review thereof, I find a lack of proper research and factual knowledge of the area affected, throughout the document. It appears to have been prepared with a clear bias towards AZNG takeover.

4. The draft EIS does not address several extremely pertinent issues. The first issue is ultimate disposition of lands. AZNG use will destroy the buffer zone and contaminate it further over time. There is no assumption (even though one is stated in 42.2.1) that AZNG training levels will remain the same. The fact is they have increased considerably over the last five years. Any kind of human impact is adverse to wildlife and ecosystems. The NADA buffer zone is extremely unique in that there is an abundance of surface water and wetland habitat not seen in most of the Flagstaff area. These conditions are extremely conducive to use by elk, deer, eagles, ducks and geese and a number of other species. A pair of bald eagles wintered between my pond and the adjacent

# McCRACKEN REALTY

397 MALPAIS LANE

FLAGSTAFF, ARIZONA 86001

PHONE 602-774-2208

marshland on NAD this winter. We have seen spotted owls on our place, badgers, large flocks of wild turkeys (a species whose numbers are decreasing rapidly), Canadian Geese, large numbers of blue herons and many other species which cross into NADA freely, as they are generally not respecters of barb wire. My specific concern with use of the wetland areas within the buffer zone is that heavy metal contamination is not only possible, but very probable. AZNG, in order to keep their troops sharp, must fire munitions. As stated in EIS on p. 131, 'An eventual minimum benefit could be realized as the production of contaminating agents ceases following termination of present AZNG activities.' Shell casings, fragmented missile and bomb casings will contaminate a delicate and rare ecosystem. Prior to AZNG takeover complete biological resource studies of the buffer zones need to be done. Complete surveys of wetland habitats, population surveys of elk, deer and other big game species, historical and archeological studies must be implemented before any proper decisions can be made as to future use. To gloss over these issues is to cheat the people of Arizona out of their future.

The draft states that there are no known endangered species on NAD, however no inventory of wildlife has been done. It is unknown whether or not there are endangered plant species because no inventory has been done.. Why not?

The draft states that there are no important historical sites on NAD, but no research has been done to verify that. The existence of the Overland Wagon Road is well known and documented by other parties as an important East-West Route of much historical significance. Does its significance end upon entering NAD? Have the numerous old homesteads on the property even been identified? The EIS notes only one Smith homestead in Volunteer Canyon, and yet there are several more homesteads within the depot, clearly visible from the civilian side of the buffer zone. Part of the homestead I now own was condemned and added to the depot. On our side of the line we have found a profusion of relics, including such items as camel shoes (or so identified by a local historian), logging train wheels, purpled glass, gold coins, axes and other 19th century tools. We have also noted what appears to be gravesites, logging railroad beds and old mill sites.

The EIS has no mention of archeological sites within the depot, and yet when building our road, less than a half mile away, we were required to do archeological studies, which identified several sites. We were also required to preserve these sites. It is very difficult to preserve an archeological site in a practice war zone.

# McCRACKEN REALTY

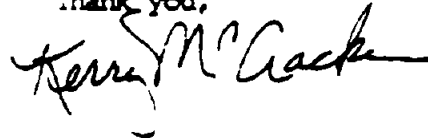
397 MALPAIS LANE  
FLAGSTAFF, ARIZONA 86001  
PHONE 602-774-2208

9. The remaining issue within the EIS deals with land use. In all fairness to the public, hunting by the public should be permitted, or no hunting should be permitted. It is arbitrary to let only guardsman hunt on NAD.

10. As to the future disposition of Real Estate within NAD, it is certainly the intent of the law to return the buffer zone to the USFS, and much of the interior, once the army has cleaned up their mess, if indeed that is possible. Wharrey housing could be sold off to low income families, and thereby increase Coconino County's tax base and help mitigate the economic impact of closure of the depot, while providing solid affordable housing for local families. The water and sewer systems could certainly operate under special use permit.

11. Please consider the beneficial impacts created by the alternative which places the USFS back in charge of NAD. They are in a position to properly manage and control the resource without further devastation of the area. In lieu of that, joint control would maintain some semblance of order and management. To allow the AZNG Complete control of NAD is tantamount to taking a wounded hen out of a coyote's mouth and leaving it to the safe keeping of a chicken eating dog.

Thank you,



Kerry McCracken  
Soggybottom Ranch  
Flagstaff, Arizona

CC. USFS COCONINO FOREST  
O.C. ARIZONA DAILY SUN



COPY

1

TRANSCRIPT OF PUBLIC HEARING  
EIS PUBLIC MEETING  
COMMISSION ON BASE REALIGNMENT

11, JUNE, 1991  
ARIZONA NATIONAL GUARD ARMORY  
FLAGSTAFF, ARIZONA  
7:30 P.M.



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**NORTHERN ARIZONA REPORTERS**  
317 N. Humphreys • PO Box 22142 • Flagstaff, AZ 86002

FAX (602) 779-3624  
(602) 774-0442

I N D E X

STATEMENTS BY:

Col. James Burns	8
R. Dennis Lund	15
Kerry McCracken	16
Cheri McCracken	17

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1 MAJOR BIASNANSON: Thank you for coming  
2 to the committee tonight. I'm Major Bob Biasnanson.  
3 I am a member of the Army Corps of Engineers out of  
4 the Fort Worth District.

5 As some of you know, we were here in  
6 June of '89 in connection with a scoping meeting to  
7 get your comments and concerns regarding Navajo Depo  
8 activity. These were included in the preparation of  
9 the Hawthorn Graphic Environmental Impact Statement  
10 or EIS.

11 The Fort Worth District was charged  
12 by the Army material command to prepare an EIS for  
13 the Hawthorn Realignment and Base Closure package  
14 identified by the Secretary of Defense's Base Closure  
15 and Realignment Commission.

16 The EIS includes realignment of  
17 Yuma-Tela Depo activity located in Oregon. The base  
18 realignment and closure of conventional ammunitions  
19 missions and Navajo Depo activity and Fort Wingate  
20 Depo activity which is located in New Mexico. All  
21 three of these installations will be transferring  
22 their ammunitions storage missions to Hawthorn Army  
23 Ammunitions Plant in Nevada.

24 Before I continue I would like to  
25 introduce some of the officials who are here tonight.

1 Representing the Northern Arizona Council of  
2 Governments is Christine Nelson. Representing the  
3 Arizona National Guard is Colonel James Burns. And  
4 representing Navajo Depo Activity is  
5 Lieutenant Colonel Larry Trippin.

6 I'd also like to introduce the people  
7 who have been directly responsible for the  
8 preparation of the Draft Environmental Impact  
9 Statement. Major Rena O'Brian is our AMC  
10 Representative in Army Material Command. Ron Ganthry  
11 is from our Los Angeles District. And Arver Ferguson  
12 is the Fort Worth project manager for the EIS.

13 Before we begin receiving your  
14 comments I would like to give you the history behind  
15 the Base Closure and Realignment Program.

16 In December of '88 the Secretary of  
17 Defense's Commission on base realignment and closure  
18 delivered a final report. The base realignment and  
19 closure list was approved and forwarded through  
20 Congress by the Secretary of Defense in January of  
21 '89.

22 The commission's recommendation  
23 impacted over 100 installations which will be closed  
24 or realigned under the provisions of Public Law  
25 100-526 which was developed from the commissions



1 report and is referred to as the Defense  
2 Authorization Amendments and Base Closure and  
3 Realignment Act.●

4 This draft EIS was prepared in  
5 accordance with the National Environmental Policy Act  
6 which is commonly referred to as NEPA. And in  
7 conjunction with the Public Law 100-526 NEPA was  
8 abbreviated somewhat by this Public Law.

9 At this time I would like to read  
10 directly from the commission's report regarding NEPA  
11 compliance. The law states: "In applying the  
12 provisions of the act, the secretary shall not have  
13 to consider: One, the need for closing or realigning  
14 a military instillation which has been selected for  
15 closure or realignment by the commission. The need  
16 for transferring functions to another military  
17 instillation which had been selected as a receiving  
18 instillation or alternative military instillations to  
19 those selected." Although the decisions were exempt  
20 from NEPA, the actual actions were not.

21 That is the purpose of the EIS and  
22 why we are conducting a public meeting tonight to  
23 document the impact that will result in implementing  
24 the decisions made in the Public Law.

25 Shown here are the major steps in the

1 NEPA process. The notice of intent was published in  
2 the federal register on May 10th, 1989. A scoping  
3 meeting was conducted in June of '89. Data gathering  
4 and impact analysis was conducted from the scoping  
5 meeting to the production of the Draft EIS. Public  
6 hearings which we are here tonight conducting.  
7 Finally, EIS and the recording of decision.

8 After the end of the public comment  
9 period on the Draft EIS, a final EIS will be  
10 prepared. There will also be an opportunity for  
11 public comment on the final EIS.

12 The purpose of the EIS is to provide  
13 data that will used to implement the base realignment  
14 and closure program. The EIS cannot change. The EIS  
15 will not change the decision to realign or close  
16 operations at Yuma-Tela, Navajo, or Fort Wingate  
17 which will eventually move to Hawthorn Ammunitions  
18 mission Plant in Nevada. They, however, act as a  
19 tool to mitigate or offset environmental, social,  
20 economic, or other possible impacts from closures of  
21 the conventional ammunitions mission at these  
22 installations which includes Navajo Depo Activity.  
23 The Army would be required to conduct separate NEPA  
24 analyses for real property dispositional alternatives  
25 to agencies other than the Department of the Defense.

1           The purpose of this meeting is for us  
2 to, again, receive your comments and concerns which  
3 are relative to the information presented in the  
4 Draft EIS. I hope that everyone here has had a  
5 chance to review the Draft EIS; however, I will  
6 provide you with a point of contact and address where  
7 you can write to receive copies.

8           We have an established format for  
9 public hearings for which we will follow tonight.

10           When you came in you should have been  
11 given a card to fill out and to sign. This card not  
12 only provides us a means for updating our mailing  
13 list but also provides you an opportunity to indicate  
14 whether you wish to make a statement or not.

15           If you did not receive a card when  
16 you came in this evening, please raise your hand and  
17 we'll give you one at this time.

18           We will now open the meeting to  
19 comments from the public who wish to speak. Anyone  
20 who has expressed an interest to comment and will  
21 provide their input on the Draft EIS will be given an  
22 opportunity to speak. You should be aware that your  
23 comments will be recorded by our court reporter. The  
24 transcript will be considered in the preparation of  
25 the final EIS. I suggest that you, please, limit

1 your presentations in order that everyone will have a  
2 chance to present their statement. If you do not  
3 wish to give an oral presentation, we will be happy  
4 to accept any written comments or concerns that you  
5 may have. The formal comment will be kept open until  
6 July 8th, 1991, to receive written comments.

7 At this time we would like to, again,  
8 hear your statements and comments.

9 As I call your name, please, come  
10 forward, introduce yourself, and make your statement.

11 First we will start with public  
12 officials who wish to make a statement. Our first  
13 speaker now will be Colonel Burns representing the  
14 Arizona National Guard.

15 COLONEL BURNS: Can everybody hear me? It  
16 will be simpler if I go without this. I'm not as  
17 ambidextrous as the Major there.

18 My name is Colonel Jim Burns and I am  
19 with the National Guard of Arizona. And I have a  
20 prepared statement which I will read.

21 Good evening, ladies and gentlemen.  
22 My name is Colonel Jim Burns and I'm here  
23 representing Major Donald L. Owens the Adjutant  
24 General for the State of Arizona, Arizona National  
25 Guard. I'm also representing all the reserve, active





1 duty soldiers, sailors, airmen, and Marines that  
2 train and work at the Navajo Army Depo as well as  
3 soldiers of the Arizona National Guard Support  
4 Brigade which I am a commander.

5 I say soldiers, sailors, airmen, and  
6 Marines because besides the Arizona National Guard,  
7 troops from all other elements of the Department of  
8 Defense use the instillation for training purposes.

9 The Defense Secretary's Commission on  
10 Base Realignment and Closures stated in its report  
11 that it anticipates the eventual transfer of Navajo  
12 to the Arizona National Guard. The Arizona National  
13 Guard totally supports the commission on this issue  
14 and agrees and supports the EIS preferred  
15 implementation alternatives of amending the existing  
16 licensing with the State of Arizona to provide a term  
17 consistent with the expiration of the current land  
18 withdrawal and to restate the primary purpose of  
19 Navajo as training and support for the Arizona  
20 National Guard.

21 It should be noted that  
22 accountability and responsibility for the  
23 instillation was already transferred to the United  
24 States Property and Fiscal Officer, the State of  
25 Arizona, and the National Guard on 2, June, 1982.



1                   Since the transfer has already  
2 occurred and the Commission's report recognizes that  
3 the army does not exercise operational control of the  
4 depo; and, therefore, the scope of the EIS in regards  
5 to NADA should be limited to the relocation of the  
6 current ammunitions mission to Hawthorn.

7                   Real property reuse and disposal  
8 alternatives should not be considered as part of the  
9 EIS process and therefore should be deleted from the  
10 Draft EIS.

11                   The Arizona National Guard concurs  
12 with the relocation of the current Army ammunitions  
13 missions as well as the amendment to the license to  
14 change the primary purpose from support of the  
15 current ammunitions missions to training. Training  
16 has always been the primary purpose of the Arizona  
17 National Guard having operational control of the  
18 installation. The current Army ammunitions mission  
19 has been viewed as a vehicle to enhance that training  
20 mission which we will continue after the ammunitions  
21 mission ceases.

22                   Even though the real property  
23 disposal of NADA is not an issue in this EIS. It is  
24 addressed in the EIS under table ES-2, Summary of  
25 Environmental Impact; therefore, I think it's

1 important to note and provide you a brief overview of  
2 the current utilization of Navajo for training and a  
3 few of the significant adverse impacts that will  
4 occur if the Arizona National Guard were to  
5 relinquish control of the installation.

6           Currently there are two reserved  
7 organizations that actually call Navajo or NADA their  
8 home. The 157th Ordinance Battalion, the Ammunition  
9 Handlers Career Management School, Headquarters  
10 Detachment, NADA, and the SeaBees detachment of the  
11 Navy, and the Arizona National Guard Weekend Training  
12 site.

13           These units not only utilize the  
14 permanent facility on the installation but train at  
15 the facility on a full and part-time basis. The  
16 installation also serves as an annual training site  
17 and the weekend training site for many other units  
18 and individuals.

19           Over the last year approximately 88  
20 units and 7,300 personnel have come to NADA to train.  
21 Personnel and units utilized NADA in preparation for  
22 Saudi Arabia as well as a normal training activity.  
23 As a matter of fact we trained a number of special  
24 units there for deployment to Saudi Arabia.

25           With the ever tightening fiscal

1 restraint and the closure of available training  
2 areas, the value of NADA as a training site becomes  
3 more and more important. NADA is exceptionally well  
4 suited for training a variety of types of units and  
5 personnel. The extensive road network and built-up  
6 areas provide ideal conditions for technical training  
7 while the remote forest areas are invaluable for  
8 tactical training to include battalion sized bivouac  
9 maneuver areas. Lessons learned from Desert Storm  
10 were that more emphasis is required on training  
11 individual soldiers in completing their tasks. This  
12 type of training primarily takes place in the field  
13 environment such as the bivouac and maneuver areas  
14 located in what we refer to as the buffer zone around  
15 Navajo Army Depo.

16           If NADA was lost as a training site,  
17 the cost of maintaining combat readiness of the  
18 Arizona National Guard and other units increase due  
19 to the increased travel time and expense. Not to  
20 mention a decrease in the readiness due to the loss  
21 to the ideal training environment.

22           A number of Arizona units including  
23 some within my own brigade would be forced to travel  
24 out of state if NADA were not available. This would  
25 result in the loss of training time and increased

1 costs.

2 Today there are four units performing  
3 their annual training at Navajo Army Depo, an Air  
4 Force support unit from California, an Ordinance unit  
5 from Georgia, and the engineers and medical units are  
6 from my own brigade. As you can see, NADA is a very  
7 valuable training resource that the Arizona National  
8 Guard has no intention of relinquishing.

9 I'd like to take this time to  
10 address some specific issues raised in the Draft EIS.

11 The EIS mentioned an unresolved  
12 issue concerning access to private a parcel of  
13 property adjacent to NADA. It is the position of the  
14 Arizona National Guard that this is not an issue in  
15 this EIS because any real property disposal  
16 alternatives other than continuation of the current  
17 operational control by the Arizona National Guard  
18 will require additional review by the National  
19 Environmental Policy Act.

20 At that time, the access issue should  
21 probably be considered in the National Environmental  
22 Policy Act process. The access issue is currently  
23 being reviewed by the Forest Service and NADA but as  
24 of today the issue has not been resolved.

25 An Environmental Remedy Investigation



1 Feasibility Study is not scheduled for NADA, which is  
2 a concern to the Arizona National Guard. However, we  
3 understand the reasons to be that the instillation  
4 will remain a Department of Defense asset; therefore,  
5 not conducting a Remedial Investigation Feasibility  
6 Study as a means of conserving base closure funds.

7           The license with the State of Arizona  
8 places responsibility for contamination due to the  
9 Army mission with the United States Government. This  
10 responsibility did not change with the transfer to  
11 the Arizona Army National Guard and will continue  
12 with the amendment to the license.

13           Of course the Arizona National Guard  
14 will continue our aggressive environmental program at  
15 the instillation to include recommendation and  
16 restoration of environmental issues resulting from  
17 past practices.

18           As part of the preferred alternative  
19 the EIS states that the termination of the mission  
20 support contract with the Arizona National Guard in  
21 fiscal year '94 would result in the reduction of the  
22 NADA work force by 120 Arizona State employees. It  
23 is our understanding that the Army is attempting to  
24 expedite the termination by as much as one year or  
25 more.

1                   This is a concern to the Arizona  
2 National Guard because those 120 employees do not  
3 have any job relocation assistance or benefit  
4 programs available to them, and most of them are  
5 National Guardsmen who would not be able to attain  
6 comparable employment in the Flagstaff area. It is  
7 our concern that the Army will not keep the  
2. 8 employees' best interests in mind in terminating the  
9 support mission contract ahead of schedule.

10                   The goal of the Arizona National  
11 Guard is to orchestrate an orderly transition into  
12 training and other missions which have a potential  
13 for employing those employees displaced as a result  
14 of the loss of the Army mission. Without a  
15 coordinated transmission and if the termination of  
16 the mission support agreement occurs prior to the EIS  
17 fiscal year '94 time frame, socioeconomic impacts  
18 would be greater than anticipated.

19                   This will not only affect the  
20 individuals in the Arizona National Guard troop  
21 structure but will also impact the community due to  
22 the loss of the Navajo Army Depo Payroll.

23                   Thank you very much and I'll be happy  
24 to entertain any questions or comments or do you want  
25 to do that afterwards?

1 MAJOR BIASNANSON: Questions will be done  
2 at the end of the meeting.

3 COLONEL BURNS: Thank you very much.

4 MAJOR BIASNANSON: Our next speaker is  
5 Dennis Lund representing Kaibab National Forest.

6 MR. LUND: Thank you. My name is Dennis  
7 Lund. I'm representing the U.S. Forest Service  
8 specifically, locally both Kaibab and Coconino  
9 National Forest." We have received a copy of the  
10 Draft Environmental Impact Statement. We appreciate  
11 receiving it very much; however, my comments will be  
12 very brief as we really have not had a chance to  
13 scrutinize the document as closely as we're sure it  
14 warrants. We will, however, be providing some  
15 written comments by July 8th, 1991.

16 At this time I think it's probably  
17 appropriate for me to say that both the Kaibab and  
18 Coconino Racketeers were disappointed to see that the  
19 prepared copy of the Draft Environmental Impact  
20 Statement failed to include any of our previous  
21 correspondence or statements during the scoping  
22 sessions in the document.

23 It appears to us right now that the  
24 document does fail to address any of the issues and  
25 concerns that we raised regarding both land





1 jurisdiction and the disposal of the hazardous waste  
2 materials at the head of Sycamore Wilderness Area and  
3 Volunteer Canyon.

4 Thank you for this opportunity.

5 MAJOR BIASNANSON: Thank you, Mr. Lund.

6 Are there any other public officials  
7 who desire to make a statement?

8 The first private citizen to make a  
9 statement will be Kerry McCracken. She is a rancher.

10 MS. MCCRAKEN: My name is Kerry McCracken  
11 I am a rancher bordered on the east for a half mile.  
12 Basically I guess that my concerns are with the  
13 preferred alternative to address the future as far as  
14 the hazardous waste and where the responsibility lies  
15 for the hazardous waste disposal.

16 Also as a neighbor of the Depo I've  
17 had a good chance to watch the Guard activity. Every  
18 year the Guard starts forest fires throughout the  
19 Depo. There's quite a bit of hunting done by Guard  
20 members now and then and here and there.

21 I feel like the Guard has shown a  
22 real disrespect for the land within the Depo and  
23 adjacent landowners' rights.

24 Every time there is any kind of any  
25 Guard training those guys fly over my house -- a 100



1 feet above my house with helicopters. This is  
2 private land. This isn't Depo land that they have a  
3 license to use and I think that there's -- I realize  
4 that currently there's a real patriotic wave going on  
5 in this country and I believe we do need places to  
6 train our troops.

7                   There's no doubt in my mind that we  
8 need those kinds of places but I consider that the  
9 Army has to be respectful of private owners' rights  
10 and also have respect for the land itself which, you  
11 know, this time of year when they're setting off  
12 bombs and starting forest fires. My concerns are  
13 } that I do have a place directly adjacent that could  
14 | burn down.

15                   I guess that's all I have to say at  
16 this point. I really don't have a copy. I haven't  
17 had a chance to look over a copy of the Environmental  
18 Impact Statement but I would like that address.

19                   MAJOR BIASNANSON: Thank you, Kerry. Our  
20 next speak are will be Cheri McCracken.

21                   MS. MCCRACKEN: Obviously McCrackens  
22 aren't shy.

23                   Basically what I would like is a  
24 | chance to look over the Environmental Impact  
25 | Statement, the draft. There are no copies available

1 tonight. Perhaps the Department of Defense can tell  
2 this lady where we can obtain a copy and get an  
3 address to do that and then we can comment in writing  
4 as we need to. Thank you very much.

5 MAJOR BIASNANSON: Thank you, Cheri. We  
6 will let you know that.

7 Do we have anyone else who wishes to  
8 make a public statement tonight? You asked a  
9 question about where you were able to get a copy of  
10 the EIS. If you will write Arver Ferguson at this  
11 address, he will forward you a copy of the Draft EIS  
12 for your review. There should also be copies of the  
13 Draft EIS in the public library here in Flagstaff.

14 We'd like to thank everybody tonight  
15 for providing us with your input and comments.  
16 Again, thank you for your attendance tonight.

17 This officially closes the meeting.  
18 If you have questions we'll stick around and be happy  
19 to respond to those questions after the meeting.  
20 Thank you very much for coming.

21 (The hearing concluded at 8:15 p.m.,  
22 June 11, 1991.)  
23  
24  
25



1 STATE OF ARIZONA )  
2 COUNTY OF COCONINO )  
3

4 I, Kimberly K. Pope, do hereby certify that I  
5 am a Notary Public within the State of Arizona.

6 I further certify that this hearing was taken  
7 in shorthand by me at the time and place herein set  
8 forth, and was thereafter reduced to typewritten  
9 form, and that the foregoing constitutes a true and  
10 correct transcript.

11 I further certify that I am not related to,  
12 employed by, nor of counsel for any of the parties or  
13 attorneys herein, nor otherwise interested in the  
14 result of the within action.

15 In witness whereof, I have affixed my  
16 signature and seal this 28th day of June, 1991.

17 My commission expires May 16th, 1995.

18  
19 OFFICIAL SEAL  
20 KIMBERLY K. POPE  
21 NOTARY PUBLIC - STATE OF ARIZONA  
22 COCONINO COUNTY  
23 My commission expires May 16, 1995.

Kimberly K. Pope  
-----  
Kimberly K. Pope  
P.O. Box 22142  
Flagstaff, Arizona 86002

22  
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## COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS

### UMATILLA DEPOT ACTIVITY

This section identifies and addresses the comments on the DEIS received during the public meeting.

DON HANSON

1. Reference meeting transcript, pages 10-11. " ... hopefully [the realignment] can be done with a minimum amount of confrontation and ... rumors and ... in a tactful way."

RESPONSE: The Army will continue to inform the public of all facts and actions during the realignment.

LTC LARRY SPARKS

1. Reference public meeting transcript, pages 11-12. Paraphrased. Pages ES-7 and 31 (Section 2.3.1) of the EIS show losses of personnel rather than spaces; oncoming CHEM DEMIL and Installation Restoration Program missions may actually cause temporary increases in hiring at UMDA. EIS needs to make this clear.

RESPONSE: The wording on cited pages refers to positions, not personnel. To clarify the relationship of realignment, CHEM DEMIL, and IRP staffing changes, page ES-9, first paragraph, last sentence, will be changed to read: "Local staffing and economic declines within the period 1991 to 2000 expected as a direct result of the realignment almost certainly will be offset by construction and operations hiring associated with the CHEM DEMIL and IRP missions." Page 148, Section 4.3.14, third sentence, also has been replaced with the foregoing sentence.

### CHANGES FROM INTERNAL REVIEW

Page 31, Section 2.3.1, second paragraph. On second line strike comma after "mainly". Revise last line to read: "... obsolete or deteriorated explosives and conventional ammunition."

Page 31, Section 2.3.1, third paragraph. Revise second sentence to read: "The installation was authorized 9 military and 243 civilian positions of which the HSC and USAISC had a combined total of 5 civilian and 6 military authorizations in support of UMDA's missions in 1989."

Page 32, Section 2.3.1, third paragraph. Revise first sentence to read: "The ammunition disposal facilities for demilitarization include an open burning area and open detonation pits which are operated under interim status."

Page 79, Section 3.3.2.1, second paragraph. Revise last sentence to read: "Coyotes hunt pronghorn kids, as well as livestock in the area."

Page 87, Section 3.3.10. Revise last sentence to read: "It receives refuse, garbage, debris, and dunnage and operates under ODEQ solid waste disposal permit 320."

Page 89, Section 3.3.11. Revise second paragraph to read: "A survey of 240 transformers found that 64 contained cooling oil with more than 50 parts per million of PCB contamination. All of these transformers have been properly removed and disposed of. No leakers or seepers are in service."

Page 89, Section 3.3.11. Revise fourth paragraph to read: "A survey of known underground storage tanks (UST) conducted in the summer of 1989 identified 81 tanks (19 septic, 47 heating oil and 7 fuel) and evaluated their leakage potential. An additional 14 tanks that may have been removed. The ODEQ regulates 7 tanks of which 2 are active and require tightness testing. Seventeen of the tanks can be removed with DERA funding. Three tanks are considered potential leakers. Additional studies under the Remedial Investigation/Feasibility Study (RIFS) are planned."

Page 89, Section 3.3.11. Revise fifth paragraph to read: "Radon may occur naturally at UMDA. A radon survey being conducted as part of the RIFS is scheduled for completion in August 1991."

Page 142, Section 4.3.2.3. Change second paragraph, last sentence to read: "Washington ground squirrels could be affected through changes in habitat as a result of the realignment or disposition of real property not needed to support the CHEM DEMIL mission although the extent of the impact would not be known until such change actually occurred."

Page 150, Section 4.3.14.1. Change second paragraph, last sentence to read: "As a result of the realignment, 75 civilian and 9 military positions would remain at UMDA (March, 1990) to perform environmental monitoring of ammunition storage igloos, ammunition handling, transport, quality control activities, and security escort."

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**PUBLIC HEARING**

**DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**BASE REALIGNMENT AND CLOSURE**

**FORT WINGATE DEPOT ACTIVITY**

**NAVAJO DEPOT ACTIVITY**

**UMATILLA DEPOT ACTIVITY**

**HAWTHORNE ARMY AMMUNITION PLANT**

June 18, 1991

7:00 p.m.

Umatilla, Oregon

**BRIDGES & KENNEDY**  
Registered Professional Reporters  
P. O. Box 223  
Pendleton, Oregon 97801  
(503) 276-9491

1 MAJOR ROBERT D. BESANCON: Thank you  
2 all for coming to our hearing tonight. Before we  
3 start with our public comments Lt. Col. Larry Sparks  
4 of the Umatilla Army Depot Activity would like to say  
5 a few words.

6 LT. COL. LARRY SPARKS: I don't want to  
7 take a whole lot of time tonight. I will get out  
8 from behind this desk.

9 A word of explanation. I think it's  
10 warranted. There are some other green suiters in  
11 town tonight. You need to understand that. You see  
12 my face enough, so I'll try to sit down most of the  
13 night.

14 But you need to understand that this  
15 Activity has several things going. One of those is  
16 base realignment closure. That's a distinct activity  
17 from the chemical stockpile disposal program which  
18 destroys the chemical weapons and that's also  
19 distinct from the environmental actions and those  
20 kind of things that are in fact going.

21 So if you make those distinctions, Major  
22 Basancon is in fact here representing the Corps of  
23 Engineers and his task and his members of his -- the  
24 body that's traveling with him, the staff that's with  
25 him this week, is to work on the Environmental Impact



1 Statement that has to do with base realignment and  
2 closure.

3 And so that's the thrust of tonight's  
4 meeting. I won't get into details. He'll explain  
5 that in minute detail, if that's what you need, I'm  
6 sure.

7 But understand this is not a Umatilla Depot  
8 Activity meeting. This is an Army meeting and we are  
9 in fact represented. If we need to make statements,  
10 we will present those the same as you or any other  
11 citizen would.

12 So without further ado, he will explain  
13 the format and the purpose, whatever. That's his  
14 bailiwick. But I just want to be able to say that  
15 there is a distinction. This is not a Umatilla  
16 Depot Activity function, and please make that  
17 distinction.

18 MAJOR ROBERT D. BESANCON: Good  
19 evening, ladies and gentlemen. I would like to thank  
20 you for coming out tonight. As Col. Sparks has said,  
21 I'm Major Bob Basancon and I am with the Fort Worth  
22 District Army Corps of Engineers.

23 As some of you may know, we were here in  
24 June of '89 and conducted a similar meeting, a  
25 scoping meeting to get your comments and concerns at

1 that time regarding Umatilla Depot Activity.

2 These included -- these were included in  
3 our preparation of the Hawthorne Draft Environmental  
4 Impact Statement, or EIS. The Fort Worth District  
5 has been charged by the Army Materiale Command to  
6 prepare an EIS for the Hawthorne realignment and base  
7 closure package that was identified by the Secretary  
8 of Defense as Base Closure and Realignment  
9 Commission.

10 The EIS includes the realignment of  
11 Umatilla Depot Activity here in Oregon, the base  
12 realignment and closure of Navajo Depot Activity in  
13 Arizona and Fort Wingate Depot Activity located in  
14 New Mexico. All three of these installations will  
15 be transferring their conventional ammunition  
16 storage missions to Hawthorne Army Ammunition Plant  
17 in Nevada.

18 Before I go any further into this process,  
19 what I would like to do at this time is identify some  
20 of the officials that are here at tonight's meeting.

21 Mr. Peck, who is a Commissioner here in  
22 Morrow County. Thank you, Mr. Peck.

23 And Alex and MinaLou Byler. Thank you  
24 for coming. They are representing the Umatilla  
25 Depot Task Force, a state appointed task force on

1 the Area.

2 I would also like to take time to introduce  
3 to you the members of the team that have been  
4 responsible for the preparation of the Environmental  
5 Impact Statement.

6 Our AMC representative is Major Renee  
7 O'Brien.

8 The Seattle District representative and  
9 the Seattle District was responsible for this  
10 particular segment of the EIS is Jim Smith, who  
11 worked particularly on the socio-economic impacts of  
12 this action.

13 And the Fort Worth District Project  
14 Manager is Mr. Arver Ferguson, standing in the back  
15 over here.

16 Before we begin to receive your comments,  
17 I'd like to take a moment and give you a history  
18 behind the Base Closure and Realignment Program.

19 In December of '88 the Defense Secretary's  
20 Commission on Base Realignment and Closure delivered  
21 its Final Report. The base realignment and closures  
22 list was approved and forwarded to the Congress by  
23 the Secretary of Defense in January of '89.

24 The Commission's recommendations have  
25 impacted over 100 installations which will be closed

1 or realigned under the provisions of Public Law  
2 100-526 which was developed from the Commission's  
3 report and is referred to as the Defense  
4 Authorization Amendments and Base Closure and  
5 Realignment Act.

6 This Draft EIS was prepared in accordance  
7 with the National Environmental Policy Act, which  
8 is commonly referred to as NEPA, and in  
9 conjunction with Public Law 100-526. The NEPA  
10 compliances were somewhat abbreviated by the public  
11 law.

12 At this time I would like to read  
13 directly from the Commission's report regarding  
14 NEPA compliance. The law states in applying the  
15 provisions of the Act the Secretary shall not have to  
16 consider the need for closing or realigning a  
17 military installation which has been selected for  
18 closure or realignment by the Commission, the need  
19 for transferring functions to another military  
20 installation which has been selected as the receiving  
21 installation, or the alternative military  
22 installations to those selected.

23 Although the decisions were exempted from  
24 NEPA, the actual actions were not. And that is the  
25 purpose of tonight's meeting and the EIS, to document

1 the impacts that will result from implementing the  
2 decision made in the Public Law.

3 Shown here are the major steps in the  
4 NEPA process. The Notice of Intent was published  
5 in the Federal Register on May 10th of '89. The  
6 scoping meeting was conducted, as I mentioned  
7 earlier, in June of '89 here. Data gathering and  
8 impact analysis was conducted from the scoping  
9 meeting to the production of the Draft  
10 Environmental Impact Statement. Public meetings  
11 are those such as we're conducting tonight. From  
12 here we'll prepare a Final Environmental Impact  
13 Statement. And then there will be a Record of  
14 Decision.

15 After the end of the public comment period  
16 on the Draft EIS, a Final EIS will be prepared.  
17 There will also be an opportunity for public comment  
18 on the Final EIS.

19 The purpose of the EIS is to provide data  
20 that will be used to implement the Base Realignment  
21 and Closure Program. The EIS will not change the  
22 decision to realign or close operations at Umatilla,  
23 Navajo or Fort Wingate.

24 It will, however, act as a tool to  
25 mitigate or offset the environmental, social,

1 economic or other possible impacts from closure of  
2 the conventional ammunition mission at those  
3 installations.

4 I would like to emphasize that this Draft  
5 EIS addresses only the realignment of the  
6 conventional ammunition mission and is not intended  
7 to address in detail the remedial actions associated  
8 with the installation restoration program or the chem  
9 demill mission proposed for the installation. These  
10 actions will be addressed under separate  
11 environmental analyses. Each of these analyses will  
12 allow additional public input into the decisions for  
13 those actions.

14 The purpose of this meeting is for us to  
15 again receive your comments and concerns which are  
16 relative to the information presented in the Draft  
17 EIS. I hope that everyone here has had an  
18 opportunity to review the Draft. However, I will  
19 provide you with a point of contact and an address  
20 that you can write and receive a copy.

21 We have an established procedure for  
22 conducting public meetings which we will follow  
23 tonight. When you came in you should have received  
24 a card to fill out and sign. This card not only  
25 provides us a means for updating our mailing list but

1 it also provides you an opportunity to indicate  
2 whether or not you wish to speak. If you did not  
3 receive a card, please indicate so and we'll get a  
4 card to you.

5 Okay. We will now open up the meeting  
6 for public comment. Anyone who has expressed an  
7 interest to provide comment or input on the Draft EIS  
8 will be given an opportunity to speak. You should be  
9 aware that your comments will be recorded by our  
10 court reporter. The transcript from tonight's  
11 meeting will be considered in the preparation of the  
12 Final EIS. I suggest that you limit your comments in  
13 order to allow other people an opportunity to present  
14 their statements.

15 If you do not wish to give an oral  
16 statement, we will be happy to accept any written  
17 concerns or comments that you may have. The formal  
18 comment period will be kept open until July the 8th,  
19 1991, to receive those written comments.

20 At this time we would like to begin with  
21 statements and comments from our public. As I call  
22 your name, please step forward, introduce yourself  
23 and make your statement.

24 I only see one individual who has indicated  
25 that he wishes to speak at this time and that's Mr.

1 Don Hanson.

2 Don, would you come up, please.

3 MR. DON HANSON: I am Don Hanson, CMT  
4 retired Army officer and was the original Project  
5 Officer for the nerve gas. At the same time I was  
6 D.S.O., involved aspects of the Umatilla Army  
7 Depot.

8 We went through many, many rumors about  
9 the base closing before and we survived, and like I  
10 say, I came here in '60. My point is this: I  
11 think all of you that are familiar with the depot  
12 know the great enthusiasm and support the community  
13 has.

14 And my point tonight is this: Although  
15 I'm quite interested in learning about the nerve  
16 gas, I would like to have the people that come to  
17 visit the depot contact all the local organizations  
18 that have dealings with the depot to see that this is  
19 supported.

20 The realignment supports a lot of problems,  
21 presents a lot of doubts, as the financial impact,  
22 people and all the things that are stated in this  
23 bill, voluminous packet, and I believe it's quite  
24 thorough.

25 My comments usually are confined to this:



1 That hopefully this can be done with a minimum amount  
2 of confrontation and minute amount of rumors and  
3 hopefully it can be done in a tactful way.

4 Thank you.

5 MAJOR ROBERT D. BESANCON: Thank you,  
6 Mr. Hanson. I do not have anyone else that has  
7 indicated they wish to speak.

8 Sir, did you wish to speak any further?

9 COL. SPARKS: Yes. As was said before,  
10 I'm Lt. Col. Larry Sparks, the Commander of the  
11 Depot, and I have some concerns as to the  
12 implications of some personnel actions that are  
13 stated in the Environmental Impact Statement.

2 14 I'm concerned that the -- there are  
15 sections that deal with this on pages 7 and page 31  
16 of the Environmental Impact Statement. They reflect  
17 a loss of personnel. When in actuality, there may be  
18 a loss of spaces. Personnel may not change in the  
19 way that this document portrays it. And it portrays  
20 a serious loss of personnel, whereas the other  
21 missions that I know will in fact take place in the  
22 same time frame that we go through this process will  
23 in fact cause some temporary increases in order to  
24 accomplish those missions.

25 So my concern is that the EIS reflect the

2  
1 effect of doing this mission at the same time that  
2 we are in fact going through a chemical stockpile  
3 disposal program and at the same time that we have  
4 to in fact go through remedial action to correct  
5 environmental difficulties which we are only now  
6 investigating.

7           So I guess I ask that the writers of this  
8 document include from the perspective of people an  
9 even or balanced perspective on what the effect of  
10 reduction in personnel spaces versus an actual  
11 increase in personnel faces, either by contractor  
12 or government employees, in order to do these other  
13 missions.

14           That's all I have to say.

15           MAJOR ROBERT D. BESANCON: Thank you,  
16 Col. Sparks.

17           Is there anyone else that did not indicate  
18 on your card that you wished to speak that at this  
19 time would like to make a statement?

20           I mentioned to you earlier that I would  
21 give you a point of contact that you could write in  
22 case you did not receive a copy of the Draft EIS  
23 and that you desire one. This is also the point of  
24 contact where you can send in written comments to  
25 the Draft EIS. As I mentioned, it's Mr. Arver

1 Ferguson, who is our Project Manager for this  
2 document.

3 I would like to thank everybody for coming  
4 tonight. We appreciate your input, and as I  
5 mentioned to you before, it will go into the  
6 preparation of the Final EIS.

7 There are some handouts in the back with  
8 this address on it so that you don't have to write it  
9 down if you don't have a pen.

10 Again, thank you very much for your  
11 attendance, and we appreciate your comments and  
12 concerns.

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(7:20 p.m.)

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1 STATE OF OREGON )  
2 County of Umatilla ) ss.

3

4 I, WILLIAM J. BRIDGES, do hereby certify  
5 that at the time and place heretofore mentioned in  
6 the caption of the foregoing matter, I was a  
7 Registered Professional Reporter and Notary Public  
8 for Oregon; that at said time and place I reported in  
9 stenotype all testimony adduced and proceedings had  
10 in the foregoing matter; that thereafter my notes  
11 were reduced to typewriting and that the foregoing  
12 transcript consisting of 13 typewritten pages is a  
13 true and correct transcript of all such testimony  
14 adduced and proceedings had and of the whole thereof.

15 WITNESS my hand at Pendleton, Oregon, on  
16 this 13<sup>th</sup> day of July, 1991.

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WILLIAM J. BRIDGES  
Registered Professional Reporter  
Notary Public for Oregon  
My Commission Expires: 6/2/92

## COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS

### HAWTHORNE ARMY AMMUNITION PLANT

This section identifies the written and oral comments on the DEIS specific to HWAAP and responds to those comments.

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL PROTECTION, DATED JULY 3, 1991

1. Although this document was not prepared to address existing conditions, we are concerned that more ammunition is being transported to Hawthorne while existing conditions warrant concern and remediation, ie. unexploded ordnance located on ranges in close proximity to Walker Lake which is often used as a recreational area.

RESPONSE: While the NDEP concerns are noted, as the comment recognizes, this document is not intended to address remediation of existing conditions. The Army's process for addressing these concerns is the Installation Restoration Program discussed on pages ES-2 and 5 of the document.

2. The report mentioned that "active groundwater monitoring and studies continue as part of the on-going installation environmental program". In a recent visit to the plant, NDEP Federal Facilities staff found that there was only one program in place to continually monitor water quality from wells that might be impacted by base operations. This was at the WDAF site.

RESPONSE: The comment reflects the current groundwater monitoring at HWAAP. This is not affected by the proposed action.

3. Although NDEP was mentioned in the text of this document, we were not included on the distribution list nor were any staff referenced as being contacted.

RESPONSE: The information used in this report was taken from existing documentation. NDEP is now on the mailing list in addition to copies provided to the Nevada state clearing house and other state agencies.



PETER G. MORROS  
Director

STATE OF NEVADA  
BOB MILLER  
Governor

L. H. DODGION  
Administrator

Administration (702) 687-4670  
Air Quality 687-5066  
Mining Regulation and Reclamation 687-4670  
Waste Management 687-5672



Wastewater Treatment Services 687-5870  
Water Permits and Compliance 687-4670  
Water Quality Planning 687-4670  
FAX 685-0068

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane

Carson City, Nevada 89710

July 3, 1991

CLEARINGHOUSE COMMENTS

SAI NV #91300138

Due Date: July 5, 1991

Title: Draft EIS, Base Alignment and Closure

AIR - Gay McCleary:

No comment

FEDERAL FACILITIES - Paul Liebendorfer:

1. Although this document was not prepared to address existing conditions, we are concerned that more ammunition is being transported to Hawthorne while existing conditions warrant concern and remediation, ie. unexploded ordinance located on ranges in close proximity to Walker Lake which is often used as a recreational area.

2. The report mentioned that "active groundwater monitoring and studies continue as part of the on-going installation environmental program". In a recent visit to the plant, NDEP Federal Facilities staff found that there was only one program in place to continually monitor water quality from wells that might be impacted by base operations. This was at the WDAF site.

3. Although NDEP was mentioned in the text of this document, we were not included on the distribution list nor were any staff referenced as being contacted.

MINING REGULATION AND RECLAMATION - Tom Fronapfel:

No comment.

SAI #91300138

July 3, 1991

Page 2

WASTE MANAGEMENT - Colleen Cripps:

No comment.

WASTEWATER TREATMENT SERVICES - Jim Williams:

No comment.

WATER PERMITS AND COMPLIANCE - Dick Reavis:

No comment.

WATER QUALITY PLANNING - Glen Gentry:

No comment.

llb

cc: Clearinghouse



COPY

1  
2 BEFORE THE ARMY CORPS OF ENGINEERS

3 -000-

4  
5 In the Matter of  
6 THE HAWTHORNE DRAFT  
7 ENVIRONMENTAL IMPACT STATEMENT /

8  
9 TRANSCRIPT OF PROCEEDINGS

10  
11 PUBLIC HEARING

12 Thursday, June 20, 1991

13 7:05 p.m.

14 1st and A Streets

15 Hawthorne, Nevada

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25 Reported by:

DENISE PHIPPS, CSR #234, RPR, CM

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A P P E A R A N C E S

MAJOR ROBERT D. BESANCON  
ARVER FERGUSON, JR.  
MAJOR RENEE O'BRIEN

HAWTHORNE, NEVADA, THURSDAY, JUNE 20, 1991, 7:05 P.M.

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MAJOR BESANCON: First, I'd like to welcome you all tonight, and I appreciate you coming out. I'm Major Bob Besancon. I'm with the Fort Worth Engineering District of the Army Corps of Engineers.

And as some of you may recall, we were here in June of '89 and conducted a scoping meeting similar to this, and the purpose of that was to get your comments and concerns regarding the Hawthorne Army Ammunition Plant Realignment Act.

These were included in our preparation of what we call the Hawthorne Base Realignment and Closure Package for the Environmental Impact Statement or EIS.

Our district has been charged by the Army Material Command to prepare an EIS for the Hawthorne Realignment and Base Closure Package. This was identified by the Secretary of Defense as a Base Closure and Realignment Commission.

The EIS includes the realignment of Umatilla Depot activity located in Oregon. The base realignment and closure of Navajo Depot activity located in Arizona, and Fort Wingate Depot activity in New Mexico.

All three of these installations are going to be

1 transferring their conventional ammunition mission to  
2 Hawthorne Army Ammunition Plant here in Nevada.

3 Before I go any further with my remarks, I'd  
4 like to introduce some of our public officials who are here  
5 tonight: Herman Stout -- is that a correct pronunciation --  
6 who is a county commissioner here. Marlene Bunch, who's the  
7 treasurer for Mineral County; and also Charles Jackson,  
8 county commissioner.

9 And as I mentioned, our representative from  
10 Hawthorne Army Ammunition Plant is Tom McDouskey, who's the  
11 environmental coordinator for the installation.

12 I'd also like to take a moment and introduce the  
13 team that helped prepare this document.

14 First is Major Renee O'Brien, who's our AMC  
15 headquarters representative. And our district project  
16 manager, Mr. Arver Ferguson, over here next to the door,  
17 who's responsible for pulling this EIS together.

18 Before I begin to receive any comments tonight,  
19 I'd first like to give some history regarding the Base  
20 Realignment and Closure Program.

21 In December of '88, the Secretary of Defense's  
22 Commission on Base Realignment and Closure delivered a final  
23 report. A base realignment and closure list was approved and  
24 forwarded to Congress by the Secretary of Defense in January  
25 of '89.

1           The Commission's recommendations have impacted  
2 over 100 installations which will be closed or realigned  
3 under the provisions of Public Law 100-526, which was  
4 developed from the Commission's report and is referred to as  
5 the Defense Authorization and Base Closure and Realignment  
6 Act.

7           This Draft EIS was prepared in accordance with  
8 the National Environmental Policy Act, which is commonly  
9 referred to as NEPA.

10           In conjunction with Public Law 100-526, the NEPA  
11 compliances were somewhat abbreviated by the public law.

12           At this time I would like to read directly from  
13 the Commission's report regarding the NEPA compliances.

14           "The law states that in applying the provisions  
15 of the Act, the Secretary shall not have to consider  
16 the need for closing or realigning a military  
17 installation which has been selected for closure or  
18 realignment by the Commission, the need for  
19 transferring functions to another military  
20 installation which has been selected as a receiving  
21 installation, or alternate military installations to  
22 those that were selected."

23           Although the decisions were exempt from NEPA,  
24 the actual implementations were not. That is the purpose of  
25 tonight's EIS meeting and why we're conducting this public

1 meeting tonight, to document the impacts that will result  
2 from implementing the decisions made in the public law.

3           These are the major steps that are in the NEPA  
4 process. The notice of intent was published in the Federal  
5 Register on May 10th of '89.

6           As I mentioned earlier, we conducted a scoping  
7 meeting here in June of '89. From that point, we did data  
8 gathering and impact analysis to the production of the Draft  
9 EIS.

10           We've conducted similar public hearings at all  
11 the installations such as we're doing tonight. And from that  
12 we'll apply those comments and prepare a Final Environmental  
13 Impact Statement which will be forwarded to the Department of  
14 Army for a record of decision.

15           At the end of the public comment period on the  
16 Draft EIS, a Final EIS will be prepared and there also will  
17 be an opportunity for public comment on the Final EIS.

18           The purpose of the EIS is to provide data that  
19 will be used to implement the Base Realignment and Closure  
20 Program.

21           The EIS will not change the decision to realign  
22 or close operations at Umatilla, Navajo or Fort Wingate, and  
23 also those will eventually move those missions to Hawthorne  
24 Army Ammunition Plant. It will, however, act as a tool to  
25 mitigate or offset any environmental, social, economic, or

1 other potential impacts from the closure of those  
2 conventional ammunition missions.

3           The purpose of our meeting tonight is for us to  
4 again receive your comments and concerns relative to the  
5 information that we have presented in the Draft Environmental  
6 Impact Statement.

7           I hope that everyone here has had a chance to  
8 review the document. However, if you were not provided one,  
9 we will provide you with a contact that you can write and  
10 receive a copy of it.

11           We have an established format for public  
12 meetings which we will follow tonight. When you came in, you  
13 were provided a card to fill out and sign. This card has  
14 several purposes.

15           First, it allows us to update our mailing list  
16 on the document. It also provides you an opportunity to  
17 indicate whether or not you wish to provide a statement or  
18 not.

19           If you didn't receive a card, would you please  
20 indicate so at this time and we'll see that you have an  
21 opportunity to fill one out.

22           We'll now open the meeting up for public  
23 comments. Anyone who has expressed an interest to comment  
24 and provide their input on the Draft EIS will be given an  
25 opportunity to speak.

1                   You should be aware that your comments will be  
 2 recorded by our court reporter. This transcript will be  
 3 considered in the preparation of our Final EIS. If you do  
 4 not wish to make a public statement, we'll be happy to accept  
 5 any written comments that you may have and the formal comment  
 6 period for the Draft EIS will be kept open until July the  
 7 8th, '91 to receive those written comments.

8                   We normally would begin with public officials  
 9 for public speaking and then follow that with private  
 10 individuals. However, I do not have any indication of anyone  
 11 wishing to make a statement tonight. At this time I'll ask  
 12 if anyone would like to get up and make a statement, even if  
 13 they didn't indicate on the card.

14                   Is there anyone here tonight that would like to  
 15 present a statement?

16                   MS. SCOTT: I'm Norma Scott. I don't really  
 17 have a statement. I have a question. I understand that a  
 18 lot of the ammunition has already been moved from the two  
 19 bases in Arizona and New Mexico, and that the Umatilla base  
 20 is closed. So do we already have it, or -- I think it's  
 21 great if we've got it, but I'm curious as to whether we  
 22 already have it because I was told that by some people.

23                   MAJOR BESANCON: First of all, Umatilla was not  
 24 closed. It was not even slated to be closed. It was slated  
 25 to be realigned, just their conventional ammunition



1 mission --

2 MAJOR O'BRIEN: No. All the ammunition hasn't  
3 been moved yet.

4 MS. SCOTT: Good. I'm glad to hear that.

5 MAJOR BESANCON: Any other individuals who would  
6 like to make a comment on the EIS or a question?

7 What I'd like to say, then, is if you have, if  
8 you would like to stay and talk to members of the team that  
9 I've introduced afterwards, we'll be happy to stay  
10 afterwards.

11 We appreciate you coming out tonight. And I'll  
12 officially close the public meeting. Thank you for coming.

13 Excuse me. I got way ahead of myself. I  
14 mentioned I would give you a point of contact that you could  
15 write and receive a copy of both the Draft EIS and the Final  
16 EIS if you were not on the mailing list.

17 This is Mr. Ferguson's address in our district,  
18 and if you will write that down or pick up a card out here,  
19 we have the card with the same address outside.

20 Again, thanks a lot for coming tonight.

21 (Proceedings concluded. at 7:20.)

22 -oOo-

23

24

25

1 STATE OF NEVADA, )  
2 ) ss.  
3 COUNTY OF WASHOE. )  
4

5 I, DENISE PHIPPS, Certified Shorthand Reporter in  
6 and for the County of Washoe, State of Nevada, do hereby  
7 certify;

8 That on Thursday, June 20, 1991, at the Mineral  
9 County Library, Hawthorne Nevada, I was present and took  
10 verbatim stenotype notes of the Hearing entitled herein, and  
11 thereafter transcribed the same into typewriting, as herein  
12 appears;

13 That said hearing was taken in stenotype notes by  
14 me, a Certified Shorthand Reporter, and thereafter reduced to  
15 typewriting under my direction, as herein appears;

16 That the foregoing transcript is a full, true and  
17 correct transcription of my stenotype notes of said hearing.

18 Dated at Reno, Nevada, this 25th day of June, 1991.

19  
20 

21 DENISE PHIPPS, CSR #234  
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**APPENDIX B**

**Consultation and Coordination Correspondence**

**for**

**Fort Wingate Depot Activity, New Mexico**

**Navajo Depot Activity, Arizona**

**Umatilla Depot Activity, Oregon**

**Hawthorne Army Ammunition Plant, Nevada**



## APPENDIX B

### Consultation and Coordination Correspondence

#### Fort Wingate Depot Activity, New Mexico

1. Letter from Albuquerque District, Corps of Engineers to New Mexico State Historic Preservation Officer, dated March 19, 1990.
2. Letter from Albuquerque District, Corps of Engineers to U.S. Fish and Wildlife Service, dated March 22, 1990.
3. Letter from Albuquerque District, Corps of Engineers to the State Forester, New Mexico Department of Energy, Minerals, and Natural Resources, dated March 21, 1990.
4. Letter from Albuquerque District, Corps of Engineers to the Director, New Mexico Department of Game and Fish, dated March 21, 1990.
5. Letter from New Mexico State Historic Preservation Officer to Albuquerque District, Corps of Engineers, dated April 4, 1990.
6. Letter from U.S. Fish and Wildlife Service to Albuquerque District, Corps of Engineers, dated April 4, 1990.

#### Navajo Depot Activity, Arizona

1. Letter from Navajo Depot Activity to Arizona State Parks, State Historic Preservation Officer, dated June 22, 1990.
2. Letter from Tooele Army Depot to Arizona State Parks, State Historic Preservation Officer, dated July 9, 1990.
3. Letter from Arizona State Parks, State Historic Preservation Officer to Navajo Depot Activity dated July 23, 1990.
4. Letter from Arizona State Parks, State Historic Preservation Officer to Tooele Army Depot dated July 26, 1990.
5. Letter from Arizona State Parks, State Historic Preservation Officer to Mr. Paul Johnson, Deputy Assistant Secretary of the Army dated July 26, 1990.
6. Letter from Los Angeles District, Corps of Engineers to Arizona State Parks, State Historic Preservation Office, dated January 19, 1990.

7. Letter from Arizona State Parks, State Historic Preservation Office to Los Angeles District, Corps of Engineers, dated February 13, 1990.
8. Letter from Los Angeles District, Corps of Engineers to U.S. Fish and Wildlife Service, dated July 27, 1989.
9. Letter from U.S. Fish and Wildlife Service to Los Angeles District, Corps of Engineers, dated August 11, 1989.
10. Letter from Arizona Nature Conservancy to Fort Worth District, Corps of Engineers, dated June 21, 1989.

#### Umatilla Depot Activity, Oregon

1. Letter from Seattle District, U.S. Army Corps of Engineers to Oregon State Historic Preservation Office, dated January 29, 1990.
2. Letter from Oregon State Historic Preservation Office to Seattle District, Corps of Engineers, dated March 15, 1990.
3. Letter from Seattle District, Corps of Engineers to Oregon Natural Heritage Program, dated March 14, 1990.
4. Letter from Seattle District, Corps of Engineers to U.S. Fish and Wildlife Service, dated March 14, 1990.
5. Letter from U.S. Fish and Wildlife Service to Seattle District, Corps of Engineers, dated May 7, 1990.

#### Hawthorne Army Ammunition Plant, Nevada

1. Letter from Hawthorne Army Ammunition Plant to Nevada State Historic Preservation Office, dated February 20, 1990.
2. Letter from Nevada State Historic Preservation Office to Hawthorne Army Ammunition Plant, dated March 5, 1990.
3. Letter from Hawthorne Army Ammunition Plant to Nevada State Museum, dated February 20, 1990.
4. Letters from Science Applications International Corporation for Fort Worth District, Corps of Engineers to Chairperson, Walker River Paiute Tribe, dated January 15, 1990 and November 7, 1990.

5. Letter from Science Applications International Corporation for Fort Worth District, Corps of Engineers to U.S. Fish and Wildlife Service, dated August 21, 1989.
6. Letter from U.S. Fish and Wildlife Service to Science Applications International Corporation, dated August 31, 1989.
7. Record of telephone conversation between Science Applications International Corporation and U.S. Fish and Wildlife Service, dated February 6, 1990.
8. Letter from Nature Conservancy to Science Applications International Corporation, dated August 30, 1989.
9. Letter from Science Applications International Corporation for Fort Worth District, Corps of Engineers to Commander, Hawthorne Army Ammunition Plant, dated July 3, 1990.
10. Letter from U.S. Fish and Wildlife Service to Commander, Hawthorne Army Ammunition Plant, dated January 21, 1991.







DEPARTMENT OF THE ARMY  
ALBUQUERQUE DISTRICT CORPS OF ENGINEERS  
P. O. BOX 1860  
ALBUQUERQUE, NEW MEXICO 87103-1860  
FAX (505) 766-2770

SENT TO  
ATTENTION OF

March 19, 1990

Engineering and Planning Division  
Planning Branch

Mr. Thomas Merlan  
New Mexico State Historic Preservation Officer  
State Historic Preservation Bureau  
228 East Palace Avenue, Room 101  
Santa Fe, New Mexico 87503

Dear Mr. Merlan:

The U.S. Army Corps of Engineers, Albuquerque District, is assisting in the preparation of an Environmental Impact Statement for the proposed closure of Fort Wingate Depot Activity (FUDA) located near Gallup, McKinley County, New Mexico. The conventional munitions mission of FUDA will be transferred to Hawthorne Army Ammunition Plant, Hawthorne, Nevada. The closure is the result of the recommendation of the Defense Secretary's Commission on Base Realignments and Closure (BRAC) from legislative requirements in the Base Closure and Realignment Act (Public Law 100-526). FUDA presently operates primarily as a munitions storage facility.

To date, approximately 1,300 acres of the 22,100 acre facility have been systematically surveyed to identify cultural resources. Fifty-five (55) known prehistoric and historic archeological sites have been recorded on FUDA, including LA 16279, a large Pueblo III community complex. A 1984 historic structure examination indicated there are no standing buildings at FUDA with historical or architectural significance.

The issue of final land disposition is as yet unresolved. The primary land disposition alternative is to revert the FUDA lands to the public domain via the Bureau of Land Management (BLM). However, should the BLM find certain lands unsuitable for return to the public domain, alternative disposal, including sale to the private sector, will be considered.

The enclosed Programmatic Memorandum of Agreement, signed by the Deputy Assistant Secretary of the Army (Installations and Housing), the President of the National Conference of State Historic Preservation Officers (NCSHPO), and the Chairman of the Advisory Council on Historic Preservation (ACHP), has been designed to streamline the historic preservation review process and minimize delays in carrying out prescribed BRAC actions.

To assure compensation for any impacts to cultural resources resulting from land disposition and to comply with the National Historic Preservation Act of 1966, as amended, a multiphased program that would include survey, testing, and determination of an appropriate mitigation strategy will be implemented. The mitigation strategy will be determined in consultation with the ACHP, New Mexico SHPO, and any other interested parties. To prevent possible increase in vandalism, pothunting, and site destruction resulting from closure, installation security will be maintained until land disposition has been completed.

If you have any questions or require additional information, please contact Ms. Sandra Rayl of my staff at (505) 766-2657.

Sincerely,

Samuel N. Aiken, P.E.  
Chief, Engineering and Planning Division

Enclosure



DEPARTMENT OF THE ARMY  
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 1860  
ALBUQUERQUE, NEW MEXICO 87103-1860  
FAX (505) 766-8770

MAIL ROOM  
ATTENTION ONLY

March 22, 1990

Engineering and Planning Division  
Planning Branch

Mr. John C. Peterson  
Supervisor, Ecological Services  
U.S. Fish and Wildlife Service  
3330 Pan American Highway, Northeast  
Suite D  
Albuquerque, New Mexico 87107

Dear Mr. Peterson:

The U.S. Army Corps of Engineers, Albuquerque District, is assisting the U.S. Army Materiel Command (USAMC) in preparing an Environmental Impact Statement (EIS) for closure of USAMC facilities in New Mexico, Arizona, and Oregon as authorized by the Base Closure and Realignment Act (Public Law 100-526). The U.S. Army Corps of Engineers, Albuquerque District (COE), is providing environmental support to USAMC for the planned closure of the Fort Wingate Army Depot (FVDA) located in McKinley County, New Mexico. The EIS will document the impacts of closure of FVDA and will provide information on the disposal of lands and facilities to the extent practicable. The location and extent of FVDA land to be included in the action is detailed in the enclosed map.

To assist the COE in this action, we request that your office identify those species listed as endangered by your agency which are known to occur or potentially could occur on FVDA. A preliminary list of Federal and State protected wildlife and plants expected in the area is enclosed. We would appreciate receiving your species list and any comments on this action by March 30, 1990. If you have any questions, please contact Mr. Jim White (505) 766-3577 or Ms. Sandra Rayl (505) 766-2657 of this office.

Sincerely,

*Kim B. Zohn*

Samuel N. Aiken, P.E.  
for Chief, Engineering and Planning Division

Enclosures



DEPARTMENT OF THE ARMY  
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 1860  
ALBUQUERQUE, NEW MEXICO 87103-1860  
FAX (505) 766-8770

MAIL ROOM  
ATTENTION ONLY

March 21, 1990

Engineering and Planning Division  
Planning Branch

Mr. James D. Norwick  
State Forester  
New Mexico Department of Energy,  
Minerals and Natural Resources  
Villages Building  
Santa Fe, New Mexico 87505

Dear Mr. Norwick:

The U.S. Army Corps of Engineers, Albuquerque District, is assisting the U.S. Army Materiel Command (USAMC) in preparing an Environmental Impact Statement (EIS) for closure of USAMC facilities in New Mexico, Arizona, and Oregon, as authorized by the Base Closure and Realignment Act (Public Law 100-526). The Albuquerque District (COE), is providing environmental support to USAMC for the planned closure of the Fort Wingate Army Depot (FVDA) located in McKinley County, New Mexico. The EIS will document the impacts of closure and will provide information as practicable on the ultimate disposition of the lands and facilities. The location and extent of FVDA land to be included in the action is detailed in the enclosed map.

To assist the COE in this action, we request that your office identify those species listed as endangered by your agency which are known to occur or potentially could occur on FVDA. A preliminary list of Federal and state protected wildlife and plants expected in the area is enclosed. We would appreciate receiving your species list and any comments on this action by March 30, 1990. If you have questions, please contact Mr. Jim White (505) 766-3577 or Ms. Sandra Rayl (505) 766-2657 of this office.

Sincerely,

*Kim B. Zohn*

Samuel N. Aiken, P.E.  
for Chief, Engineering and Planning Division

Enclosures



DEPARTMENT OF THE ARMY  
ALBUQUERQUE DISTRICT CORPS OF ENGINEERS  
P. O. BOX 1800  
ALBUQUERQUE, NEW MEXICO 87103-1800  
FAX (505) 766-2770

ARMY USE  
APPROPRIATE ONLY

March 21, 1990

Engineering and Planning Division  
Planning Branch

Mr. Bill Montoya  
Director  
New Mexico Department of Game and Fish  
Villagra Building  
Santa Fe, New Mexico 87503

Dear Mr. Montoya:

The U.S. Army Corps of Engineers, Albuquerque District, is assisting the U.S. Army Materiel Command (USAMC) in preparing an Environmental Impact Statement (EIS) for closure of USAMC facilities in New Mexico, Arizona, and Oregon, as authorized by the Base Closure and Realignment Act (Public Law 100-526). The U.S. Army Corps of Engineers, Albuquerque District (COE), is providing environmental support to USAMC for the planned closure of the Fort Wingate Army Depot (FVDA) located in McKinley County, New Mexico. The EIS will document the impacts of closures of FVDA, and will provide information as practicable on the ultimate disposition of the lands and facilities. The location and extent of FVDA land to be included in the action is detailed in the enclosed map.

To assist the COE in this action, we request that your office identify those species listed as endangered by your agency which are known to occur or potentially could occur on FVDA. A preliminary list of Federal and State protected wildlife and plants expected in the area is enclosed. We also need any comments you may have regarding the future management of game arrivals, especially buffalo and pronghorn on FVDA lands. We would appreciate receiving your species list and any comments on this action by March 30, 1990. If you have any questions, please contact Mr. Jim White (505) 766-3577 or Ms. Sandra Rayl (505) 766-2657 of this office.

Sincerely,

*Kim B. Zohn*

Samuel N. Alken, P. E.  
Chief, Engineering and Planning Division

Enclosures



CARREY CABRUTHERS  
COMMISSIONER

STATE OF NEW MEXICO  
OFFICE OF CULTURAL AFFAIRS  
HISTORIC PRESERVATION DIVISION

VALLA HERERA, ROOM 101  
228 EAST PALACE AVENUE  
SANTA FE, NEW MEXICO 87503  
(505) 827-8300

THOMAS W. MERLAN  
DIRECTOR

HELMUTH J. NAUMER  
CULTURAL ANTHROPOLOGIST

April 4, 1990

Mr. Samuel N. Aiken  
Chief  
Engineering and Planning Division  
Albuquerque District  
U.S. Army Corps of Engineers  
Post Office Box 1580  
Albuquerque, New Mexico 87103-1580

Re: Closure of Fort Wingate Depot Activity

Airt: Sandra L. Rayl, District Archaeologist

Dear Mr. Aiken:

Thank you for your recent letter informing this office of the progress on the Environmental Impact Statement for the proposed closure of the Fort Wingate Depot Activity (FWDA) near Gallup, New Mexico.

I agree with your assessment that, based on the 1984 historic structures survey, none of the standing military buildings at FWDA possesses any historical or architectural significance. However, cultural resource surveys of approximately six percent of the land area of this facility have identified 55 prehistoric and historic archaeological sites that can be considered potentially eligible for inclusion in the National Register of Historic Places. Additional significant archaeological sites can be expected to be located in unsurveyed areas of the facility that have not been extensively disturbed by previous activities.

The need for further efforts to identify significant sites will depend on the decision on final land disposition. In general, it is my opinion, in accordance with the Programmatic Agreement concerning the realignment and closure of Army installations, that intensive cultural resource inventory surveys of facility lands to be transferred from Federal ownership will be required. An exception to this requirement would be any lands that have been previously disturbed to an extent that would preclude the identification of significant archaeological sites. The determination of the extent of such disturbance should be made by a qualified professional archaeologist, in consultation with this office.

Mr. Samuel N. Aiken  
April 4, 1990  
Page 2

The effects of the transfer of any facility lands on historic properties can be considered adverse. Measures to treat the identified effects will depend on the nature and location of the identified properties and the terms of any transfer agreement. Until there is a better understanding of the properties to be affected and the land disposition alternatives, it would be premature to attempt to determine the effects of this undertaking on historic properties.

I look forward to continuing our consultation on the proposed closure of FWDA. In the meantime, please contact this office with any questions you may have regarding my comments on this matter.

Sincerely,

Thomas W. Merlan  
State Historic Preservation Officer

TWM:DER:bc/Log 24172



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE

Ecological Services

Suite D, 3530 Pan American Highway, NE  
Albuquerque, New Mexico 87107 Cons. #2-22-90-I-080

April 4, 1990

Mr. Samuel M. Aiken  
Engineering and Planning Division  
U.S. Army Corps of Engineers  
P.O. Box 1580  
Albuquerque, New Mexico 87103-1580

Dear Mr. Aiken:

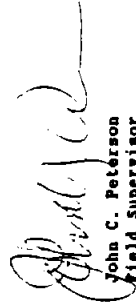
This responds to your letter dated March 22, 1990, requesting comments on species you identified that are federally listed or proposed to be listed as threatened or endangered in the Fort Wingate area. The proposed action involves the closure of Fort Wingate as authorized by the Base Closure and Realignment Act (Public Law 100-526). Your geographic area of interest is Fort Wingate, McKinley County, New Mexico.

We have reviewed your list of state and Federal threatened or endangered species occurring in the Fort Wingate area and find no need for additions or corrections at this time. If your Biological Assessment is not initiated within 90 days, the accuracy of the list should be verified before conducting the assessment.

We suggest you contact the New Mexico Department of Game and Fish and the New Mexico Energy, Minerals and Natural Resources Department for any additional information on animals and plants of state concern.

If we can be of further assistance, please call Charlie McDonald at (505) 883-7877 or FT9 474-7877.

Sincerely yours,



John C. Peterson  
Field Supervisor

cc:  
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico  
Director, New Mexico Energy, Minerals and Natural Resources, Department,  
Santa Fe, New Mexico  
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife  
Enhancement, Albuquerque, New Mexico



DEPARTMENT OF THE ARMY  
ARIZONA ARMY NATIONAL GUARD  
NAVAJO DEPOT ACTIVITY  
BELLEVILLE, ARIZONA 86015-5000

REPLY TO  
ATTENTION OF

Office of the Commander

June 22, 1988

Ms. Shereen Lerner, Ph.D.  
State Historic Preservation Officer  
ARIZONA STATE PARKS  
800 W. Washington - Suite 415  
Phoenix, Arizona 85007

Subject: Navajo Depot Activity (NADA) Management Status

Dear Ms. Lerner:

This is in reference to the Memorandum For Record, dated 18 June 1988, subject: Meeting with State Historical Preservation Office, 13 June 1988 (see enclosure).

Navajo Depot Activity has been under the management of the Arizona National Guard since June of 1982, and it is the current understanding that this will continue into the future. Some realignment and closure will result in the primary mission of the Depot changing from a supply depot to a training site; however, all existing uses will most likely continue, at levels commensurate with the changing mission priorities. Actual land ownership will remain with the Federal Government licensed to the State of Arizona. The License, which was initiated in June of 1982, will be amended to reflect the change in primary missions.

The Arizona National Guard is submitting a request to the National Guard Bureau to prepare an Historical Properties Management Plan; however, it is unknown when assets will become available to complete a plan.

If further information is needed in regards to the current and anticipated future management of NADA, please contact either myself or Major Thomas Galkowski at (602) 774-7101, Ext 203.

Encls.

Harry W. Walden  
Lieutenant Colonel,  
Arizona National Guard  
Commanding Officer

CF:  
BG Toesi  
MAJ Galkowski  
Malcolm Walden  
Harry Hensell



DEPARTMENT OF THE ARMY  
TOOELE ARMY DEPOT  
TOOELE, UTAH 84074-5000

REPLY TO  
ATTENTION OF

SOSTE-BC

July 9, 1990

Ms. Shereen Lerner, Ph. D.  
State Historic Preservation Officer  
Arizona State Park  
800 W. Washington  
Suite 415  
Phoenix, AZ 85007

Subject: Navajo Depot Activity

Dear Ms. Lerner;

This letter is a follow up to the meeting which took place 13 June 1990 in Phoenix, AZ between representatives of the Arizona National Guard and the Arizona SHPO. I have received a Memorandum for the Record of this meeting from Major Galkowski and it appears that the meeting resolved the outstanding issues between your agencies.

My purpose in writing to you is to inquire if you consider that we have met the terms of the Programmatic Agreement (copy enclosed in my previous correspondence). If so, would you please sent me your concurrence. If not, please let me know what else you require.

Thank you for your consideration.

Sincerely,

Malcolm I. Walden  
Chief, Base Realignment/Closure Office



**ARIZONA STATE PARKS**

909 W. WASHINGTON  
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PHOENIX, ARIZONA 85007  
TELEPHONE 602-442-4174

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July 23, 1990

Larry W. Triphahn  
Lieutenant Colonel  
Arizona National Guard  
Commanding Officer  
Navajo Depot Activity  
Bettlemont, AZ 86015-5000

RE: Navajo Depot Activity Status Meeting, DOD-Army

Dear Colonel Triphahn:

In response to your letter, this is a confirmation of the meeting held on 13 June 1990 between the State Historic Preservation Office and representatives of the Arizona Army National Guard concerning the Base Realignment and Closure program at Navajo Depot Activity. The findings of this meeting were recorded in the Memorandum For Record filed by Major Galkowski on 18 June 1990, included in your letter.

The meeting was of great value in clearing up a number of our concerns. We now understand that the administration of NADA has remained a Department of the Army function despite the operational transfer to the Arizona National Guard in June 1982. We further recognize that the effect of BRAC on NADA will be merely a reversal of mission activity, emphasizing a training role over the storage activity. We see no difficulty in this shift although we are concerned that the increased emphasis on infantry training may have a long term impact on the Buffer Zone. The Buffer Zone has never been surveyed for historic or prehistoric resources. The recommendation was made in the meeting that a survey be conducted of the Buffer Zone, possibly as a field school project from Northern Arizona University, in light of limited BRAC available funding.

As we stated in the meeting, the fact that the ownership of NADA has not actually changed means the requested Historic Properties Management Plan is not necessary at this time. Your letter constitutes the official notification we requested that the land will remain in Federal ownership.

SHPO requirements for NADA development projects under Section 105 of the National Historic Preservation Act were discussed in the meeting. If ground disturbing activities are planned, we should be consulted about each undertaking. If during any ground disturbing activity, historic or prehistoric cultural resources are encountered, this office should be notified immediately and all work cease until consultation is completed. Any proposed demolition or major alteration of pre-1946 structures should also be approved by this office. Approval is obtained by submitting a completed State Historic Property Inventory form and photographs illustrating all four main facades of the structure, with a brief statement of the proposed work.

LTC Triphahn  
July 23, 1990  
Page 2

If plans are extant of the structure, these should be submitted also if copies can be conveniently made.

The meeting also addressed the location of the new WET Site which was originally intended to replace the current facility at the old hospital. The new proposed site, as noted in the meeting, is south of the current NADA administrative complex on a previously disturbed parcel of land, and thus should not require survey. However, we have received a letter from Major Moye, Facilities Management Officer, indicating three sites are still under consideration and a new EA is being prepared. It is our understanding that the final revised EA is due in our office 1 October 1990 and we will reserve final comment until our review of that document.

The 19th Century Overland Road runs through NADA. Maps provided by Staff Sergeant Hack and Dr. James Byrkill of Northern Arizona University locate the road in T21N, R5E Sections 9 10 11 and 12, and T21N, R6E Sections 7 17 and 18. Some portions of the road have been disturbed and lack integrity. However, there may be intact sections which retain adequate integrity to be considered for the National Register of Historic Places. These sections are not currently threatened, but any future work in their vicinity will require consultation with this office. Smiths Ranch (1878) was apparently located at Volunteer Spring which is now the vicinity of Reservoir #1 which is a disturbed area in T21N, R5E Section 11.

During the meeting, mention was made of the extensive base records which had been stored in the attic of Building #1. Have these been investigated and arrangements made for their preservation?

We appreciate the interest and concern shown by the Army and the Arizona National Guard in complying with the needs of historic preservation and the desire to improve communication between the Guard and the SHPO. Should you have any questions please feel free to contact me.

Sincerely,

Shereen Lerner, Ph.D.  
State Historic Preservation Officer



**ARIZONA  
STATE  
PARKS**

600 W. WASHINGTON  
SUITE 418  
TUCSON, ARIZONA 85707  
LEPHONE 803-443-1174

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DEPUTY DIRECTOR

July 26, 1990

Mr. Malcolm T. Walden  
Chief, Base Realignment/Closure Office  
Department of the Army  
Tooele Army Depot  
Tooele, UT 84074-5000

RE: Arizona, NADA, BRAC Programmatic Agreement, DOD-Army

Dear Mr. Walden:

This is in response to your letter inquiring whether the issues resolved in the SHPO-Arizona National Guard meeting of 13 June 1990 met the terms of the Programmatic Agreement signed 5 February 1990. This PA was signed by representatives of the Army, the National Council of State Historic Preservation Officers, and the Advisory Council on Historic Preservation and is intended to address the Section 106 requirements of the Base Realignment and Closure program.

It is our understanding that the local National Guard command at the Nivado Army Depot Activity will meet the Section 106 review requirements regarding future demolition, alteration, construction, or development projects at the installation. This will include appropriate Environmental Assessments for the proposed new WET site.

The need still exists for an Historic Preservation Management Plan and a Buffer Zone survey. As we indicated in the meeting we recognize National Guard limitations in providing these services and under the terms of the PA, considering the continuing Federal ownership of the property, we regard these as Federal responsibilities. For your information I am enclosing a copy of a recent letter to Mr. Paul W. Johnson, Deputy Assistant Secretary of the Army, outlining this position.

We appreciate your cooperation with this office in meeting the historic preservation requirements of the BRAC program and shall look forward to working with the Army on the necessary reviews. If you have any questions please do not hesitate to contact me.

Sincerely,

Shereen Lerner, Ph.D.  
State Historic Preservation Officer

cc: LTC Triphahn

Encl.





## ARIZONA STATE PARKS

600 W. WASHINGTON  
SUITE 418  
TOLSON, ARIZONA 85907  
TELEPHONE 602-442-4174

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EXECUTIVE DIRECTOR

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SECURITY DIRECTOR

July 26, 1990

Mr. Paul W. Johnson  
Deputy Assistant Secretary of the Army  
Office of the Assistant Secretary  
Department of the Army  
Washington, D.C. 20310

RE: Arizona, BRAC Programmatic Agreement, DOD-Army

Dear Mr. Johnson:

Thank you for your letter confirming that the Army has initiated the Section 106 process under the National Historic Preservation Act for the three Army installations in Arizona affected by the Base Realignment and Closure Act (BRAC). This process is being facilitated through the Programmatic Agreement (PA) signed by yourself for the Army, the National Conference of State Historic Preservation Officers and the Advisory Council on Historic Preservation dated 5 February 1990. The three installations involved are the Navajo Army Depot Activity (NADA), Fort Huachuca, and Yuma Proving Ground.

The BRAC Programmatic Agreement addresses the general historical, architectural and archaeological requirements of this program. As each installation is unique we have established contact with local base authorities and are dealing with each site individually. An installation specific Programmatic Agreement is being developed for Fort Huachuca and another may be generated for Yuma Proving Ground. There is no apparent conflict between these local arrangements and the basic Programmatic Agreement with the exception of the fifteen day review requirement. It is our opinion that fifteen days is an inadequate time frame for proper review and response, thus we utilize a thirty day response deadline.

The fact that a portion of Fort Huachuca is a National Historic Landmark will perhaps require more detailed measures than those outlined for work within the Historic District, although it is presumed most of the development will be outside the District. It is our understanding from conversations with Ms. Marie Coltrill at Fort Huachuca that all undertakings in the PA that has been developed will be considered.

The construction of new ranges and facilities at Yuma Proving Ground will involve tracts of land which have not been archaeologically surveyed. As this is an archaeologically sensitive area, survey and mitigation activities may become quite detailed.

Regarding the closure of the Navajo Depot, we have met with officials of the Arizona Army National Guard. They indicated that although the Army is closing its military mission activity at NADA, the Arizona Army National

Paul W. Johnson  
July 26, 1990  
Page 2

Guard will continue to operate the facility. They also informed us that although the operational transfer of NADA to the National Guard took place in June 1982, this transfer did not include the property which remains in Federal ownership. As the Department of the Army oversees the National Guard, Section 106 responsibility must be carefully defined. The Guard has indicated they will initiate appropriate consultation for proposed demolition, development or construction activity at NADA. However, they also state they are not in a position to implement survey activity or an Historic Properties Management Plan. In light of apparent continuing Federal control of the property we stated that Guard development of such a plan, although desired, was not necessary at this time. Under the terms of the PA the development of an Historic Preservation Management Plan would remain a Federal responsibility in any case. We are particularly concerned that the Buffer Zone at NADA has never been archaeologically surveyed; perhaps the Army should assume responsibility for this survey.

We appreciate your cooperation with this office in meeting the historic preservation requirements of the BRAC program and shall look forward to working with the Army on the necessary reviews. If you have any questions please do not hesitate to contact me.

Sincerely,

Shereen Lerner, Ph.D.  
State Historic Preservation Officer

January 19, 1990

Office of the Chief  
Environmental Resources Branch

Dr. Shereen Lerner  
State Historic Preservation Officer  
800 West Washington, Suite 415  
Phoenix, Arizona 85007

Dear Dr. Lerner:

The Los Angeles District Corps of Engineers (Corps) is assisting in the preparation of an Environmental Impact Statement for a proposed base closure of the Navajo Army Depot facility near Flagstaff, in Coconino County. Presently the facility is being operated by the Arizona Army National Guard conducting munitions storage and maintenance, and reserve unit training.

Alternatives for the proposed undertaking are still being formulated, and may include: 1) transferring the facility permanently from the Department of the Army to the National Guard; 2) transferring the facility to the Forest Service and selling a portion to private interests; 3) providing for a shared use of the site between the Forest Service and the Army National Guard.

The Corps has conducted a records and literature search of the facility. The records indicate that there are few known historic properties. However, no systematic field surveys have yet been conducted.

The Corps believes that unless the land is sold to private interests, there will probably be no effects on cultural resources as a result of the transfer. Any new activity after the transfer would require additional Section 106 consultations.

Subsequent to a decision by the Department of the Army on the disposition of the facility, we will correspond with your office with our determination of effect.

-2-

We would appreciate receiving any comments you have on the proposed undertaking so that we may take them into account. If you have any questions on this project, please call Mr. Stephen Dibble at (213) 894-0244.

Sincerely,

Robert S. Joe  
Chief, Planning Division

CC:  
PD  
PD-S  
PD-SM

ERB

February 13, 1990

Robert S. Joe  
Chief, Planning Division  
U.S. Army Corps of Engineers  
P.O. Box 2711  
Los Angeles, CA 90053-2325

RE: Navajo Army Depot, DOA-FS/Coontino and Kaibab, DOD-Corps

Dear Mr. Joe:

Thank you for your letter stating that the agency is assisting in the preparation of an EIS for the proposed closure of the Navajo Army Depot (NAD) outside of Flagstaff. The facility is currently being operated by the Arizona Army National Guard. I have reviewed your letter and have the following comments pursuant to 36 CFR Part 800:

1. You state that the Corps has conducted a records and literature search of the facility and that the records indicate that there are few known historic properties (however, no systematic field surveys have been conducted). For your information, we reviewed a draft Environmental Assessment prepared by Northern Arizona University for the NAD Weekend Training Site in late 1988; that document stated that there were no known sites on the installation. The Weekend Training Site draft EA provided no indication that a site file records check was made and contained inaccurate information. For example, the Overland Road, a historic trail, is within NAD and a conversation I had with Dr. John Hanson, the Archaeologist for Kaibab National Forest, indicated that there are probably at least several other historic properties within NAD. Based on this information, on December 8, 1988 we asked the Guard to conduct an archaeological survey of the Weekend Training Site; to date they have not responded. If you don't mind, we would like to review the records/literature search that the Corps prepared so we will be better informed about the potential for cultural resources in the area.

2. You also state that three alternatives are proposed; these are: 1) transferring the facility to the National Guard; 2) transferring the facility to the Forest Service and selling a portion to private interests; and 3) having the Forest Service and the Guard share use of the facility.

3. Given the lack of response to our letter of December 8, 1988 to the National Guard (a copy of this letter was sent to Steve Dibble in your office on July 25, 1989), we have some reservations about transferring the facility to that agency without a specific historic properties management plan in place prior to the transfer taking place.

4. As you point out, if any of the property is sold to private interest, the area would have to be surveyed by a qualified archaeologist to locate and evaluate any existing cultural remains pursuant to 36 CFR 800.4.

5. If the land is transferred in its entirety to another Federal agency with the Forest Service maintaining control of cultural resource management (they have a demonstrated good track record and qualified archaeological personnel), we agree that adequate protection would be afforded by Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended.



# ARIZONA STATE PARKS

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GENERALIST

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STATE LAMP COMMISSIONER

KENNETH E. TRAVOUS  
COMMISSIONER DIRECTOR

COURTLAND NELSON  
DEPUTY DIRECTOR

Robert Joe  
February 13, 1990  
Page 2

6. Regardless of which alternative is selected, we would appreciate being kept advised of any developments on this proposed undertaking.

Your continued cooperation with this office is appreciated. If you have any questions, please contact me.

Sincerely,

Robert E. Gassar  
Compliance Coordinator

for Shereen Lerner, Ph.D.  
State Historic Preservation Officer



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
ECOLOGICAL SERVICES  
3616 W. Thomas, Suite 6  
Phoenix, Arizona 85019

July 27, 1989

Office of the Chief  
Environmental Resources Branch

Ms. Leslie Fitzpatrick  
Endangered Species Office  
U.S. Fish and Wildlife Service  
3616 West Thomas Road, Suite 6  
Phoenix, Arizona 85019

Dear Ms. Fitzpatrick:

Please provide a current list of any endangered, threatened or Candidate species, pursuant to the Endangered Species Act of 1973, as amended, that may be affected by the proposed cessation of any activities at Navajo Depot Activity.

This project may include a change of activities at the Navajo Depot Activity. At this time we would like a list covering the entire installation area, although the affected areas may be substantially less. A map of the area is enclosed.

Please respond to this species list request within thirty (30) days of receipt of this letter. Should you require additional information of have any questions, please contact Ms. Lee C. Hackelung, Environmental Coordinator, at (213) 394-3397.

Thank you for your assistance in this matter.

Sincerely,

Robert S. Joe  
Chief, Planning Division

Enclosure  
CF:  
CESPL-PD  
CESPL-PD-R  
CESPL-PD-RQ(2)

JOE  
CESPL-PD  
SCHUBEL  
CESPL-PD

VILLALOBOS  
CESPL-PD-R  
MACIAS  
CESPL-PD-RQ

HACKELUNG  
CESPL-PD-RM

August 11, 1989

2-21-89-1-179

Robert S. Joe  
Planning Division  
Los Angeles District  
Corps of Engineers  
P.O. Box 2711  
Los Angeles, California 90053-2325

Dear Mr. Joe:

This responds to your request of July 27, 1989 for information on species listed or proposed to be listed as threatened or endangered that may be on the Navajo Army Depot in Coconino County, Arizona.

Our data indicates that no listed, proposed or candidate category 1 species are likely to be found on the Depot. We would appreciate receiving any information that may be developed as part of your assessment that describes the presence of prairie dog colonies on the Depot and any actions that might affect them. Prairie dog colonies support the endangered black footed ferret (*Mustela nigripes*) and although this species is considered to be extirpated from Arizona, information on prairie dog colonies is important in evaluating habitat potential.

If we may be of further assistance, please contact Ms. Lesley Fitzpatrick or me (Telephone: 602/26104720).

Sincerely,

*Sam F. Spiller*  
Sam F. Spiller  
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico  
(FWE/BC)  
Director, Arizona Game and Fish Department, Phoenix, Arizona



# The Arizona Nature Conservancy

300 East University Boulevard, Suite 230, Tucson, Arizona 85705  
(602) 622-3861

Mr. Arvar Ferguson  
Army Corps of Engineers  
P.O. Box 17300  
Fort Worth, TX 76102-0300

21 June, 1989

Dear Mr. Ferguson,

I am writing in response to your request for comments regarding planning for the closure of the Navajo Depot. Several sensitive plant and animal species and ecological communities are found on or near the Navajo Depot, as summarized in the enclosed print-out from the Arizona Nongame Data Management System. These sensitive species and communities should be surveyed, and if found on the base, protected from deleterious impacts that may result from closure of the Navajo Depot.

Of particular importance is the Spotted Owl (Strix occidentalis) a candidate for federal listing which is found in old-growth coniferous forest. Where stands of old-growth forest are found on the Navajo Depot, these stands should be protected from disturbance, particularly logging, that may reduce the value of these habitats for Spotted Owls.

Our recommendation is that where examples of old-growth coniferous forest or of montane grassland communities are found, that these areas be designated as Research Natural Areas (RNA) before the property is transferred to the management of another agency. Long-term protection of these sensitive communities will be assured if RNA status is conferred to them. Because the Navajo Depot has had relatively restricted access for a number of years, as compared to surrounding land, it is likely that less disturbed, better condition examples of these communities can be found on the Depot than in the surrounding area.

If I can be of further help, particularly with regard to surveying the Depot for sensitive species, please feel free to contact me. Thank you for the opportunity to comment on the closure of the Navajo Depot.

Sincerely,

Peter L. Warren  
Public Lands Protection Planner

cc: Col. Tadahiko Ono, Army Corps of Engineers

category IV and V Register-eligible buildings are sited, has not been completed. Preliminary results of aerial photographic interpretation suggest that there is a high probability that potentially significant archaeological sites will be found at UDMA (enclosure 2). We understand that a Programmatic Agreement between Headquarters, Department of the Army and the Oregon State Historic Preservation Officer is being negotiated to provide for completion of inventory and evaluation of potentially significant properties at UDMA before they will be affected by the realignment.

As we would like to indicate in the RIS that the Section 106 coordination process for the UDMA realignment has begun, we request that you review the material in enclosure 1. If you concur with the report's findings, and if you also concur with our finding that the UDMA realignment will have no effect on standing architecture that is eligible for the National Register of Historic Places, we ask that you so indicate in writing to our office.

If you have any questions about the attached historic properties survey report, please call Mr. Lawr Salo at telephone (206) 764-1630.

Sincerely, /s/

P.M. O'Dell, P.E.  
Chief, Engineering Division

Enclosures

Copies Furnished w/enclosures:

Dr. Leland Gillean  
Oregon State Archaeologist  
Department of Transportation  
Parks and Recreation Division  
525 Trade Street Southeast  
Salem, Oregon 97310

Ms. Claudia Wisaley  
Western Office of Project Review  
Advisory Council on Historic Preservation  
730 Simms Street, Room 401  
Golden, Colorado 80401

JAN 29 1980

Planning Branch

Mr. David Thibet  
Oregon State Historic Preservation Officer  
Department of Transportation  
Parks and Recreation Division  
525 Trade Street Southeast  
Salem, Oregon 97310

Dear Mr. Thibet:

The Seattle District, U.S. Army Corps of Engineers is preparing parts of an Environmental Impact Statement (EIS) for realignment of the Seattle Depot Activity (UDMA), Burien, Oregon. The realignment will save the conventional munitions sites from UDMA to the Northwest Army Ammunition Plant in Nevada. Structures used by the conventional munitions sites that are not needed to support the Chemical Weapons Demilitarization sites are for startup at UDMA in 1995 will be declared surplus to the Army Materiel Command's needs, and may be transferred to other Department of Defense commands or other Federal agencies. If the assets are not needed by the Federal government, they may be sold or otherwise disposed of. At this point we are not aware of any planned disposal outside the Federal government.

You will find enclosed a copy of an historic properties report for UDMA (enclosure 1). The report was prepared in 1984 to document an Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) Survey of UDMA. Following procedures in Army Regulation 420-40, the report classifies standing structures as belonging to one of five major categories and presents recommendations for further work at members of each category. The survey found no category I (major importance) or II (important) properties at UDMA. Two category III (minor importance) properties are present: the Headquarters Building (Building Number 1) and the Firehouse (Building Number 2). Documentation to HABS/HAER level 4 has been completed for the two category III properties. All other properties are of categories IV (little or no importance) or V (detrimental to the significance of adjacent historic properties).

Neither of the category III properties is included in UDMA's realignment surplus list and will not be affected by the realignment. In consideration of the findings in the attached report, it is Seattle District's opinion that no standing structures that are eligible for the National Register of Historic Places will be affected by the UDMA realignment. Please note that this opinion is restricted to standing structures only. We believe that UDMA has potential for other kinds of historic properties, including segments of the National Register thematically nominated Oregon Immigrant Wagon Road, as well as prehistoric archaeological sites. A comprehensive cultural resources inventory, including archaeological survey of the lands upon which the



Department of Transportation  
**STATE HISTORIC PRESERVATION OFFICE**

Parks and Recreation Division  
547 TRADE STREET SE, SALEM, OREGON 97310  
March 15, 1990

MAR 14 1990

Planning Branch

P. M. O-Dell  
Seattle Corp of Engineers  
PO Box C-3755  
Seattle, WA 98124-2255

RE: Environmental Impact Statement  
Umatilla Depot Activity  
Harriston/Umatilla Counties

Our office has reviewed the material you have sent regarding the above-referenced project.

The headquarters building (building 1) and firehouse (building 2) were declared eligible by the SHPO on May 20, 1988. Since these properties are not to be included in the realignment surplus list, we concur that the above-referenced project would have "No Effect" on standing structures on, or eligible for inclusion on, the National Register of Historic Places. If you have any questions you can contact Dr. Leland Gilson at 378-5023.

Sincerely,

D. W. Powell, III  
Deputy SHPO

DWP:LG:jn  
O-DELL.LTR

MAR 2

STATE HISTORIC PRESERVATION PROJECT

Sue Vrillakas  
Oregon Natural Heritage Program  
1205 Northeast 25th  
Portland, Oregon 97210

Dear Ms. Vrillakas:

The Seattle District, U.S. Army Corps of Engineers, is the lead agency for analyzing the environmental impacts of a base realignment under the Base Realignment and Closure Act of 1988 (BRAC) at Umatilla Depot Activity, in Umatilla and Morrow Counties, Oregon. The proposed action could affect land use patterns in the vicinity of the Activity, and the Corps is preparing an environmental impact statement for this action. A brief description of the action is enclosed as enclosure 1.

As part of our scoping process, the Seattle District is requesting information from you regarding the occurrence of any sensitive species (plants and animals) in the project area.

If you have any questions regarding this request or require additional information, please contact Mr. Ken Brunner, wildlife biologist, at telephone (206) 764-3479, or Mr. Laver Salo, environmental coordinator, at telephone (206) 764-3430. Thank you for your assistance on this matter.

Sincerely,

/s/

Frederick C. Weismann  
Chief, Environmental Resources  
Section



**United States Department of the Interior**

**FISH AND WILDLIFE SERVICE**  
Portland Field Office  
727 NE 24th Avenue  
Portland, OR 97232

MAR 14 1990

Planning Branch

Base Petcocks, Field Supervisor  
U.S. Fish and Wildlife Service  
737 Northeast 24th Avenue  
Portland, Oregon 97232

Dear Mr. Peterson:

The Seattle District, U.S. Army Corps of Engineers, is the lead agency for analyzing the environmental impacts of a base realignment under the Base Realignment and Closure Act of 1988 (BRAC) at Usatilla Depot Activity, in Usatilla and Morrow Counties, Oregon. The proposed action could affect land use patterns in the vicinity of the Activity, and the Corps is preparing an environmental impact statement for this action. A brief description of the action is enclosed as enclosure 1.

As required by Section 7(c) of the Endangered Species Act of 1973 (16 USC, 1531, et seq.), we request a list of proposed and listed endangered and/or threatened species that may be present in the vicinity of the vicinity of the base. We would also appreciate receiving a list of any candidate species which are presently under review that may occur in the base vicinity.

If you have any questions regarding this request or require additional information, please contact Mr. Ken Brunner, wildlife biologist, at telephone (206) 764-3479, or Mr. Lorr Hale, environmental coordinator, at telephone (206) 764-3630. Thank you for your assistance on this matter.

Sincerely,

/s/

Frederick C. Weimann  
Chief, Environmental Resources  
Section

May 7, 1990

1-7-90-SP-117

Frederick C. Weimann  
Seattle District, Corps of Engineers  
P.O. Box C-3755  
Seattle, Washington 98124-2255

Dear Mr. Weimann:

This is in response to your letter dated March 14, 1990 and received by us on March 19, 1990, requesting information on listed and proposed endangered and threatened species that may be present within the vicinity of Usatilla Depot Activity in Usatilla and Morrow Counties, Oregon.

To the best of our knowledge, there are no listed or proposed endangered species within the area of the project.

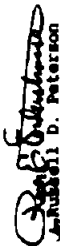
We have attached a list of candidate species (Attachment A) presently under review by this Service for consideration to propose and list as endangered or threatened. Candidate species have no protection under the Endangered Species Act but are included for your consideration as it is possible candidates could become formal proposals and be listed in the near future. If you determine the project may affect candidate species, you are not required to perform a biological assessment or to consult with the Fish and Wildlife Service. If an evaluation of your project indicates that it is likely to adversely impact a candidate species, you may wish to request technical assistance from this office.

This fulfills the requirements of the Fish and Wildlife Service pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended (16 USC 1531 et. seq.). Should you choose to perform a biological assessment or review, we would appreciate a copy for our information, even if it shows a "no effect" situation.



If you have any additional questions regarding your responsibilities under the Act, please contact Diana Wang at our office, phone (503) 231-6179 or FTS 429-6179. All correspondence should include the above referenced case number. Your interest in endangered species is appreciated.

Sincerely,

  
Robert D. Peterson  
Field Supervisor

Attachment

cc: PFO-ES  
BFO-SE  
ODPW (Nongame)  
ONHP

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND  
CANDIDATE SPECIES THAT MAY OCCUR IN THE AREA OF THE  
UMATILLA DEPOT ACTIVITY IN UMATILLA AND MORROW COUNTIES, OREGON  
(T4N R26-28E AND T5N R27-28E)  
1-7-90-SP-117

LISTED SPECIES

None

PROPOSED SPECIES

None

CANDIDATE SPECIES

Birds

Long-billed curlew *Numenius americanus* <sup>2</sup>  
Nesting occurs in T4N R27E S9. Species may also occur in T5N R28E S23.

Plants

Thompson's sandvort *Arenaria franklinii* var. *thompsonii* <sup>2</sup>  
Recorded occurrence in T4N R28E S11.

(E) - Endangered (T) - Threatened (O) - Critical  
Abundant  
(S) - Suspected (D) - Documented

(1) - Category 1: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.

(2) - Category 2: Taxa for which existing information indicates may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

1/ U. S. Department of Interior, Fish and Wildlife Service, Jan 1989, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.32.

2/ Federal Register Vol. 54, No. 120, June 23, 1989 Proposed Rule-Northern Spotted Owl

3/ Federal Register Vol. 54, No. 4, January 6, 1989 Notice of Review-Animals

4/ Federal Register Vol. 55, No. 38, February 21, 1990 Notice of Review-Plants

STATE OF NEVADA



RONALD B. WESTERGAARD  
State Historic Preservation Officer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

Capital Complex  
Carson City, Nevada 89218  
(702) 687-5138

UZR  
v

8 0 FEB 1990

3NCM-08P

SUBJECT: Cultural Resources Survey, Truck Inspection Lot Expansion, Hawthorne  
Army Ammunition Plant, Mineral County, Nevada

Mr. Ron James, Deputy SRO  
Department of Conservation and Natural Resources  
Division of Historic Preservation and Archaeology  
301 South Fall Street  
Carson City, Nevada 89710

Dear Mr. James:

Reference U.S. Army Corps of Engineers, Cultural Resources Survey Report,  
February 1989, subject as above (enclosed).

Reference report is forwarded for your review and comments in accordance  
with 36 CFR 600.51b). As documented in the report, no prehistoric or historic  
period resources were located within this proposed project's Area of Potential  
Effect (APE). Therefore, we conclude that this undertaking will have no effect  
on National Register of Historic Places eligible or listed properties.

Point of contact is Mrs. Marilyn Berry, 3NCM-08P, (702) 645-7991.

Sincerely,

*F. L. Justice*  
F. L. Justice  
Chief, Operations Review Division

Enclosure

Copy Furnished (w/enclosure):

Sacramento District Corps of Engineers, ATTN: CRRP-ED-D (Mr. R. Weaver),  
650 Capitol Mall, Sacramento, CA 95814-4704

89  
ORIGINATOR \_\_\_\_\_ DATE \_\_\_\_\_  
feb29

March 5, 1990

F. L. Justice, Chief  
Operations Review Division  
Department of the Army  
Hawthorne Army Ammunition Plant  
Hawthorne, Nevada 89415-5000

Dear Mr. Justice:

This letter is in response to your request for our concurrence that the expansion  
of a truck inspection lot will not affect the Hawthorne Army Ammunition Plant,  
Mineral County, Nevada. We've reviewed the report which was prepared following  
an intensive archeological/historic survey of the project area. Historic properties  
were not encountered.

We concur that the proposed undertaking will have no effect on properties listed  
on or determined eligible for inclusion in the Register.

Please note that Ronald James has been appointed State Historic Preservation  
Officer and our new telephone number is 687-5138.

Sincerely,

*Alice M. Baldrice*  
Alice M. Baldrice, Deputy  
State Historic Preservation Officer

AMB:amt  
cc: Rich Weaver

20 FEB 1990

SMCWN-ORP

SUBJECT: Cultural Resources Survey, Truck Inspection Lot Expansion, Hawthorne  
Army Ammunition Plant, Mineral County, Nevada

Ms. Maggie Brown  
Nevada State Museum, Capital Complex  
Carson City, Nevada 89710

Dear Ms. Brown:

Reference U.S. Army Corps of Engineers, Cultural Resources Survey Report,  
February 1980, subject as above (enclosed).

Subject report is forwarded for your information. The report has also been  
submitted to the Nevada State Historic Preservation Officer.

Point of contact is Mrs. Marilyn Berry, SMCWN-ORP, (702) 945-7501.

Sincerely,

SIG:LLD

F. L. Justus  
Chief, Operations Review Division

Enclosure

Copy Furnished (w/enclosure):

Sacramento District, Corps of Engineers, ATTN: CESPK-EO-D (Mr. R. Weaver),  
650 Capitol Mall, Sacramento, California 95814-4704

144  
ORIGINATOR 7/1 DATE 2/1  
14833



January 15, 1990

Anita Collins, Chair  
Walker River Paiute Tribe  
P.O. Box 220  
Schurz, Nevada 89427

Dear Anita:

The purpose of this letter is to document conversations and communications with you regarding concerns of the Walker River Paiute Tribe related to the realignment and stabilization of activities at the Hawthorne Army Ammunition Plant (HWAAP). I sincerely apologize for taking so long to follow-up on our conversation of November 20, 1989.

The proposed action at HWAAP was explained in a letter to you, dated November 7, 1989 (Enclosure 1). The only change in the proposed action as described in the enclosed letter is that HWAAP is no longer expected to increase its workforce by three civilian positions; no increase or decrease in workforce is expected to result from the proposed action.

Identification of potential transportation-related and cultural resource impacts to Native American peoples is part of the environmental studies associated with the realignment and stabilization of activities at HWAAP. As a result of discussions with you on November 2 and November 20, the following represents my understanding of the concerns and conclusion of the Tribe:

As long as the land disturbance associated with the parking lot is of the magnitude indicated in the letter dated November 7, 1989 (enclosed) and the land disturbance for the parking lot is restricted to the HWAAP base, the Walker River Paiute Tribe does not have cultural or transportation-related concerns related to the proposed realignment and stabilization of activities at HWAAP. It is unlikely that impacts will occur to the Walker River Paiute people as a result of the proposed action at HWAAP.

Within the next several days, we will be calling HWAAP to check on the status of the Memorandum of Understanding (or Memorandum of Agreement) between the base and Mineral County or the Walker River Paiute Tribe regarding emergency response. I will inform you of the status.

Anita Collins, Chair  
Walker River Paiute Tribe  
January 15, 1990  
Page 2

If my understanding of the Walker River Paiute Tribe's concerns and conclusion is incorrect, please contact me as soon as possible. The Tribe will have an additional opportunity to comment on cultural and other concerns associated with the proposed action at HWAAP when the Draft Environmental Impact Statement (DEIS) is released for public review and comment. I will make sure that you receive a copy of the DEIS so that you may review it.

Please call me collect at (702) 369-4175 if you have any questions regarding the proposed action at HWAAP, or if my understanding of the Walker River Paiute Tribe's concerns related to the proposed action is not correct. Thank you for your assistance in identifying the concerns of the Walker River Paiute people related to the proposed action at HWAAP.

Sincerely,

Tom Greider, Sociologist  
Principal Investigator

cc with encl:

J. Raines, SAIC/Las Vegas  
A. Ferguson, USACOE, SWF



November 7, 1989

Anita Collins, Chair  
Walker River Paiute Tribe  
P.O. Box 220  
Schurz, Nevada 89427

Dear Anita:

It was good to talk with you last week about the different activities that are affecting the Walker River Paiute Tribe. This letter is a follow-up to our conversation concerning realignment and stabilization of activities at the Hawthorne Army Ammunition Plant (HWAAP).

As we discussed last week, Science Applications International Corporation (SAIC) is preparing an environmental impact statement on the realignment of activities at HWAAP. Under Public Law 100-526, entitled the Defense Authorization Amendments and Base Closure and Realignment Act, the Department of Defense proposes to stabilize the total shipments into and out of HWAAP at approximately 80,000 tons annually. This amount is about the same amount that was shipped in 1988 (84,000 tons) and 1987 (86,800 tons); but it is more than was shipped in 1986 (62,800 tons), 1985 (31,700 tons), and 1984 (46,300 tons). Based on the mode of transport for shipments in 1988 and 1987, an estimated 5,000 trucks and 530 rail cars will be required for shipment of 80,000 tons into and out of HWAAP. As a result of stabilizing the number of shipments, HWAAP is expected to increase its workforce by three civilian positions.

Upgrading an existing parking lot at HWAAP is also expected to occur in 1990. The upgrade includes construction of 60 trailer parking pads, a 960 square feet in-processing facility, and a new paved road connecting the public road with the parking lot. Improvements would be made to the surface of the 6.6 acre parking lot, security fencing, lighting, and lightning protection.

In the effort to prepare a comprehensive environmental impact statement on the realignment of activities at HWAAP, any transportation-related or cultural resource concerns the Walker River Paiute Tribe may have regarding the proposed action need to be identified and evaluated in terms of potential impacts to the Tribe.

Anita Collins, Chair  
Walker River Paiute Tribe  
November 7, 1989  
Page 2

I will call you the week of November 13, 1989, to continue our discussion of the proposed action at HWAAP. Please feel free to call me (702/369-4175) at any time if I can be of assistance to you.

Sincerely,

Thomas Greider  
Sociologist

CC:

J. Raines, SAIC/Las Vegas  
A. Ferguson, USACOE, SWF





United States Department of the Interior

FISH AND WILDLIFE SERVICE

REMO FIELD STATION  
4600 Kietzke Lane, Building C-125  
Reno, Nevada 89502

August 31, 1989  
File No.: 1-5-89-SP-192

Mr. Kent O. Wirtz, Biologist  
Science Applications International Corp.  
2765 South Highland Drive  
Las Vegas, Nevada 89109

Dear Mr. Wirtz:

As requested by your letter of August 21, 1989, please find below a list of endangered and threatened species which may be present in the area of or be affected by the proposed U. S. Department of Defense (DOD) Base Realignment and Closure Program, which may involve an increase in the number of personnel stationed at the Hawthorne Army Ammunition Plant and in the munitions and other materials stored at the existing facilities. To the best of our knowledge, no proposed species occur within the project area. This fulfills our requirement to provide a list of species under Section 7(c) of the Endangered Species Act of 1973, as amended. Please see Attachment A for your requirements.

Endangered  
none

Threatened  
Labontan Cutthroat trout, Oncorhynchus clarki henshawi  
-Walker Lake

Candidate  
Oryzias nevadensis (plant found in the vicinity of Thorne)

We have also included a list of candidate species which may be affected by the project. These species are currently being reviewed by the U. S. Fish and Wildlife Service for possible future proposal and listing as endangered or threatened. Candidate species have no protection under the Endangered Species Act, but are included for your consideration because they could be formally proposed and listed during the project construction period.


Information relative to the current status and management of the Labontan cutthroat trout and birds at Walker Lake can be obtained by contacting the Nevada Department of Wildlife, 380 West "B" Street, Fallon, Nevada 89406, (702) 423-4171.

Upon completion of the Biological Assessment, should you determine that a listed species is likely to be affected, then the Department of Defense should request Section 7 consultation through our office. Should the Assessment reveal that only candidate species will be affected, we urge the DOD to seek technical assistance from our office. We will assist in developing the necessary planning alternatives to avoid conflict should a candidate species become listed before completion of the project.

If the Assessment is not initiated within 90 days of the date of this letter, you should verify the accuracy of the list with our office.

If you have any questions regarding the list or the Department of Defense's responsibility under the Act, please contact Donna Withers at (702) 784-5227, or FTS 470-5227. Thank you for your interest in endangered species, and we await your Biological Assessment.

Sincerely,

  
Richard J. Navarre  
Field Supervisor

cc: Assistant Regional Director (AFNE), Portland, Oregon

# Nevada Natural Heritage Program

University of Nevada • Las Vegas, Nevada 89154  
(702) 739-3381

August 30, 1989

Kent Hirtz  
SAIC  
2765 S. Highland Drive, Suite 101  
Las Vegas, NV 89109

Dear Kent:

Possible rare plants for the Hawthorne Munitions Depot are as follows:

*Arabis badensis*  
*Antrodia juncea*  
*Opuntia pulchella*  
*Cercaria nevadensis*  
*Psoralea cuneata*

I don't seem to be able to locate a reference to K. Bell's article that I mentioned, but I will look at home and let you know. It was co-authored with Richard Johnson and could probably be found in BIOABS without too much searching.

I hope this is of some help. Nice to see you--let's do it again.

My best,

*Teri*  
Teri Knight, Botanist

## SAIC CONTACT REPORT

Originator: Kent Hirtz

Date of Contact: 02/06/90

Person Contacted: Donna Withers

Agency Affiliation: U.S. F.W.S.

Address: Area Field Sta.

Telephone Number: 1-702-5227

Subject: Isle Sacras

Discussion: There have been 20 changes

to listed species since last

to check (Aug 1989)





**United States Department of the Interior**

**FISH AND WILDLIFE SERVICE**  
FISH AND WILDLIFE ENHANCEMENT  
RENO FIELD STATION  
4600 Kietzke Lane, Building C-125  
Reno, Nevada 89502-5093

July 3, 1990

Lt. Col. O.B. McCain  
Commander, Hawthorne Army Ammunition Plant  
Hawthorne, NV 89415-5000

**Subject:** Biological Assessment - Truck Inspection Lot Expansion, Hawthorne Army Ammunition Plant, Hawthorne, Nevada

Dear Lt. Col. McCain:

Enclosed are two copies of the subject report; one for submission to the Reno Field Office of the United States Fish and Wildlife Service (USFWS) and one for your retention in your project files.

Please provide SAIC and Fort Worth District, Corps of Engineers (SAJC) with copies of the final transmittals and any responses you receive so we can update our project status files.

POC for this effort is Mr. John Raines at (702) 369-4175 or Mr. Arver Ferguson at (817) 334-2095 (Fort Worth District, COE).

Sincerely,

John A. Raines  
Project Manager

JAR:mct

cc: U.S. Army Engineer District, Fort Worth  
ATTN: Mr. A. Ferguson  
819 Taylor Street  
Fort Worth, TX 75102

Enclosures

January 21, 1991  
File No.: USA 10

O. B. McCane, Lieutenant Colonel  
Commanding Officer  
Hawthorne Army Ammunition Plant  
Hawthorne, Nevada 89415-5000

Colonel McCane:

The U.S. Fish and Wildlife Service has reviewed the biological assessment for the proposed inspection lot expansion at the Hawthorne Army Ammunition Plant, Hawthorne, Nevada. As stated in the biological assessment the category 2 candidate species for the federal endangered species list, *Oryzopsis nevadensis*, is found in the vicinity of the Hawthorne Army Ammunition Plant, however, we agree with the findings of the Soil Conservation Service survey in that the probability of damage to this species is improbable. We thank you for the opportunity to provide comment on this matter.

Sincerely,

David L. Barlow  
Field Supervisor

cc: U.S. Army Corps of Engineers, Fort Worth District,  
819 Taylor Street, Fort Worth, Texas 75102  
Attn: Arver Ferguson, CFSWF-PL-RE

John A. Raines, Project Manager, Science Applications  
International Corporation, 2675 E. Highland Drive,  
Suite 200, Las Vegas, Nevada 89108



## **APPENDIX C**

**Programmatic Agreement among Department of the Army,  
The Advisory Council on Historic Preservation, and  
the National Conference of State Historic Preservation Officers  
Concerning Realignment and Closure of Army Installations  
in Accordance with Base Closure and Realignment Act**



**PROGRAMMATIC AGREEMENT  
AMONG  
DEPARTMENT OF THE ARMY  
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND  
THE NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS  
CONCERNING  
REALIGNMENT AND CLOSURE OF ARMY INSTALLATIONS  
IN ACCORDANCE WITH  
BASE CLOSURE AND REALIGNMENT ACT**

WHEREAS, the Department of the Army (Army) is responsible for implementation of applicable portions of the Base Closure and Realignment Act of 1988 (P.L. 100-526), commonly known as the "BRAC" program; and

WHEREAS, the Army is proceeding with base realignment and closure actions, to include the realignment of functions and units, closure of installations, and disposal of surplus property in a manner consistent with the "Report of the Defense Secretary's Commission on Base Realignments and Closures," December 29, 1988 (Commission Report); and

WHEREAS, the Army has determined that its implementation of the BRAC program may have effects on properties included in and eligible for inclusion in the National Register of Historic Places (historic properties); and

WHEREAS, the Army has consulted with the Advisory Council on Historic Preservation (Council) and the National Conference of State Historic Preservation Officers (NCSHPO) pursuant to Section 800.13 of the regulations (36 CFR Part 800) implementing Sections 106 and 110(f) of the National Historic Preservation Act (NHPA) and Army Regulation 420-40, "Historic Preservation;"

NOW, THEREFORE, the Army, the Council, and the NCSHPO agree that the Army's implementation of the BRAC program shall be administered in accordance with the following stipulations, which will satisfy the Army's Section 106 and 110(f) responsibilities for all individual undertakings under the BRAC program.

**Stipulations**

The Army will ensure that the following measures are carried out.

**I. Applicability**

The terms of this Agreement are intended to apply to all Army installations which may be affected under the provisions of P.L. 100-526 (see Attachment 1), with the exception of the 52 Stand Alone Housing Sites that are variously located in

Connecticut, Illinois, Maryland, Massachusetts, Missouri, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, Washington, and Wisconsin. Those sites will be the subjects of individual consultation between the Army and the appropriate State Historic Preservation Officer (SHPO) in accordance with Section 800.4 and 800.5 of 36 CFR Part 800.

**II. Areas of Potential Effects**

Although some BRAC activities may induce changes in population distribution, traffic, and land use that extend beyond the particular facilities to be closed and parcels on which new construction will occur, the effect of these changes on historic properties is uncertain and in most cases is expected to be minor. Accordingly, the area of potential effects (36 CFR 800.2(c)) of a BRAC action shall be understood to be the area of the facility to be closed and/or constructed, unless there is compelling evidence that effects are likely to occur in a broader area. In cases of dispute over the area of potential effects of a BRAC action, the opinion of the Council will be binding on all parties to this Agreement.

**III. NEPA and Preliminary Coordination with the SHPO**

A. It is mutually understood that many of the terms of this Agreement will be carried out after the Army has complied with the National Environmental Policy Act (NEPA) and filed its Record of Decision (ROD). Nevertheless:

1. whenever it is feasible for the Army to carry out the terms of this Agreement prior to filing the ROD, the Army will do so; and

2. whenever the Army files a ROD on a BRAC action for which the terms of this Agreement have not yet been fully implemented, the Army will stipulate in the ROD that the NHPA has not yet been complied with and that no action will be taken which would foreclose completion of the Army's responsibilities under the NHPA; and

J. the Army will ensure that no actions that could result in effects on historic properties are undertaken pursuant to a ROD until the terms of this Agreement have been carried out.

B. The Army will notify the appropriate SHPO at the earliest time possible of the nature and timing of the BRAC actions for individual installations and will provide the

Guidelines"), except as provided in Attachment 3.

3. The Army will develop priorities for undertaking identification and evaluation of historic properties on individual installations. These priorities will be determined by:

- a. the specific nature and timing of the undertaking proposed;
- b. the nature and extent of the individual Army installation and its land use history;
- c. the potential nature and extent of historic properties; and
- d. possible constraints on field investigations, such as ranges, impact and contaminated areas, safety zones and hazardous materials.

4. All identification and evaluation activities will be carried out in consultation with the appropriate SHPO. In addition, the Army and the SHPOs will assemble and exchange information as it becomes available on the location and evaluation of historic properties.

5. The Army will ensure the identification of records and objects related to the historic significance of properties to be disposed of. Each installation will be required to identify extant historic records and related historic objects.

6. Throughout the planning and implementation of the BRAC program, the Army will provide guidance to the field to ensure that historic properties are not inadvertently damaged, destroyed, or allowed to deteriorate.

B. Evaluation

The Army will determine the eligibility of properties for inclusion in the National Register in accordance with 36 CFR 800.4(c), and with reference to inventories and planning by the State, the Army's history and traditions, previous Army historic site surveys, and any thematic studies that may have been completed or are underway.

V. Determinations of Effect

A. The Army, in consultation with the appropriate SHPO, shall determine the effect of BRAC actions on historic properties in accordance with 36 CFR 800.5, applying the Criteria of Effect

following information:

- 1. a description of the type and location of the undertaking.
- 2. currently available milestones for BRAC actions affecting the installation.
- 3. information available about historic properties at the installation.

C. The Army will coordinate the NEPA process with its NHPA activities. In accordance with the memorandum to all BRAC participants dated July 12, 1989 (Attachment 2), NEPA documentation for each facility will:

- 1. identify known historic properties and past studies;
- 2. identify the potential for historic properties to be affected by the BRAC process; and
- 3. identify the steps necessary for the Army to meet its Section 106 responsibilities under NHPA.

D. The Army will invite comments from affected SHPOs on Environmental Assessments (EA) and Draft Environmental Impact Statements (DEIS).

E. The Army shall provide a copy of this Agreement, its attachments, AR 420-40, 36 CFR 800, and the materials listed in Stipulation IX of this Agreement to appropriate commanders.

IV. IDENTIFICATION AND EVALUATION

A. Identification

1. Based on the assembly of existing information through the NEPA process, the Army will consult with individual SHPOs and make a reasonable and good faith effort to identify historic properties located on installations under Army control that will be affected by BRAC.

2. When existing information is not adequate for identifying significant properties, the Army will undertake installation-specific field surveys in accordance with appropriate professional standards as defined in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-42; hereafter "Standards and

and Adverse Effect at 36 CFR 800.9.

B. Where the Army determines pursuant to 36 CFR 800.5 that an adverse effect may occur, then:

1. If the Army determines, in consultation with the SHPO and taking into account the comments, if any, of the interested persons identified at 36 CFR 800.5(e)(1), that it is appropriate to apply the standard mitigation measures set forth in Attachment 4, the Army may provide the SHPO and the Council with sufficient documentation to support this determination, advise them that it intends to carry out the specified measures, and request their concurrence within 15 days. If the Council and the SHPO concur within 15 days of their receipt of such documentation, the Army shall carry out the standard mitigation measures it has determined to be appropriate. Failure by the Council or SHPO to respond within the specified time period shall be taken to evidence that party's concurrence. Should the Council or SHPO disagree with the Army's determination, the Army will undertake consultation in accordance with 36 CFR 800.5(e).

2. If the Army and the SHPO, taking into account the comments, if any, of the interested persons identified at 36 CFR 800.5(e)(1), agree on a program to avoid, minimize, or mitigate the adverse effect, the Army may provide the Council with sufficient documentation to support this determination and request its concurrence within 30 days. If the Council concurs within 30 days of its receipt of such documentation, the Army shall carry out the program. Failure by the Council to respond within the specified time period shall be taken to evidence the Council's concurrence. Should the Council object to the program, the Army will undertake consultation in accordance with 36 CFR 800.5(e).

3. If the Army determines that neither paragraph 1 nor paragraph 2 above is applicable, the Army will undertake consultation in accordance with 36 CFR 800.5(e).

#### VI. Treatment and Management.

A. The Army will ensure that the effects of BRAC actions on historic properties are treated in accordance with the determinations and agreements reached pursuant to Stipulation V.

B. For those installations or portions of installations which will remain under Army control, the Army will develop treatment and management plans to ensure that properties affected by BRAC are incorporated into Installation Historic Preservation Plans (HPP) in accordance with AR 420-40, and shall create such

HPPs should they not presently exist. All such HPPs shall be developed or amended to include properties affected by BRAC within a reasonable period of time following the date of this Agreement, not to exceed the September 30, 1995 date for completion of BRAC actions as specified in P.L. 100-526.

C. For those installations of which the Army will dispose, the Army will work with the local re-use committees, appropriate SHPOs and other interested parties to develop treatments and/or management plans to ensure compatible reuse.

D. Notwithstanding any other provision of this Agreement, the Army may undertake documentation of historic structures in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation (48 FR 44730-34) prior to making a determination or reaching an agreement pursuant to Stipulation V, if the Army judges that such documentation is likely to be part of a mitigation program that will subsequently be agreed to.

E. Notwithstanding any other provision of this Agreement, the Army may enter into agreements with SHPOs and the Council, seeking the concurrence of other interested persons, if any, establishing processes for the identification, evaluation, treatment and management of historic properties that may be subject to effect by a BRAC action, in lieu of identifying such properties and establishing specific treatment or management plans for them prior to making a decision regarding such an action, where:

1. the precise nature, schedule, location or design of the action is uncertain, and
2. the Army, SHPO, and Council agree that the effects of the action are likely to be relatively minor, or affect properties whose treatment or management will require the application of routine procedures.

#### VII. Interim Protection, Records Retention, and Long Term Curation

A. The Army will notify the appropriate commanders of the need for interim protection of identified and potential historic properties to ensure that deferred maintenance or other management decisions do not adversely affect the integrity of these properties. Important architectural elements will be identified to ensure future appropriate disposal.

B. The Army will consult with the SHPO on terms of curation

Preparing Agreement Documents (Advisory Council on  
Historic Preservation, 1989).

and disposition of historical documents, drawings, photographs,  
reports, and archeological materials generated by BRAC studies.

VIII. Public Involvement

- A. The Army will ensure that the activities of the local re-use committees will be coordinated, as appropriate, with activities carried out under this Agreement.
- B. The Army and the appropriate SHPO will consider the need for additional consulting parties consistent with the Council's publication, "Public Participation in Section 106 Review: A Guide for Agency Officials" (Advisory Council on Historic Preservation, 1989).
- C. To the extent possible, public participation shall be coordinated with public participation under NEPA.

IX. Standards and Guidelines

- Standards and guidelines for implementing this Agreement include, but are not limited to:
  - Army Regulation (AR) 420-40: Historic Preservation (Department of the Army, 15 May 1984);
  - 36 CFR Part 800: Protection of Historic Properties;
  - The Section 110 Guidelines: Guidelines for Federal Agency Responsibilities under Sec. 110 of the National Historic Preservation Act (53 FR 4727-4746);
  - The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-42);
  - The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (National Park Service, 1983);
  - Identification of Historic Properties: a Decisionmaking Guide for Managers (Advisory Council on Historic Preservation, 1988);
  - Public Participation in Section 106 Review: A Guide for Agency Officials (Advisory Council on Historic Preservation, 1989); and

X. Dispute Resolution

- A. Should a SHPO or an interested person identified at 36 CFR 800.5(e)(1) object to the Army's implementation of any part of this Agreement, the Army shall consult with the objecting party to resolve the objection. If the Army determines that the objection cannot be resolved, the Army shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation, the Council will either:
  - 1. Provide the Army with recommendations, which the Army will take into account in reaching a final decision regarding the dispute; or
  - 2. Notify the Army that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the Army in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.
- B. Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; the Army's responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.
- C. Should a member of the public object to any measure carried out under the terms of this Agreement, or the manner in which such a measure is implemented, the Army shall take the objection into account and consult as needed with the objecting party, the SHPO, and the Council to resolve the objection.

XI. Amendments

Any party to this Agreement who determines that some portion of the Agreement cannot be met must immediately request the other signatories to consider an amendment or addendum to this Agreement which would ensure full compliance. Such an amendment or addendum shall be executed in the same manner as the original Agreement. Should any party to this Agreement be unable to maintain a level of effort sufficient to carry out the terms of



Hawaii

Kapalana Military Reservation - closure  
Schofield Barracks - realignment

Illinois

Fort Sheridan - closure

Indiana

Jefferson Proving Ground - closure  
Indiana Army Ammunition Plant - partial closure  
Fort Benjamin Harrison - realignment

Iowa

Fort De Moines - partial closure

Kansas

Fort Leavenworth - realignment

Kentucky

Lexington Bluegrass Army Depot - closure  
Bluegrass Activity - realignment  
Fort Knox - realignment  
Fort Campbell - realignment

Louisiana

New Orleans Military Ocean Terminal - closure

Massachusetts

Army Materiel Technology Laboratory - closure  
Fort Devens - realignment  
Natick Research, Development & Engineering Center -  
realignment

Maryland

Mike site at Aberdeen Proving Ground - closure  
Gaitherburg Army Reserve Center - closure  
Fort Meade - partial closure and realignment  
Fort Holabird - partial closure and realignment  
Fort Detrick - realignment  
Aberdeen Proving Ground - realignment  
Harry Diamond Laboratory - realignment

Michigan

Pontiac Storage Facility - closure  
Detroit Arsenal - realignment

Missouri

Mike site at Kansas City - closure  
Fort Leonard Wood - realignment

North Carolina

Fort Bragg - realignment

New Jersey

Fort Dix - realignment  
Fort Monmouth - realignment  
Picatinny Arsenal - realignment  
Mike Philadelphia 41/41 (stand alone housing) - closure

New Mexico

Fort Wingate - closure  
White Sands Missile Range - realignment

Nevada

Hawthorne Army Ammunition Plant - realignment

New York

Fort Drum - realignment

This Agreement, that party shall notify the others and seek an appropriate amendment.

ATTACHMENT 1

Execution and implementation of this Programmatic Agreement evidences that the Army has satisfied its responsibilities under Sections 106 and 110(f) of the National Historic Preservation Act for all individual undertakings of the program.

DEPARTMENT OF THE ARMY

BY: *Paul W. Johnson* (date) 5 Feb 1990  
Paul W. Johnson, Deputy Assistant Secretary of the Army  
(Installations and Housing)

NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS

BY: *F. Lawrence Oaks* (date) 2-5-90  
F. Lawrence Oaks, President

ADVISORY COUNCIL ON HISTORIC PRESERVATION

BY: *John F. W. Rogers* (date) 2-5-1990  
John F. W. Rogers, Chairman

Alabama

Alabama Army Ammunition Plant - closure  
Coosa River Annex - closure  
Anniston Depot - realignment  
Redstone Arsenal - realignment

Arizona

Navajo Activity - closure  
Fort Huachuca - realignment  
Yuma Proving Ground - realignment

California

Presidio of San Francisco - closure  
Hamilton Army Air Field - closure  
Sierra Depot - potential realignment  
Fort Ord - realignment  
Oakland Army Base - realignment  
Fort Irwin - realignment  
Camp Parks - realignment  
Sacramento Army Depot - realignment

Colorado

Bennett Army National Guard Facility - closure  
Pueblo Depot - realignment  
Fort Carson - realignment  
Fitzsimons Army Medical Center - realignment

District of Columbia

Fort Mc Blair - realignment  
Walter Reed Army Medical Center - realignment

Florida

Cape St. George Reservation - closure

Georgia

Fort Gordon - realignment  
Fort Benning - realignment



ATTACHMENT 2

DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
WASHINGTON D.C. 20310-0104



Fort Sill - realignment

Oklahoma

Oregon

Umatilla Depot - realignment

Pennsylvania

Tacony Warehouse - closure  
Robyhanha Depot - realignment  
Letterkenny Depot - realignment  
Fort Indian Town Gap - realignment

South Carolina

Fort Jackson - realignment

Texas

Fort Bliss - realignment  
Red River Depot - realignment

Utah

Fort Douglas - closure  
Tooele Depot - realignment

Virginia

Cameron Station - closure  
Fort Belvoir - realignment  
Fort Lee - realignment  
Fort Myer - realignment  
Fort A. P. Hill - realignment

Washington

Fort Lewis - realignment

Wisconsin

Fort McCoy - realignment

DACS-DMB (5-10c)

18 JUL 1989

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Plan to Accomplish Historic and Cultural Resources Requirements  
IAW Base Realignment and Closure Implementation Plan for the Army

1. References:

- a. DACS-DM, Letter, HQDA, 13 Feb 89, subject: Headquarters, Department of the Army Base Realignment and Closure Implementation Plan.
- b. CERF-ZA, Letter, HQUSACE, 18 May 89, subject: Potential Effect of Base Realignments and Closures on Cultural Resources.

2. Purpose. To ensure that the requirements of the National Historic Preservation Act (NEPA) of 1966, as amended, its implementing Federal regulations and AR 420-40: Historic Preservation are accomplished in accordance with the guidance and schedule set forth in Ref. 1.a.

3. General Guidance.

a. This letter provides guidance for accomplishment of responsibilities discussed in Ref. 1.b. by ODE, MACOMs, installations, and USACE districts and USACE Mobile District.

b. The NEPA requirements shall be met in coordination with the National Environmental Policy Act (NEPA) actions to the greatest extent possible. In addition, all base realignment and closure undertakings that may have an effect on significant historic places (buildings, structures, sites, districts and objects that meet the criteria of the National Register of Historic Places) shall be reviewed with the appropriate State Historic Preservation Officer (SHPO) and with the Advisory Council on Historic Preservation (Advisory Council), in accordance with the Council's regulations, 36 CFR 800. It is expected that most consultations will result in a Memorandum of Agreement (MOA) between the Army, the SHPO, the Advisory Council and any other appropriate consulting parties.

4. Chief of Engineers (COE) will:

a. In accordance with Ref. 1.a. provide technical advice and assistance relating to compliance with historic and cultural resources laws, rules, and regulations.

DACS-DHS (5-10c)  
SUBJECT: Plan to Accomplish Historic and Cultural Resources Requirements  
IAW Base Realignment and Closure Implementation Plan for the Army

- a. Assist installations, as appropriate, in development of MOAs and other compliance and mitigation documents.
- f. Forward all MOAs to OCE for ratification by Army's Federal Representative (DASA(TAH)).
- g. Ensure that guidance and information on historic preservation compliance is disseminated in a timely manner to MACH components.
- h. Review DD Form 1391 to ensure project compliance with NEPA and/or MOAs.
- i. Coordinate with Center for Military History on treatment of historic records associated with historic places.
- j. Provide installation points of contact for historic resources to OCE (CEHSC-FN).
- k. MACH historic preservation contacts are:  
FORSOM: Dr. James Cobb/FACEN-CDE/(404)362-7186  
TRADOC: Dr. Paul Green/ATEN-FN/(804) 727-2362  
AHC: Mr. Paul McQuitt/CESMF-PL-RC/USACE Fort Worth District/(817)334-2095  
MCM: Ms. Peggy Weigle/ANRST-HEB/(202)475-1199

7. Installations will:
  - a. Provide all existing information about historic and cultural resources to USACE districts preparing Environmental Assessment/Environmental Impact Statement.
  - b. Ensure adequacy of historic and cultural resource information in NEPA documentation.
  - c. Establish a POC for historic resources for all base realignment and closure actions and forward name, address and telephone number to MACH POC.
  - d. Provide materials about the installation's mission and its historic and cultural resources for compliance consultation with SHFO, Advisory Council and MACH.

DACS-DHS (5-10c)  
SUBJECT: Plan to Accomplish Historic and Cultural Resources Requirements  
IAW Base Realignment and Closure Implementation Plan for the Army

- b. Convene a meeting of Cultural Resources (CR) Subcommittees of BRACD Environmental Committee as required, but not less than every 6 months. The chair of the subcommittee is the HQDA Historic Preservation Officer and members are the historic preservation officers for AHC, FORSOM, and TRADOC, and the cultural resource specialist for Mobile District.
- c. Develop standards for information about historic and cultural resources and for assessments of undertakings having an effect on significant historic resources.
- d. Assist MACHs in developing MOAs and compliance documents for individual installations.
- e. Consult with the National Conference of State Historic Preservation Officers (NCSHPO) and the Advisory Council to develop an Army-wide Programmatic Agreement (PA) (IAW 36 CFR 800).
- f. Obtain the signature of the Army's Federal representative on Memorandum of Agreement (MOA) entered into with the Advisory Council and the SHFOs for installation base realignment and closure undertakings.
- g. Review historic and cultural resources work requirements and cost estimates, as requested by MACHs.
- h. Monitor compliance activities in order to correlate with BRACD schedule and report to Deputy Assistant Secretary of the Army (Installations and Housing).
- i. Point of contact is Constanca Ramirez (CEHSC-FN) OHL 202-272-0867, AV 285-0867.

6. MACHs will:
  - a. Ensure that all installations meet NEPA requirements.
  - b. Include compliance with NEPA in MACH Base Realignment and Closure Implementation Plan and engineer action plan.
  - c. Identify installation historic and cultural resources work requirements and cost estimates.
  - d. Identify compliance tasks and schedule for each installation.

DMCS-DHS (5-10c)

SUBJECT: Plan to Accomplish Historic and Cultural Resources Requirements  
IAW Base Realignment and Closure Implementation Plan for the Army

9. USACE District Offices will:

a. Ensure that historic and cultural resources are included in each EA and EIS.

b. Include the following information in each EA/EIS regarding historic and cultural resources:

(1) Summary of existing information about the location, identification, evaluation (including overviews, inventories, mitigation documents, National Register nominations, consensus determinations, and National Historic Landmarks) and management (including any PAs, NDAs, historic preservation plans, archaeological resources management plans, maintenance plans, historic family housing studies, etc.).

(2) Evaluation of the adequacy of the existing information to fully or partially meet compliance requirements for this realignment or closure undertaking.

(3) List of references consulted to determine known and likely historic and cultural resources.

(4) Identify (on a map which indicates contours, impact areas, ranges, etc.) all resources known to meet the criteria of the National Register.

(5) Map identification of all resources likely (high probability) of meeting National Register criteria.

(6) Map identification of all resources that are more than 40 years old and that are unlikely (low probability) to meet National Register criteria.

(7) List of public concerns (from NEPA scoping and other activities) about historic and cultural resources and all contacts with SRO regarding closure or realignment undertaking.

(8) Identify the effects of the undertaking on all properties identified in (3), (4), and (5) above and on those resources for which data to evaluate them are not available.

DMCS-DHS (5-10c)

SUBJECT: Plan to Accomplish Historic and Cultural Resources Requirements  
IAW Base Realignment and Closure Implementation Plan for the Army

c. Identify future work that will be required in order to meet NEPA and NHPA Section 106, 110, and 111 requirements. Recommendations for work should be restricted solely to those effects brought about by base closure or realignment. Information about work efforts to be recommended at the affected installations will include:

(1) Approximate size (in acres) of areas to be recommended for archaeological survey.

(2) Approximate number and locations of buildings, structures, districts, objects or sites to be recommended for historical inventory.

(3) Approximate number of known archaeological sites needing additional testing or data analysis to determine National Register eligibility.

(4) Separate cost estimates to complete each of the above studies broken out at a minimum by contract and administration costs or by in-house costs if the tasks can be completed by Corps of Engineers cultural resource personnel.

(5) Separate cost estimates for those installations to be realigned if activity placement alternatives have been identified that will differentially affect cultural resources. The estimates should reflect the different costs between locating activities in areas thought to have a high potential for possessing significant cultural resources versus areas thought to have a low potential for possessing significant resources.

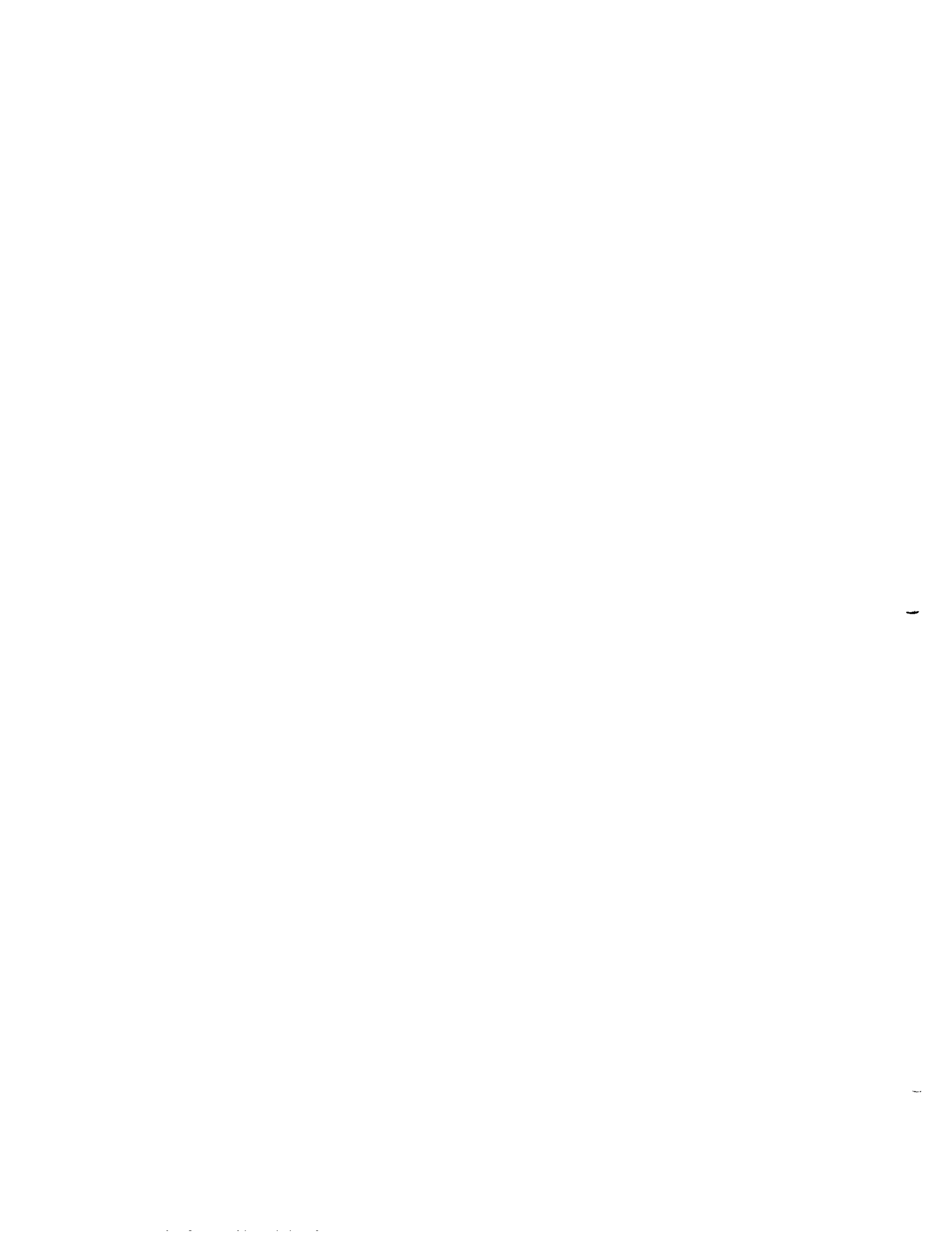
d. Provide MACOHs with cost estimates to complete work identified in Subparagraph c above NIT 4 Aug 89. Work items shall indicate if tasks are to identify and evaluate historic resources or to mitigate the effects of the base realignment and/or closure undertaking.

e. Provide FOC for historic resources actions to MACOHs and COE.

9. USACE Mobile District will:

a. Provide project management oversight and coordination between the USACE direct support districts, MACOHs, and DA during the NHPA process.

b. Continue overall project management and coordination duties during the ongoing NHPA compliance process, following completion of initial EA/EIS documentation, to include oversight of historic preservation action plan.



**Administrative Record**

FORT WINGATE DEPOT ACTIVITY, GALLUP, NEW MEXICO

**Document No. 91-4**

*Final Environmental Impact Statement,  
Base Realignment and Closure:  
Fort Wingate Depot Activity,  
Navajo Depot Activity,  
Umatilla Depot Activity,  
Hawthorne Army Ammunition Plant*

U.S. Army Corps of Engineers, Fort Worth District

**August 1991**



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INQUIRIES REGARDING THIS DOCUMENT AND/OR THE ADMINISTRATIVE RECORD FOR  
FORT WINGATE DEPOT ACTIVITY SHOULD BE MADE TO:  
COMMANDER, TOOELE ARMY DEPOT, TOOELE, UTAH 84074

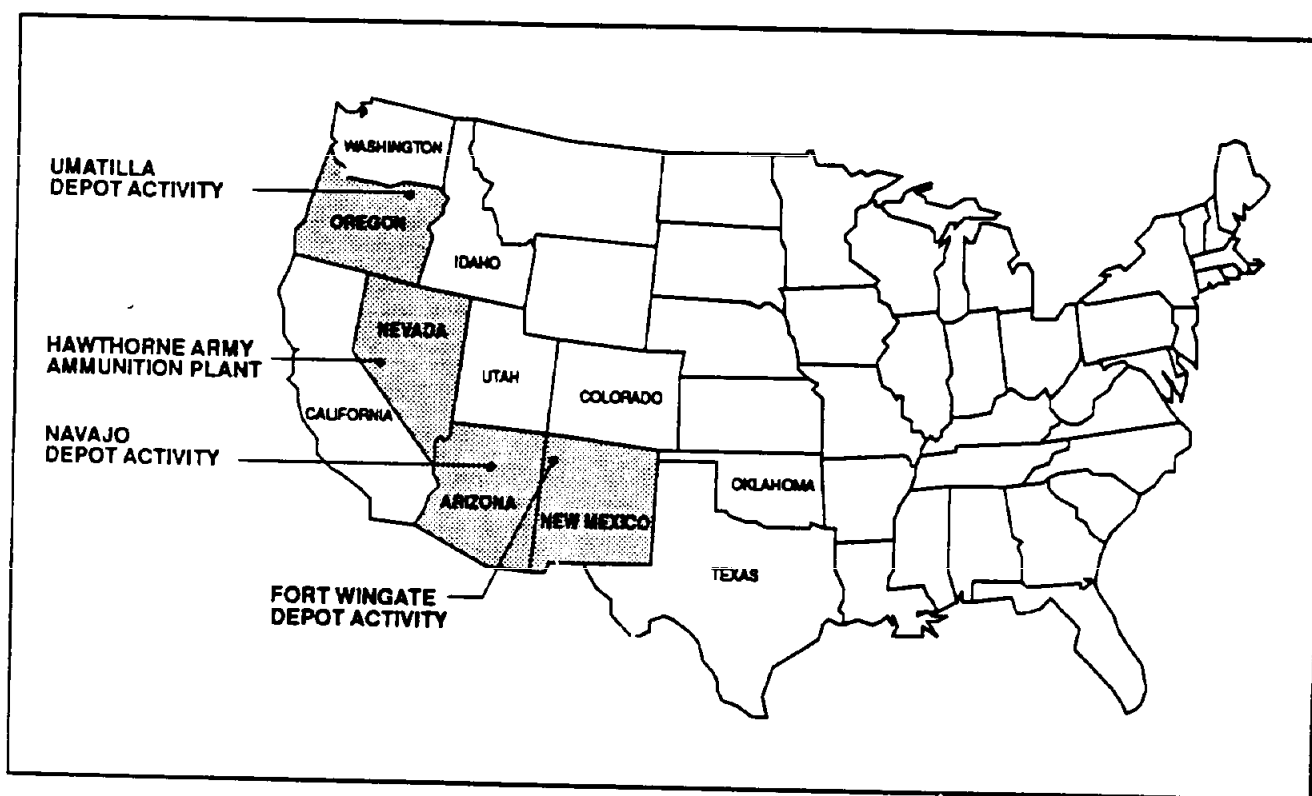




# FINAL ENVIRONMENTAL IMPACT STATEMENT

## BASE REALIGNMENT AND CLOSURE


- FORT WINGATE DEPOT ACTIVITY
- NAVAJO DEPOT ACTIVITY
- UMATILLA DEPOT ACTIVITY
- HAWTHORNE ARMY AMMUNITION PLANT




August 1991

**FINAL  
ENVIRONMENTAL IMPACT STATEMENT**  
for  
Closure of Fort Wingate Depot Activity, NM  
and Navajo Depot Activity, AZ, and  
Realignment of Umatilla Depot Activity, OR  
with Transfers to Hawthorne Army Ammunition Plant, NV

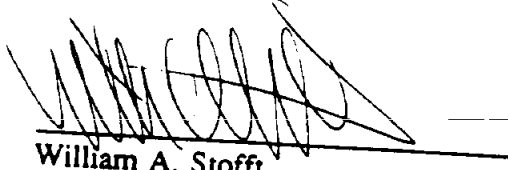
Prepared by:  
U.S. Army Engineer District, Ft. Worth  
U.S. Army Corps of Engineers

  
William D. Brown  
Colonel, EN  
Commanding

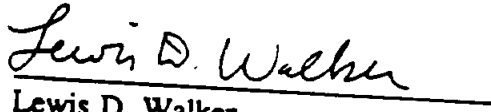
Reviewed by:  
U.S. Army Materiel Command

  
William B. McGrath  
Major General, U.S. Army  
Chief of Staff

Recommended for Approval by:  
Department of the Army  
Office of the Chief of Staff

  
William A. Stofft  
Major General, General Staff  
Director of Management

Approved by:  
Office of the Secretary of the Army

  
Lewis D. Walker  
Deputy Assistant Secretary of the Army  
(Environment, Safety and Occupational Health)

## EXECUTIVE SUMMARY

The action evaluated in this environmental impact statement (EIS) is the closure of Fort Wingate Depot Activity (FWDA) in New Mexico and Navajo Depot Activity (NADA) in Arizona and the realignment of Umatilla Depot Activity (UMDA) in Oregon, and Hawthorne Army Ammunition Plant in Nevada. Manpower positions, materials, and supplies (other than strategic stockpile material) from FWDA, NADA, and UMDA would be eliminated, disposed of through attrition, or transferred to various other U.S. Army Materiel Command facilities. The conventional ammunition missions of these three activities will be moved to Hawthorne Army Ammunition Plant (HWAAP) in Hawthorne, Nevada. Current plans call for reduction in quantities of ammunition to be moved through current mission shipments, demilitarization, and disposal. This means that no new stocks of ammunition are now being shipped to FWDA, NADA, or UMDA, and ammunition now in storage at these sites will be removed to the HWAAP or other ammunition storage facilities; items which are obsolete will be demilitarized at the current or a selected demilitarization facility while items which cannot be moved due to safety concerns will be demilitarized at the current facility. Both the current and selected facility will follow established procedures for demilitarization (disposal) of conventional ammunition.

Disposition of strategic stockpile material and real estate is beyond the scope of this EIS. Currently, the Army does not plan to move Defense Logistics Agency (DLA) strategic material stockpiles stored at FWDA, NADA, and UMDA as a base realignment and closure (BRAC) action. The material is to remain in place for an undetermined period of time. The U.S. Army Corps of Engineers (USACE) Real Estate Office and AMC will work with DLA to develop plans for its ultimate disposition. The Army will insure that the material is provided adequate protection after closure or realignment at these three installations.

This BRAC was recommended by the Defense Secretary's Commission on Base Realignment and Closure (the Commission), and adopted in the Defense Authorizations Amendments and Base Closure and Realignment Act (Public Law 100-526, hereinafter referred to as the Act).

The purpose of the Act, as set forth in the statute's subheading, is to "provide procedures to facilitate the closure and realignment of obsolete or unnecessary military installations." The Commission's recommendation to close a particular installation generally requires the Army to (1) relocate, to the sites identified by the Commission, all military activities specifically recommended for relocation; (2) realign, in a militarily efficient and economical manner, any remaining active Army units for which the Commission did not identify specific receiving locations; (3) abide by other directive Commission recommendations regarding the particular closure; and (4) dispose of military properties and facilities rendered excess or surplus by the closure in accordance with applicable law. As used in this document, disposal of real property means return to prior Federal agency administration or transfer, sale, or lease to other Federal, state, county or tribal agencies, or private interests.

of this EIS only the initial DOD contacts had been made. Reuse planning is a separate ongoing action not covered in detail in this EIS.

## **Major Conclusions and Findings**

### **Fort Wingate Depot Activity, New Mexico**

FWDA is located approximately 32 miles east of the Arizona/New Mexico border in McKinley County, New Mexico. FWDA ships, receives, renovates, stores, and demilitarizes ammunition and components and stores Defense Logistics Agency (DLA) strategic stocks. In addition to the support and mission activities, FWDA provides space for three tenants: (1) the U.S. Army Information Systems Command (USAISC); (2) the U.S. Army Medical Department Activity (MEDDAC) Occupational Health Clinic; and (3) the U.S. Department of Agriculture (USDA).

The BRAC activities at FWDA will consist of the transfer of ammunition stocks and the closure of the installation. The DLA strategic material stockpile stored at the depot will not be relocated as a BRAC Action. Current plans call for reduction in quantities of ammunition through current mission shipments, demilitarization, disposal, and transfer of remaining assets. The Act mandates that closure be completed by September 30, 1995.

The closure of FWDA would reduce direct employment by 93 civilian and 2 military jobs, and would precipitate an annual \$2 million decrease in total regional wages and salaries. The numbers of personnel holding second jobs and of working dependents is expected to decrease by 55 full-time positions, and their wages and salaries will decrease by \$750 thousand. Regional sales would decrease by \$4.9 million. The total decrease in regional population is expected to be 305 persons. The socioeconomic effects of the proposed base closure actions represent about 1 percent of regional employment, population, income, or sales volume. These socioeconomic effects are not considered significant.

The equipment used for the relocated mission will be moved to other Army activities if it is needed. If the items are not needed or are unserviceable for Army or DOD missions, they will be disposed of as surplus property through the routine Defense Reutilization and Marketing Service (DRMS) process. Lands at FWDA are being considered for return to the public domain via the Bureau of Land Management (BLM) as a real property disposal alternative following the Department of Army's proposed closure action. The Army has not identified a preferred alternative for real property disposal. Possible real property reuse alternatives are identified in Section 2.1.2.2 of the EIS. The nature and extent of hazardous and toxic contamination at FWDA could have major impact on decisions regarding land reuse. The U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) has prepared an Enhanced Preliminary Assessment which describes the nature of hazardous and toxic substance contamination at FWDA. Studies to further define the extent of hazardous and toxic substance contamination and unexploded ordnance continue. Cultural and biological resource surveys on FWDA have not been completed for 100 percent of the installation.

Final land and facility disposition will determine what additional cultural and biological resource surveys are necessary. Prior to the disposal action, consultations on cultural resources will be completed, as specified in the February 5, 1990 Programmatic Agreement, with the New Mexico State Historic Preservation Officer (SHPO) and other parties regarding cultural resources and with the U.S. Fish and Wildlife Service (USFWS) and New Mexico Department of Game and Fish regarding biological resources.

Table ES-1 summarizes the environmental impacts of this closure action discussed in Section 4.1. Based on these analyses, no adverse impacts of the closure action at FWDA are considered significant. However, the impacts of anticipated real property disposal cannot be fully addressed at this time since the method of disposal has not been selected. The disposal action will require supplemental NEPA analysis.

### Navajo Depot Activity, Arizona

NADA is located in Coconino County in northern Arizona. The installation is operated by the Arizona National Guard (AZNG). Currently, the active Army mission at NADA is to operate a reserve storage depot activity providing for the shipping, receiving, care, preservation, and minor maintenance and demilitarization of assigned commodities, mainly ammunition stocks. NADA has nine tenant activities including the leased Wherry Housing Complex.

Current activities at NADA encompass more than the active Army conventional ammunition mission. Additional storage and training activities are common. For example, other branches of the Department of Defense (DOD) store and ship ammunition to and from NADA. Defense Logistics Agency (DLA) strategic and critical stockpiles are stored at the depot and will not be relocated as a BRAC Action. Non-Department of Defense mission storage contractors, personnel, equipment, and facilities may also be affected by the NADA closure. The extent of impact depends on which disposal alternative is followed.

The BRAC activities at Navajo Depot Activity will consist of the closure of the facility by September 30, 1995. Current plans call for reduction in quantities of ammunition through current mission shipments, demilitarization, disposal, and transfer of remaining assets. A net total of 124 (4 Federal and 120 AZNG) employees would leave NADA, thereby precipitating a further loss of 84 secondary jobs and decreasing wages and salaries in the region by about \$3.9 million. Regional sales are expected to decrease by \$3.7 million. The regional population would decrease by 425 persons. The socioeconomic effect of the BRAC action represents less than 1 percent of the regional employment, population, income, or sales volume. These socioeconomic effects are not considered significant.

Table ES-1. Summary of Environmental Impacts Due to Closure of Fort Wingate Depot Activity, New Mexico.<sup>1</sup>

Issues	Impact of Closure Action <sup>2</sup>	Impact Range of Real Property Disposition Alternatives <sup>3</sup>
Climate, geographic setting and geology	No impact	No impact
Biological environment	Minimum Adverse to Moderate Beneficial	Moderate to Substantial Adverse
Land and airspace use	Minimum Adverse to Moderate Beneficial	Substantial Adverse to Minimum Beneficial
Air quality	No impact to Minimum Beneficial	Minimum Adverse to Minimum Beneficial
Water resources	Minimum Beneficial	Minimum Adverse
Noise	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse
Cultural resources	Minimum to Moderate Adverse	Substantial Adverse to Substantial Beneficial
Native American concerns	No impact	Unidentified
Wastewater disposal	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse
Solid waste disposal	Minimum Beneficial	Minimum Adverse
Hazardous waste disposal	Minimum Adverse to Minimum Beneficial	No impact to Substantial Adverse
Energy usage	Minimum Beneficial	Moderate Adverse
Aesthetic quality	No impact	Minimum Adverse to Moderate Beneficial
Socioeconomics	Minimum Adverse	Minimum Beneficial
Transportation	Minimum Adverse to Minimum Beneficial	Minimum to Moderate Adverse

<sup>1</sup> No adverse impacts of the closure action at FWDA are considered significant. However, the impacts of real property disposal cannot be fully addressed at this time and will require additional NEPA analysis.

<sup>2</sup> Potentially adverse short term impacts occur during the closure process while potentially beneficial long term impacts occur following conventional ammunition mission closure.

<sup>3</sup> While the Army has no preferred alternative at this time, fourteen potential real property disposition alternatives are suggested in Section 2.1.2.2. Appropriate potential reuse alternatives and the associated impacts will be the subject of subsequent NEPA analysis and documentation.

ammunition mission at FWDA and NADA. No impacts on agreements or commitments to other organizations at UMDA and HWAAP are expected.

### **Controversial Issues**


There are no known controversial environmental issues pertaining to the realignment or closure of the conventional ammunition missions at FWDA, NADA, UMDA, or HWAAP. Although disposition of installation lands is beyond the scope of this EIS, potential real property disposition alternatives at FWDA and NADA are considered controversial based on input during the scoping process.

### **Unresolved Issues**

There are no known unresolved environmental issues pertaining to the realignment or closure of the conventional ammunition missions at FWDA, NADA, UMDA, or HWAAP. However, potential real property disposition at FWDA and UMDA is considered unresolved. The owner's access to one parcel of private property adjacent to NADA is an unresolved issue.

### **Mitigation**

Army actions to avoid or minimize potentially adverse impacts resulting from the preferred and other implementation alternatives as identified and described in Chapter 4 of the EIS for FWDA (Section 4.1.18), NADA (Section 4.2.18), UMDA (Section 4.3.18), and HWAAP (Section 4.4.18) will be based upon the following:



- **Biological Environment**

- An intensive threatened and endangered species survey of FWDA before real property disposal.
- An intensive threatened and endangered species survey of NADA, before return of the land to USFS administration should this real property disposal alternative be selected.

- **Cultural Resources**

- Implementation of the Programmatic Agreement among the U.S. Army, the Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers (February, 1990) for each installation.
- Implementation of the Memorandum of Agreement between the U.S. Army and New Mexico State Historic Preservation Officer for closure of FWDA.
- Implementation of the Memorandum of Agreement between the U.S. Army and the Arizona State Historic Preservation Officer for closure of NADA.

## 2.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

Fort Wingate Depot Activity (FWDA) is located in the foothills of the Zuni Mountains, approximately 32 miles east of the Arizona/New Mexico border and 8 miles east of Gallup, McKinley County, New Mexico (Figure 2-1).

Operations at FWDA are under the direction of the Office of the Commander and are divided among the Support Division, the Mission Division, and the Quality Assurance Division. In addition to the ammunition storage activity, FWDA currently provides space for three tenants: (1) the U.S. Army Medical Department Activity (MEDDAC) Occupational Health Clinic, (2) the U.S. Army Information Systems Command (USAISC), and (3) the U.S. Department of Agriculture (USDA).

### 2.1.1 NO ACTION ALTERNATIVE

This section describes the current mission activities at FWDA. The current environmental and socioeconomic conditions at FWDA are discussed in Section 3.1.

The current mission assigned FWDA is to provide three functions as a reserve storage depot activity: (1) provide facilities for the storage of materiel, mainly, inert and explosive ammunition components, and other commodities such as Defense Logistics Agency (DLA) strategic and critical materiel; (2) ship and receive materiel, primarily by rail or truck transport; and (3) demilitarize and dispose of obsolete or deteriorated explosives and ammunition.

The level of activity associated with the ammunition supply mission varies within the capability defined by staffing and facilities. FWDA is currently authorized 2 military and 92 civilian positions. Since 1978, civilian staffing has averaged about 86, reached a peak of 104 in 1983, and has been about 82 since 1986. Direct operational support facilities include a transportation and handling network with 22 miles of rail and 150 miles of roads, seven general supply warehouses, 731 earth covered ammunition igloos, 12 above ground ammunition storage magazines, 22 ammunition workshop buildings, and an open burning and open demolition area. These staffing levels and facilities result in a current capability mix for conventional ammunition movement, storage, and demilitarization of about 28,000 tons (movement assumed without demilitarization) or 3,800 tons (demilitarization without movement). Workload capabilities are balanced by mission mix each year not to exceed the total mission capability between these two extremes.

The movement capability associated with these staffing and facility capabilities over the past five years has been about 26,000 tons of ammunition per year based upon the limited demilitarization program. However, ammunition shipments to and from FWDA are variable and contingent upon changes in the various Army missions supported by FWDA. Table 2-2 highlights recent historic movements of ammunition to and from the depot. Due



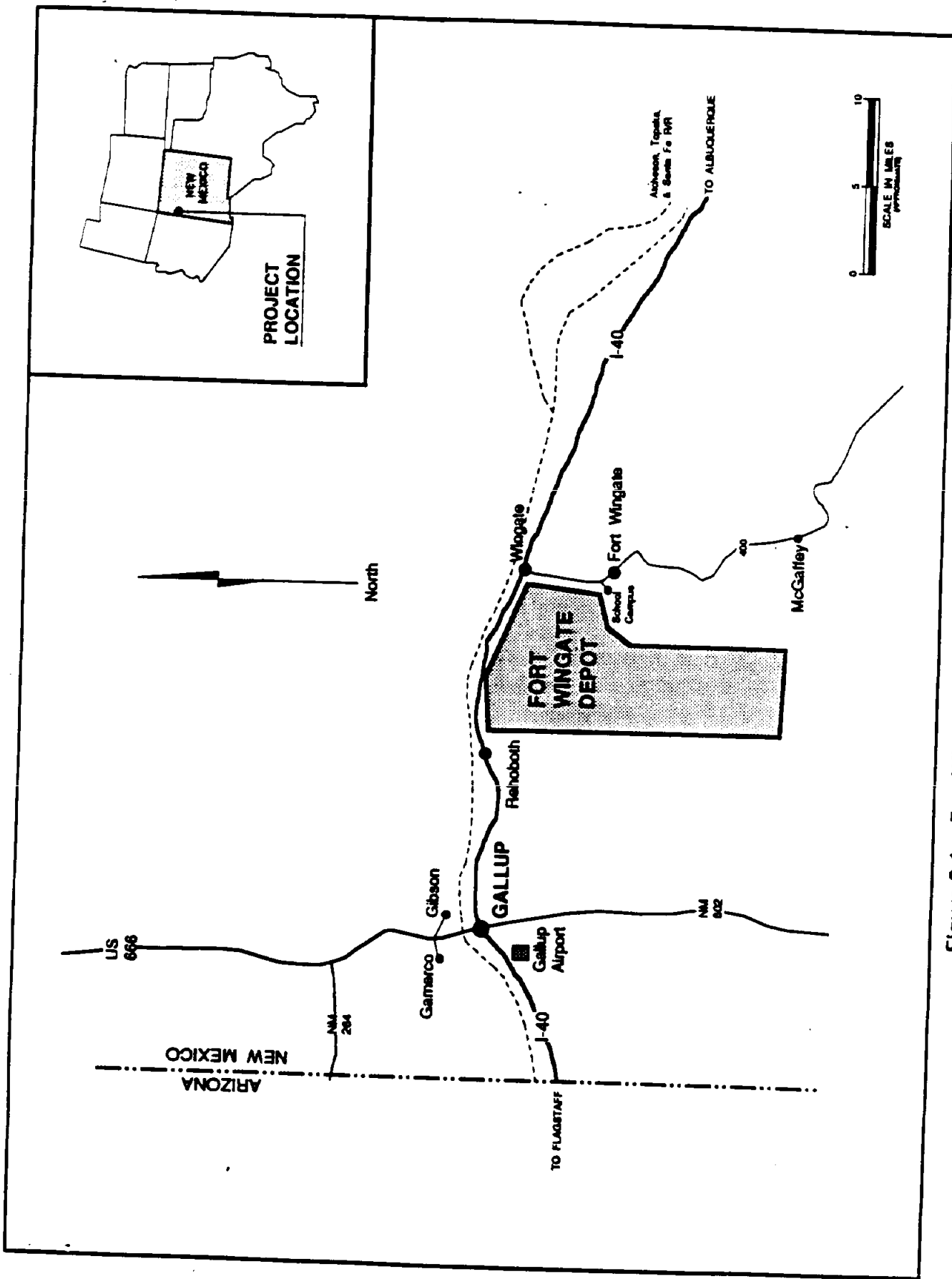


Figure 2-1 Fort Wingate Depot Activity Locations

Table 2-2. Historic Movements of Ammunition to and from FWDA.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
90	0	11	11
89	1	4	5
88	8	4	12
87	10	4	14
86	1	5	6
85	2	10	12

Source: Standard Depot System, Program Status, Depot System Command (DESCOM), September, (Applicable Fiscal Year).

to the variability of Army requirements for ammunition shipments, baseline projections of conventional ammunition movements during FY91-95 are the current capacity to process up to 26,000 tons of ammunition per year.

Transportation of explosives is strictly governed by Department of Transportation (DOT) and Army regulations cited in the introduction to this chapter. Local installation SOPs exist for ammunition transportation within FWDA, including transportation to the demilitarization activities. Before exiting FWDA, loaded transport units are inspected to assure proper loading, placarding and bracing, and to assure that the quantity of explosives, and number of authorized operators and transients is not exceeded.

The transportation routes to the destination points are determined by the carriers. Ammunition from FWDA is primarily transported to Crane Army Ammunition Plant, Indiana; Hawthorne Army Ammunition Plant, Nevada; Lexington-Blue Grass Army Depot, Kentucky; Red River Army Depot, Texas; Savanna Army Depot, Illinois; Seneca Army Depot, New York; Sierra Army Depot, California; and Tooele Army Depot, Utah. The majority of ammunition moved from FWDA in FY90 has gone by truck.

Available records for the past 12 years indicate no accidents involving commercial shipping of hazardous materials from FWDA. The FWDA fire department is currently available for emergency response at and near FWDA. While there is no active hazardous materials team at FWDA, fire department personnel could provide emergency apparatus in the event of release of hazardous materials on FWDA or surrounding area. Fire

department crews also are available to assist local federal, state or county agencies in the event of a hazardous materials spill on or near FWDA.

The ammunition disposal facilities include an open burning area and open detonation pits for demilitarization operations which are authorized by the Environmental Protection Agency (EPA) at single event levels of 5,000 pounds of explosive above ground or 10,000 pounds of explosive with earth cover. The 1988 Resource Conservation and Recovery Act (RCRA) Part B permit application filed with the EPA sought authorization for up to 2,000 tons to be disposed of annually by open burning and open detonation. However, open burning is also governed by a state permit which is renewed every six months with the New Mexico Environmental Improvement Division (NMEID) for the expected disposal quantity. The five-year open burning/open detonation (OB/OD) history for FWDA between 1985 and 1989 is 1, 580, 489, 114, and 727 tons, respectively (Standard Depot System, Program Status, DESCOM, September, Applicable Fiscal Year). Currently, FWDA has the capability to perform one above ground detonation (maximum 2,000 pounds of explosives) and one burn (1 pan maximum, 1,000 pounds of explosives) per day, four days per week. FWDA will request demilitarization limits of 2,000 tons for baseline operations during the next NMEID permit period, which is within the current RCRA Part B permit application limits and represents the current demilitarization component of the baseline mission capability.

Factors that affect detonation scheduling are wind speed, wind direction, temperature, temperature gradients, visibility, and ceiling. OB/OD operations are permitted only during daylight hours, and when wind speeds are between 4 and 15 miles per hour; wind direction confines dense clouds of smoke within the installation boundaries; ceiling exceeds 1,000 feet; and visibility exceeds 5 miles. The Quality Assurance Officer is responsible for visual surveillance for aircraft before and during detonation. The Gallup Flight Service must be notified to obtain weather and aircraft activity information at least 12 hours and again at 2 hours before scheduled detonation or burning. The area must also be searched or scanned for personnel and livestock activity. Before burning, the NMEID must also be notified.

## 2.1.2 PROPOSED ACTION

This section describes the proposed action at FWDA. The environmental and socioeconomic consequences of the proposed action and implementation alternatives are discussed in Section 4.1.

The Act mandates closure of FWDA be initiated by September, 1991 and closed by September 30, 1995. Sufficient storage capability has been identified at other depots to accept the ammunition mission currently at FWDA. This mission was recommended to be relocated to Hawthorne Army Ammunition Plant, Nevada. Defense Logistics Agency (DLA) strategic and critical stocks of fluorspar stored at FWDA will not be relocated as a BRAC action. Reuse of the real property following closure of FWDA will require remediation of those sites regarded as environmental hazards through the ongoing DERP.

### **2.1.2.1 Preferred Implementation Alternative**

This alternative balances the movement of ammunition stocks and demilitarization of unserviceable ammunition at FWDA with respect to requirements and capabilities throughout the Army logistical system. The Army would move and dispose of ammunition in accordance with existing guidelines and capability levels at FWDA. By the end of FY92, 91 civilian and 2 military manpower positions would be eliminated and 2 civilian positions would be transferred to another Army installation. As a result, FWDA would be ready for closure by May 1992.

**Ammunition shipments.** The movement and disposal of ammunition stocks at FWDA would be accomplished to the extent practicable by balancing the ammunition support workload at depot activities throughout the Army. This requires some types of ammunition to be shipped to installations other than HWAAP. As of September 1990, about 20,000 tons of ammunition are estimated to be shipped from FWDA in the course of continuing Army support and as a direct result of closing FWDA (Table 2-3). The shipments would be scheduled along with the demilitarization program so as to remain within the current capability total limits of 28,000 tons per year. Ammunition transportation would be by truck or rail, whichever method is the most cost efficient.

**Ammunition disposal.** The Army plans to dispose of 500 tons of miscellaneous ammunition at FWDA during FY92 using current demilitarization procedures of open burning, open detonation, and surplus to the Defense Reutilization and Marketing Office. FWDA would also renew its semi-annual permit from NMEID, as it has in the past, to accomplish this annual level.

**Real property reuse.** The Army plans to dispose of FWDA real property by the end of September, 1995. As of this FEIS, the Army has not determined a preferred alternative and no recommendations for disposal of real property are presented since baseline studies to identify suitable new development tenants are not completed. The Army's goal is to restore FWDA property to unrestricted use within the limits of the best available technology. The Army would provide caretaker services until the property is disposed of in accordance with existing real property procedures. Alternative land disposal scenarios and potential future uses for FWDA real property are not discussed in detail in this EIS but will be addressed in additional NEPA analysis as required apart from the mission closure action.

### **2.1.2.2 Other Potential Real Property Reuse Alternatives**

This section lists land disposal scenarios to include the possible preferred implementation alternative and other potential future uses for FWDA real property. These potential future uses were developed during the initial scoping process. All interested parties were provided the opportunity to suggest alternative uses such as the following:

- Return of the 6,000 woodland acres to the public domain and the Bureau of Land Management (BLM) administration.

Table 2-3. Planned Movement of Ammunition to and from FWDA<sup>1</sup>.  
(1,000 tons)

Fiscal Year	Receipts	Shipments	Total Movements
95	0	0	0
94	0	0	0
93	0	0	0
92	0	0	0
91	0	20	20

Source: Standard Depot System, Ammo Lot File Summary, DESCOM, May 1990.

<sup>1</sup> Total planned movements (baseline plus BRAC-related).

- Transfer of the 6,000 woodland acres to the USDA or U.S. Forest Service (USFS).
- During the initial scoping process, Native Americans suggested conveyance of 6,000 woodland acres to a Native American tribe (e.g., Zuni, Navajo) contingent upon appropriate Congressional and other administrative actions. At the request of the Navajo tribe, representatives of the Department of Defense (DOD) and the Army met with representatives of the Navajo Tribe to discuss the tribe's interest in obtaining all of the base property. Tribal representatives were encouraged by DOD to present their preliminary economic development plan to Gallup and McKinley County officials, as joint participants in the Fort Wingate Reuse Commission.
- Sale or lease of developed acreage (excluding hazardous and toxic materials and unexploded ordnance contaminated areas) for such uses as:
  - USDA support of the Navajo Tribe food distribution program.
  - New Mexico National Guard training center.
  - Substance and alcohol abuse treatment facility.
  - Prison facility.
  - Light industrial manufacturing.
  - Gallup airport relocation and expansion site.

- Cultural resources research/curation facility.
- Interim storage of low level nuclear waste.
- U.S. Air Force flight training and portable runway installation.
- Wildlife preserve.
- Ammunition storage (compatible use).

Disposal of those sites identified as potentially contaminated (USATHAMA, March 1990) would be deferred until any environmental restoration actions, associated with the Base Closure Process, have been completed. The disposal actions are subject to additional environmental impact analysis.

## 2.2 NAVAJO DEPOT ACTIVITY, ARIZONA

Navajo Depot Activity (NADA) is located in Coconino County, Arizona, 12 miles west of Flagstaff and 17 miles east of Williams (Figure 2-2). Operations at NADA are under the direction of the Office of the Commander and provided by the Supply, Ammunition, and Transportation Division and the Administrative/Services Division. NADA has nine tenant activities: (1) the Wherry Housing Complex, (2) the U.S. Post Office, (3) the USFS Fire Tower, (4) the Luke Air Force Base Post Exchange (seasonal), (5) the U.S. Army Information Systems Command, (6) the Defense Mapping Agency, (7) the 157th Ordnance Battalion (Arizona Army National Guard (AZNG)), (8) the U.S. Air Force (USAF) Ground Wave Emergency Network Tower, and (9) the Defense Investigative Service.

### 2.2.1 NO ACTION ALTERNATIVE

This section describes the current mission activities at NADA. The current environmental and socioeconomic conditions at NADA are discussed in Section 3.2.

The primary mission of NADA is to provide three functions as a reserve storage depot activity: (1) to provide facilities for the storage of materiel, mainly, inert and explosive ammunition components, and other commodities such as DLA strategic and critical materiel; (2) to ship and receive materiel, primarily by rail or truck transport; and (3) to demilitarize and dispose of obsolete or deteriorated explosives and ammunition. The secondary mission is to support reserve component training.

On June 1, 1982 accountability and responsibility for the real property at NADA was transferred to the United States Property and Fiscal Officer (USPFO), State of Arizona, Arizona National Guard (AZNG). At the same time, a license was granted to the State of Arizona acting by and through the Adjutant General to use and occupy NADA on behalf of the Department of the Army, subject to and in accordance with an Interservice Support Agreement (ISSA) between USPFO for Arizona and the Commander, Tooele Army Depot. Since that time, training activities have steadily increased. In 1987, the National Guard Bureau (NGB) prepared an Environmental Assessment for the construction of a 600-person

## Chapter 3

### AFFECTED ENVIRONMENT

This chapter describes the baseline environmental resource setting of Fort Wingate Depot Activity (FWDA), Navajo Depot Activity (NADA), Umatilla Depot Activity (UMDA), and Hawthorne Army Ammunition Plant (HWAAP).

#### 3.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

The regional study area is defined as the geographic area within which environmental resources and socioeconomic conditions may be directly affected by the BRAC action. McKinley County, New Mexico encompasses 5,400 square miles with about 64,000 residents in 1989. This region would experience the direct effects of closure of Fort Wingate Depot Activity (FWDA). The project area is the 22,000 acres of the activity, itself.

##### 3.1.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY

The regional climate is semiarid, characterized by spring and fall droughts. Summer precipitation accounts for approximately 60 percent of the annual precipitation (11 inches per year). Winter precipitation is highly variable. Average temperatures range from a mean high of 64° F to a mean low of 36° F, with an average diurnal variation of 30° F. Extremes range from over 100° F to 0° F. Approximately 151 days are frost-free. Wind direction is generally from the southwest, averaging 9.6 miles per hour, except during the spring when the average is 12 miles per hour.

The principal drainage in the region is the Puerco River, an ephemeral, east-west flowing stream, located immediately north of the installation boundary. FWDA is bounded on the west by the Hogback, a ridge of steeply dipping sedimentary rocks; on the south by the Zuni Mountains; on the east by a small valley terminating at the base of the Zuni Mountains; and on the north by the south fork of the Puerco River. Elevations range from 6,700 feet at the northern boundary to 8,200 feet at the southern boundary.

Three principal geologic formations ranging in age from Permian to Cretaceous are exposed within FWDA and its vicinity. These are the Glorieta sandstone/San Andres limestone, the Chinle claystone, and the surface alluvium of the Puerco River valley. The subsurface strata along southwestern and western boundaries of FWDA contain a complete stratigraphic column, with exposed Cretaceous rocks overlying Jurassic, Triassic, and Permian rocks. Near the administration area to the north, the Cretaceous beds are absent and strata of Triassic age or older are present. In the southeastern corner of FWDA, Cretaceous, Jurassic, and Triassic formations are absent and Permian beds overlie Precambrian rock. Permeable sand and sandy loam clays compose the major soil types. Soil thicknesses vary from 12 inches over most of the installation to 150 feet (alluvial

accumulations) along canyon floors and in the Puerco River valley. FWDA soils are highly erodible, exhibit low fertility, and contain from 15 to 35 percent rock inclusions.

McKinley County is located within seismic zone II. Earthquake records dating from 1906 to 1983 indicate two major events within a 150-mile radius of FWDA: a level VI magnitude vibration (modified Mercalli) felt within 25 miles of FWDA in late 1976, early 1977, and a level VIII magnitude vibration (modified Mercalli) in the Socorro area in 1906.

### **3.1.2 BIOLOGICAL ENVIRONMENT**

#### **3.1.2.1 Terrestrial Ecosystems**

Three major biotic communities found within McKinley County -- Rocky Mountain (Petran) and Madrean Montane Conifer Forests; the Great Basin Conifer Woodland; and the Great Basin Desertscrub -- also occur at FWDA. The varied soil types and elevational differences within FWDA allow for considerable plant and animal species diversity. More than 100 plant and over 200 animal species are likely to occur. These are more fully described in the supporting documentation.

Common floral species include Douglas and white fir; limber, ponderosa, and piñon pines; one-seeded, Rocky Mountain, and alligator junipers; quaking aspen; Gambel oak; locust; big, bigelow, and sand sagebrushes; cliffrose; Apache plume; Mormon tea; barberry; skunkbush; four-wing saltbush; penstemons; globemallows; composites; chenopods; grasses (muhlies, bromes, fescues); and various introduced species--Russian thistle, tumble mustard, filaree, and cheatgrass brome.

Common faunal species include mule deer; fox; coyote; cottontail; black-tailed jackrabbit; tassel-eared squirrel; chipmunk; porcupine; dwarf, vagrant, and Merriam shrews; spotted, golden-mantled, and thirteen-lined ground squirrel; kangaroo rat; vole; piñon mouse; bushy-tailed woodrat; sparrow; piñon and Stellar jay; warbler; oriole; owl; broad-tailed hummingbird; pygmy nuthatch; western flycatcher; woodpecker; Gambel's quail; plateau whiptail; wandering garter snake; and prairie rattlesnake.

A cooperative plan between the U.S. Army and the U.S. Fish and Wildlife Service (USFWS) and the New Mexico Department of Game and Fish (NMDGF) provides for the stocking, management, and control of introduced game species (e.g., bison, pronghorn antelope) as well as native game and predator species.

#### **3.1.2.2 Aquatic Ecosystems, Wetlands, and Floodplains**

Aquatic habitat at FWDA is limited to the sewage treatment evaporation pond and two impoundments, Lake McFerren located in the southeastern corner of FWDA and Lake Knudsen located in the east-central portion. The main ephemeral drainages are the south fork of the Puerco River and its tributaries, Milk Ranch canyon, and Fenced-Up Horse



canyon. Parts of Lakes Knudsen and McFerren are wetland-types, as defined by the U.S. Department of the Interior (USDI) and the U.S. Army Corps of Engineers (USACE).

Lake McFerren is a small 2-acre impoundment; Lake Knudsen is a shallow, often dry, 20-acre intermittent playa lake. Both support a variety of plant life--algae, elodea, sedges, bulrushes, and cattails. Introduced crayfish limit the amount of benthic plant growth and retard eutrophication. Game fish (blue catfish, channel catfish, and rainbow trout) are stocked on a put-and-take basis. The impoundments are not suitable for reproductive fish populations because they periodically dry up or fill with silt. Periodic dredging is required to remove accumulated silt. No fish inhabit the upper reaches of the Puerco River or the drainages within FWDA due to ephemeral flow and water quality degradation caused by heavy sediment load.

### 3.1.2.3 Threatened and Endangered Species

Several Federal or state listed endangered or threatened species possibly occur within FWDA. The species and their habitat requirements are described more fully in the supporting documentation.

The bald eagle (Haliaeetus leucocephalus) is classified as a Federally Endangered species. Perching, resting, and limited lacustrine habitat is available within FWDA. The Federally Endangered peregrine falcon (Falco peregrinus) breeds regionally in cliffs within wooded/forested habitats where they can forage. The southwestern willow flycatcher (Empidonax traillii extimus), a State Endangered Group 2 and Federal Notice of Review (category 2) species, prefers riparian woodland habitats. The gray vireo (Vireo vicinior), a State Endangered Group 2 species, is generally found in open woodlands/shrublands dominated by juniper.

The southern spotted owl (Strix occidentalis lucida), a Federal category 2 candidate, prefers montane conifer forest, although it may also be found in pine-oak woodlands and wooded canyons. It breeds mainly in cliff areas. The spotted bat (Euderma maculatum), a State Endangered Group 2 and Federal category 2 candidate, has been recorded in a wide variety of habitats, from riparian and piñon-juniper woodlands to Ponderosa pine and spruce fir forests. The northern goshawk (Accipiter gentilis apache) is a Federal category 2 candidate adapted to pine forests. It nests in cliffs or large trees. The black footed ferret (Mustela nigripes), a Federally Endangered species, possibly occurs within the depot.

Zuni fleabane (Erigeron rhizomatus), a Federally Endangered species, is restricted to the Chinle shale formation in association with piñon-juniper habitat. Since it is known to occur east of FWDA at old Fort Wingate, the probability that it would occur on FWDA is high. Acoma fleabane (Erigeron Acomanis), a Federal Category 2 candidate, occurs on gypsum sandstone cliffs and canyons in association with piñon-juniper habitat. Chaco milkvetch (Astragalus micromerius), a state-sensitive species, occurs on sandstone and gypsum sandstone cliffs in association with sagebrush and piñon-juniper habitat. Zuni milkvetch (Astragalus accumbens), a localized, endemic state-sensitive species, is abundant in the Zuni Mountains. It prefers well developed sandy clay soils associated with

sedimentary outcrops within the lower piñon-juniper to ponderosa communities. The orchid, Piperia unalascensis, a proposed state endangered species is restricted to the Zuni Mountains in association with ponderosa pine and spruce-fir habitat. Wright's pincushion cactus (Mammillaria wrightii var. wrightii), a state-protected species, occurs on gravelly hills and washes between elevations 3,000 and 5,000 feet.

Grama Grass Cactus (Pediocactus papyracanthus = Toumeyia papyracantha), a state-protected and Federal category 2 candidate, occurs in valleys and open slopes between elevations 6,000 and 7,000 feet. The Pecos sunflower, Helianthus paradoxus, is a state-protected and Federal category 1 candidate species. It may be extinct in New Mexico.

### 3.1.3 LAND AND AIRSPACE USE

FWDA is almost entirely surrounded by Federally owned or administered lands including both national forest and Indian reservation lands. North and east of FWDA is the Navajo Indian Reservation (NIR). Development north of FWDA includes Red Rock State Park, the Zuni railroad siding (Navajo Industrial Park), El Paso natural gas fractionating plant and housing area, the small Navajo community of Church Rock, and the transportation corridors for Interstate-40, old U.S. Highway 66, and the Santa Fe railroad. The community of Fort Wingate, located immediately to the east on reservation land, was the original fort headquarters site. To the south is the largely undeveloped Cibola National Forest. The land to the west is in checkerboard ownership, with management responsibilities divided between the Bureau of Land Management, Bureau of Indian Affairs (Navajo tribal trust land), Navajo tribe (fee lands), and individual Indian allottees. Most of this land is undeveloped, except for the Sundance subdivision and coal mine, and Rehoboth Mission, which are located about 0.5 and 1.5 miles west of FWDA, respectively. The corporate limit of Gallup is located approximately 8 miles west of FWDA. Only a narrow utility corridor extends to Red Rock State Park.

McKinley County has no regulatory control over subdivision and construction on state, Federal, or reservation lands held in trust by the U.S. government. Collectively these lands comprise 83 percent of the county landbase--5 percent state-owned; 16 percent Federally-owned; and 62 percent Indian-owned. The remaining 17 percent is privately owned. County regulations, however, do apply to tribally-owned fee lands. Local control over individual Indian allotment lands has not been defined by the courts at this time. The Navajo and Zuni tribal councils and federal agencies regulate construction on reservation lands.

FWDA land use and activity areas are shown in Figure 3-1. The activities associated with each land use area are discussed in supporting documentation. FWDA real estate comprises 22,100 acres of withdrawn public-domain land. Land and building use is primarily dedicated to storage.

Approximately 5,800 acres on FWDA are forested, primarily with piñon and juniper. At higher elevations, ponderosa pine, limber pine, and Douglas fir occur. Timber management (e.g., thinning, deadfall and slash removal, and diseased tree removal) is

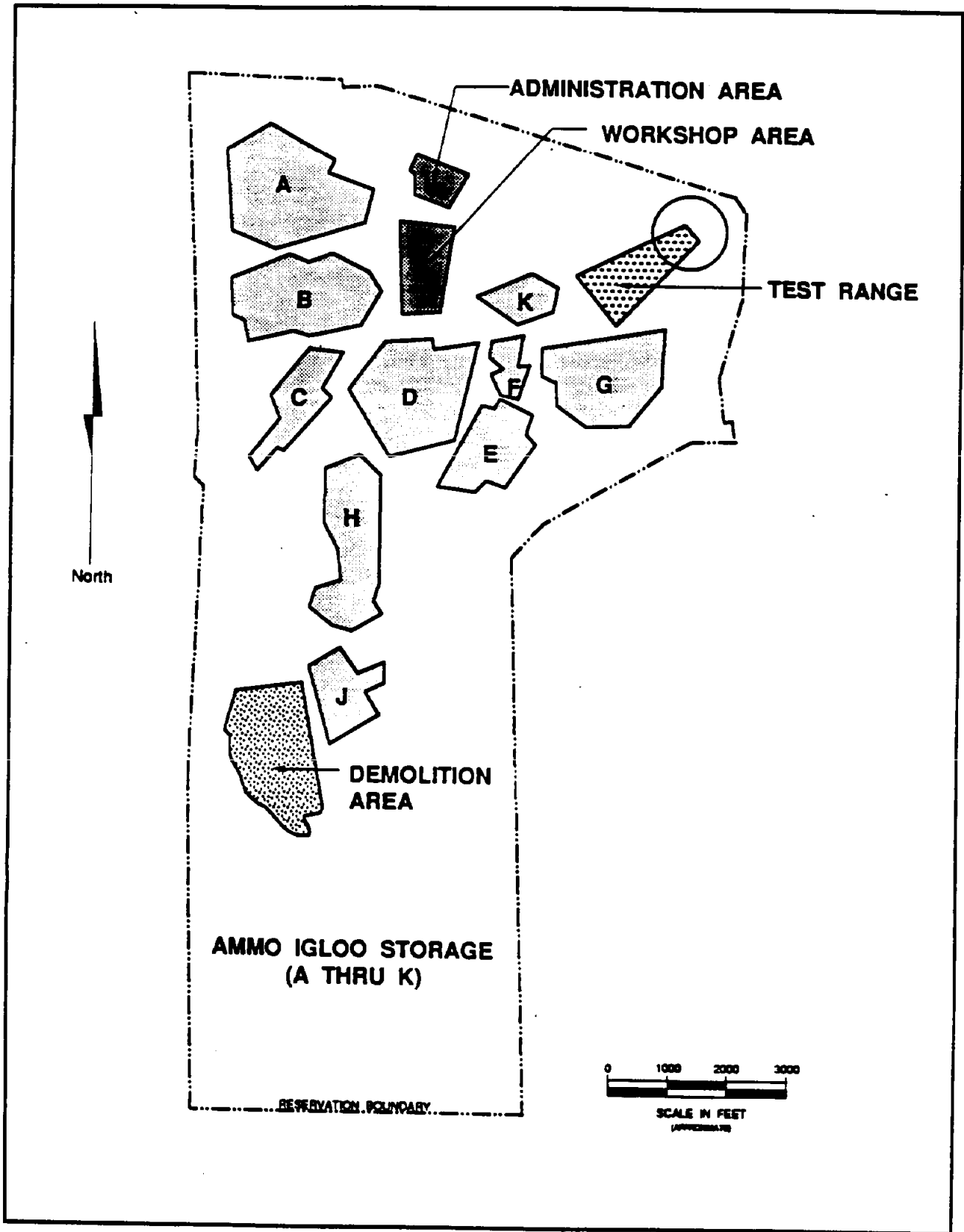


Figure 3-1. Fort Wingate Depot Activity Land Use

practiced to a limited extent. There have been no commercial timber harvests on FWDA. The forest has been impacted slightly by construction activities, fire lanes, and road and igloo maintenance. Between 1870, when Fort Wingate was established, and 1963, there were few grazing restrictions. From 1963 to 1971, a limited number of grazing leases were issued. Currently, there are no grazing leases on FWDA. The only known mineral resources on FWDA are sand and gravel, which are not mined. The potential exists for occurrence of other minerals commonly found in the region.

FWDA recreational facilities include a horse barn, tennis court, and one stocked fishing lake, Lake McFerren. Fishing on FWDA is restricted to depot personnel. The NMDGF authorizes annual public bow hunts for antelope. Hunting is generally permitted only within the buffer zone outside the fenced restricted area. Within Gallup and vicinity are city, state, and national parks. The Gallup Parks and Recreation Department operates 15 public parks with playgrounds, baseball fields, and tennis courts. The most heavily developed regional park is Red Rock State Park, located about 8 miles east of Gallup and 0.5 miles north of FWDA.

A 1973 agreement with FWDA authorizes USDA to lease two warehouses, Buildings 12 and 13, and to use the rail system part time for the Navajo Tribe food distribution program. Surplus warehoused food donated by the USDA is distributed to satellite warehouses on the Navajo Indian Reservation.

Presently, no other agencies use FWDA airspace. From 1963 to 1967, White Sands Missile Range (WSMR) used FWDA as a test-firing launch site for mid-range missiles. The Federal Aviation Administration is currently studying the feasibility of acquiring a portion of FWDA for the proposed Gallup Municipal Airport relocation and expansion project. The U.S. Air Force has also expressed interest in utilizing a portion of FWDA for touch-and-go landing training exercises and portable runway installation.

### 3.1.4 AIR QUALITY

McKinley County is in the EPA's Four Corners Interstate air quality control region and in the state of New Mexico's Region 1 air quality control region. The Four Corners Interstate region is in attainment status for National Ambient Air Quality Standards for priority pollutants (particulate matter, sulfur oxides, nitrogen dioxide, carbon monoxide, ozone, and lead); air quality is good. In the EPA's Prevention of Significant Deterioration (PSD) program, the region is designated Class IA for particulate matter and sulfur oxides and Class III for nitrogen dioxide, carbon monoxide, and ozone. Under the state's PSD program administered by the New Mexico Environmental Improvement Division (NMEID), McKinley County is considered PSD Class II, which allows for moderate development and its associated air emissions; NMEID follows Federal standards for evaluating new pollution sources. Air quality at FWDA is also in attainment and is considered good. Discharges at FWDA that affect air quality include vehicle emissions, plant heating, and demilitarization.

Emission products resulting from open detonation of commonly used explosives in ammunition are shown on Table 2-1. Under the current permit conditions, concentrations of most pollutants at FWDA are within EPA standards. Carbon monoxide release rates within the ammunition demolition area momentarily can exceed EPA standards, but concentrations dissipate quickly with no lasting effects (see Table 4-2). The maximum plume height of combustion products of a detonation is approximately 260 feet above ground level. There are no existing data or modeling to show that there have been violations of the air quality or air toxic guidelines beyond FWDA boundaries. Gallup monitors only for total suspended particulates.

### 3.15 WATER RESOURCES

No permanent surface streams exist on FWDA. Two major drainage systems located within FWDA are Milk Ranch Canyon and Fenced-Up Horse Canyon. The southeastern corner of the installation is drained to the east by several small parallel washes feeding into Milk Ranch Canyon. The east-central portion of FWDA, which includes most of the magazine area, drains to the northeast into the lower reaches of Milk Ranch Canyon before emptying into the South Fork of the Puerco River. The western portion of the installation, is drained by a network of washes into Fenced-Up Horse Canyon, which flows north into the South Fork of the Puerco River. Bread Springs Wash drains the extreme southwestern corner of FWDA. All flow from Bread Springs Wash is diverted to the west side of the Hogback, and eventually empties into the Puerco River west of Gallup.

The region around Gallup, including FWDA, was declared an underground water basin in 1980 by the State of New Mexico. This action prohibits any major new groundwater withdrawals without approval of the State Engineer.

The Glorieta sandstone/San Andres limestone forms the major aquifer of the region, supplying the necessary water for FWDA through a single, deep artesian well located beneath Building 69 in the administration area. The well intercepts the aquifer at a depth of 1,350 feet. The 1970 free-flowing yield of the well was 90 gallons per minute (gpm). Currently the free-flow yield is 12 gpm, though it can be pumped at 165 gpm. The recharge area is in the southeastern corner of FWDA. Water entering the aquifer moves down-gradient to the northwest. The annual snowmelt on FWDA contributes approximately 2,300 acre-feet of groundwater per year for recharge.

Shallow, water-bearing alluvial sands, silts, and clays with lenses of gravel occur along the northern edge of FWDA. These alluvial aquifers are primarily recharged from surface runoff, but some located in the upper reaches of the installation are recharged by springs from underlying aquifers. The shallow groundwater table found in the alluvium is discontinuous and has a low yield. The average depth to water is 20 to 30 feet.

The installation has three water storage tanks--an elevated tank of 250,000-gallon capacity, a ground tank of 200,000-gallon capacity, and an underground storage tank of 100,000-gallon capacity. Water from the artesian well is pumped to the underground storage

reservoir, where it serves two separate distribution systems. One system supplies untreated water for fire fighting and irrigation. The other provides water to the treatment plant in Building 2. The water is treated and chlorinated before distribution in the potable system. In 1981 the installation was using approximately 7,800 gallons of treated water per day.

The State of New Mexico Health and Environmental Department is responsible for enforcing regulations governing public water supplies. Federal contaminant standards have been adopted by the state. In accordance with 40 CFR 141.143, the Bureau of Indian Affairs (BLA) water analysis laboratory in Gallup performs chemical, radiological, and bacteriological analyses on raw and treated water. FWDA employees take two samples per week from 14 sampling points on FWDA for these analyses. The analyses show no significant change (improvement or deterioration) in water quality from wells tapping the San Andres-Glorieta aquifer at FWDA. All pollutant parameters are within applicable standards except for iron, sulfates, and total dissolved solids, which may affect taste, but do not pose health hazards.

A high-gross alpha radiation level (18 to 20 picocuries per liter (pCi/l)) has been frequently found in the raw water since 1984. Although the precise factors contributing to this variability are unknown, it is known that natural uranium occurring in the FWDA region contributes to higher than average background gross alpha particle activity. The EPA maximum contaminant level (MCL) criteria for the gross alpha is 15 pCi/l. There are no known releases of explosive contaminants to groundwater at FWDA. However, since demilitarization activities are known to have released contaminants to the soil, there is potential for groundwater contamination.

Several activities in the administration, ammunition workshop, functional test, former sanitary landfill, and former trash burning areas are suspected of releasing contaminants (e.g., explosives, leachates, heavy metals, pesticides, waste oils, lubricants, solvents, diesel fuels) to the shallow groundwater aquifer. Likewise, there is potential for contaminant migration via surface runoff during heavy rainfall and snow melt. The evidence of release of explosive and other contaminants into the FWDA soils warrants remedial investigation.

### 3.1.6 NOISE

Neither McKinley County nor the state of New Mexico has adopted noise abatement regulations. Therefore, noise data are limited. As defined by the U.S. Army, a high noise area is an area where the sound pressure level exceeds 85 decibels (dBA), regardless of its duration, or where the peak sound pressure level exceeds 140 dBA. The Army has in place an official policy/program for noise levels known as an Installation Compatible Use Zone (ICUZ). The program provides for land use in such a manner as to preclude the placement of noise producing operations in proximity to noise-sensitive populations. It also establishes mitigation measures to ensure that noise above certain thresholds does not impact public areas. High noise areas identified on FWDA include Building 528 (renovation of ammunition); Building 5 (forklift and vehicular maintenance); Building 9 (machine shop);

Building 11 (locomotive storage and minor repair); Building T-33 (carpenter shop); and the heavy equipment yard.

Other noise-producing activities include rail and motor vehicle traffic, small-arms firing, and ammunition detonation. Noise generated from infrequent rail and motor vehicle traffic within FWDA is insignificant. There is greater noise impact from Interstate-40/old U.S. Highway 66 and the Santa Fe railroad line immediately north of the depot boundary. Ammunition detonation is conducted in the southern portion of FWDA in an isolated and topographically buffered area. Detonations can be scheduled year-round, four days per week, 1 blast per day. Computer generated noise contours indicate two concentric noise sensitive zones (Zones II; 62-70 dBC defined as intermediate impact, and III; above 70 dBC defined as highest impact) that are incompatible with residential development on or near FWDA. Zones II and III occur within a 2,300 to 1,500 meter (8,200 feet to 4,920 feet) radius of the open burning/open detonation (OB/OD area), respectively, and partially extended outside the western FWDA boundary a maximum distance of 5,500 feet east-west by 15,100 feet north-south (Zone II) and 2,200 feet east-west by 8,000 feet north-south (Zone III). No community development currently exists within this area, though there is scattered, low-density residential housing within the outermost portions of Zone II. Zone II is compatible with housing if noise reduction measures are used. The computer model predicted noise levels for ICUZ Zones II and III do not exceed 70 decibels (dBC). Zone I (less than 62 dBC) is the lowest impact zone and requires no mitigative measures for housing or other use. No field data are available to verify the accuracy of the contours or the actual noise levels within these zones.

### 3.1.7 CULTURAL RESOURCES

Prehistoric occupation of the region represents an almost complete occupational sequence, spanning the period from 10,000 B.C. to A.D. 1540. Numerous Anasazi ruins related to the Cibola Anasazi Chacoan development occur in the immediate FWDA region. Included are the nearby Chacoan outliers, Heaton Canyon Village and Fort Wingate Ruin, and their satellite communities. The Chacoan culture flourished from about A.D. 1000 until 1150. By A.D. 1200 the Chacoan heartland was largely abandoned. During the 1200s, the Zuni area southwest of FWDA experienced a dramatic population influx, presumably from the Little Colorado and Chacoan regions. At least 36 large plaza-oriented pueblos were constructed in the Zuni drainage between A.D. 1200 and 1540. The large Fenced-Up Canyon site complex (LA 16279) located on FWDA probably represents an aggregation of population from the Red Mesa - Rio Puerco area (Breternitz and Ash 1984).

Perhaps as early as the A.D. 1500s, Athabaskans (i.e., Navajos and Apaches) entered the northern Southwest. Bear Springs/FWDA is within the traditional use area of the Navajo. European presence is documented as early as 1540 when Coronado's expedition travelled to the Zuni Pueblo. Following the American annexation of the New Mexican territory in 1848, the U.S. Army reconnoitered the area seeking routes for a transcontinental railroad and sites for military outposts to protect settlers from Indian attack. Bear Springs

became an important stopping point for these expeditions and an important location for negotiating peace treaties with the Navajo.

Fort Fauntleroy (renamed Fort Lyon on September 28, 1861), was established at Bear Springs on July 22, 1860 to protect settlers enroute to California. In 1861, during the Civil War, the Fort Lyon garrison was transferred to Fort Craig near Socorro. The abandonment of Fort Lyon left much of the western territory of New Mexico and the Wingate valley undefended. In October 1862, the Army established the garrison post, Fort Wingate, at Ojo del Gallo, approximately 50 miles east of Fort Lyon and the present FWDA, to protect the eastern end of the Wingate Valley. From 1863 to 1865, Fort Wingate served as a receiving station on the Navajo's long march from Fort Defiance, Arizona to internment at Bosque Redondo near Fort Sumner in eastern New Mexico. Following the signing of the Navajo Treaty in 1868, the Navajo were returned to their former homeland on a newly created 3.5-million acre reservation. Old Fort Wingate at Ojo del Gallo was abandoned in 1868 and a new Fort Wingate was established July 22, 1868 at Bear Springs to receive the returning Navajos. The new Fort Wingate served as a temporary ration distribution center until Fort Defiance, Arizona, located at the western end of the Defiance valley, was reoccupied and established as the permanent Navajo Agency site.

In 1870 a 100-square-mile military reservation, which incorporated Fort Lyon, was carved out of the public domain and designated Fort Wingate Military Reservation. Fort Wingate was enlarged by 30 square miles in 1881. Six original fort buildings, still standing, are no longer part of FWDA.

Fort Wingate was deactivated in 1911 and placed under the supervision of a caretaker. From 1914 to 1915 Fort Wingate served as a detention center for Mexican Federalist troops and their families who fled from the Pancho Villa uprising in northern Mexico. In 1918 Fort Wingate became an ordnance depot for storing excess World War I ammunition. The original fort building complex was transferred to the BIA in 1925 for use as a boarding school. Approximately 9,000 acres of the military reservation north of the Santa Fe Railroad were transferred to U.S. Department of Interior and added to the Navajo Indian Reservation in 1928. In that same year, the depot activity shifted from dead storage of ammunition to its current mission of renovating, repacking, and shipping ammunition. In 1941 the present administration buildings and ammunition storage igloos were built. Fort Wingate was highly active during World War II. Fort Wingate was renamed Fort Wingate Army Depot in 1962 and redesignated Fort Wingate Depot Activity (FWDA) in 1971 when 4,556 acres were transferred to the USFS.

Eight archeological projects have occurred at FWDA over a 50-year period; 55 sites have been recorded, including one Archaic, two unknown, 21 Pueblo, and 31 Navajo period sites. Most sites (49) were recorded during the 1978 survey (Stucky and Smith 1978) of ammunition storage areas slated for renovation. Four sites have been excavated including portions of the large Pueblo III Fenced-Up Canyon community complex, formerly thought to be a Chacoan outlier. Of the 55 sites, one--LA 73321, an eroded low density artifact scatter--has been evaluated for significance in accordance with National Historic Preservation Act (NHPA) criteria (36 CFR Part 60.4d) and was determined to be ineligible



for inclusion to the National Register of Historic Places. The eligibility status of the remaining sites is undetermined. A 1984 historic structure examination indicated there are no standing buildings at FWDA with historical or architectural significance (Building Technology Incorporated, 1984).

### **3.1.8 NATIVE AMERICAN CONCERNS**

The Native American concerns addressed in this EIS are regional land use issues, traditional cultural values, and religious issues. Regional land use issues are of concern to both the Navajo and Zuni tribes. Perhaps as early as the 1500s, and most certainly since the 1700s, northeastern Arizona and northwestern New Mexico was the traditional homeland of the Navajo. Zuni ties to the region can be traced to at least the 14th century.

The second area of concern are traditional cultural values that have historical depth. These include various natural or landscape features or cultural sites such as hogans blessed by medicine men; burial hogans; burials; sweatlodges; ceremonial sites; and archeological sites, which may be important for reasons other than their scientific or historic value (e.g., they may contain Indian burials or sacred paraphernalia, or be considered shrines).

A third concern is the inseparability of cultural values from religious issues, which may be deeply imbedded in the belief system. For example, the gathering of plants may be of religious importance because of the role they play in traditional medicine or the conduct of rituals. Cultural landscapes may serve as places of worship or objects of veneration, or they may be associated with important events or ritual activities. Also of concern is the fact that certain religious knowledge is explicitly regarded as secret, to be shared only in prescribed ways with individuals within the native community.

Identified sacred sites near FWDA are Church Rock, considered sacred to the Navajo; and Bear Springs and McGaffey, considered sacred to the Zuni (Van Valkenburgh, 1974; Hart, 1980; Kelley, 1984). None of the identified sacred sites is within FWDA. Given the historic use of the FWDA area by the Zunis and Navajos, various sacred sites may be present within FWDA. These might include areas traditionally used for procuring plants, ceremonial materials, or minerals; gravesites; ceremonial sites; sweathouses; homesites; or certain archeological sites.

### **3.1.9 WASTEWATER DISPOSAL**

The main FWDA sewage treatment plant consists of a bar screen, a lift station, 192,000-gallon capacity Imhoff tank, sludge beds, three stabilization ponds, and an evaporation-infiltration lagoon. The plant treats 5,600 gallons of sewage per day and has a maximum rated capacity of 120,000 gallons per day. Under conditions where the inflow rate would exceed the evaporation rate, discharge from the lagoon would be conveyed into an open drainage ditch, which drains into the South Fork of the Puerco River. However, under current facility operation, the discharge is confined to the lagoon, where it evaporates.

The State of New Mexico has not required development of a National Pollution Discharge Elimination System (NPDES) permit since the evaporation-infiltration rates exceed the inflow rate. Isolated areas of FWDA previously used two septic tanks to treat domestic wastewater. These tanks are no longer in use.

### 3.1.10 SOLID WASTE DISPOSAL

Within McKinley County are six modified waste disposal landfills. The City of Gallup collects perishable refuse from FWDA. Since 1969 FWDA has maintained a six-acre landfill for non-hazardous, non-perishable solid waste materials (e.g., construction debris, dunnage). Currently it is designated to receive inert material which is not compacted, but is covered with six inches of compacted soil. The waste may be as much as 20 feet deep in parts of the landfill. Pesticide containers have been identified in the waste and paint cans and suspected asbestos-containing materials were observed in the active section of the landfill. It is located in the southwestern corner of the workshop area three miles from the administration complex. The former (currently abandoned) landfill and burning area was located north of the water storage tanks off the North Patrol road. Disposal activity ceased in 1968. Garbage, trash, debris, and possibly some pesticide containers were discarded there.

### 3.1.11 HAZARDOUS WASTES AND THEIR DISPOSAL

There is no EPA-approved hazardous waste disposal site on FWDA. The Defense Reutilization and Marketing Office (DRMO), located on Kirtland Air Force Base, Albuquerque handles off-site disposal of industrial waste and scrap material including hazardous wastes for FWDA. ELTEX Chemical of Houston, Texas is DRMO's present contractor for hazardous waste treatment and disposal; the previous contractor was TRICIL Environmental Management Company (Laidlow) of Chattanooga, Tennessee. In 1990, 75 drums (55-gallons each) of waste oil and 20,100 pounds of PCP-treated wood pallets were transported from FWDA for disposal in RCRA-permitted disposal sites.

General areas within FWDA containing potentially contaminated sites are indicated in Figure 3-2. Although FWDA does not require any emergency remedial action, areas of known or suspected releases of hazardous or potentially hazardous materials would require additional investigation or remedial action before the property can be released for unrestricted use.

The USATHAMA enhanced preliminary assessment report addresses FWDA Areas Recommended for Environmental Evaluation (AREE) in terms of the broad geographical and functional categories of administration, workshop, magazine/igloo, and OB/OD areas, and other areas and facilities. These are more fully described in the supporting documentation. The limits of the affected areas have not been determined.

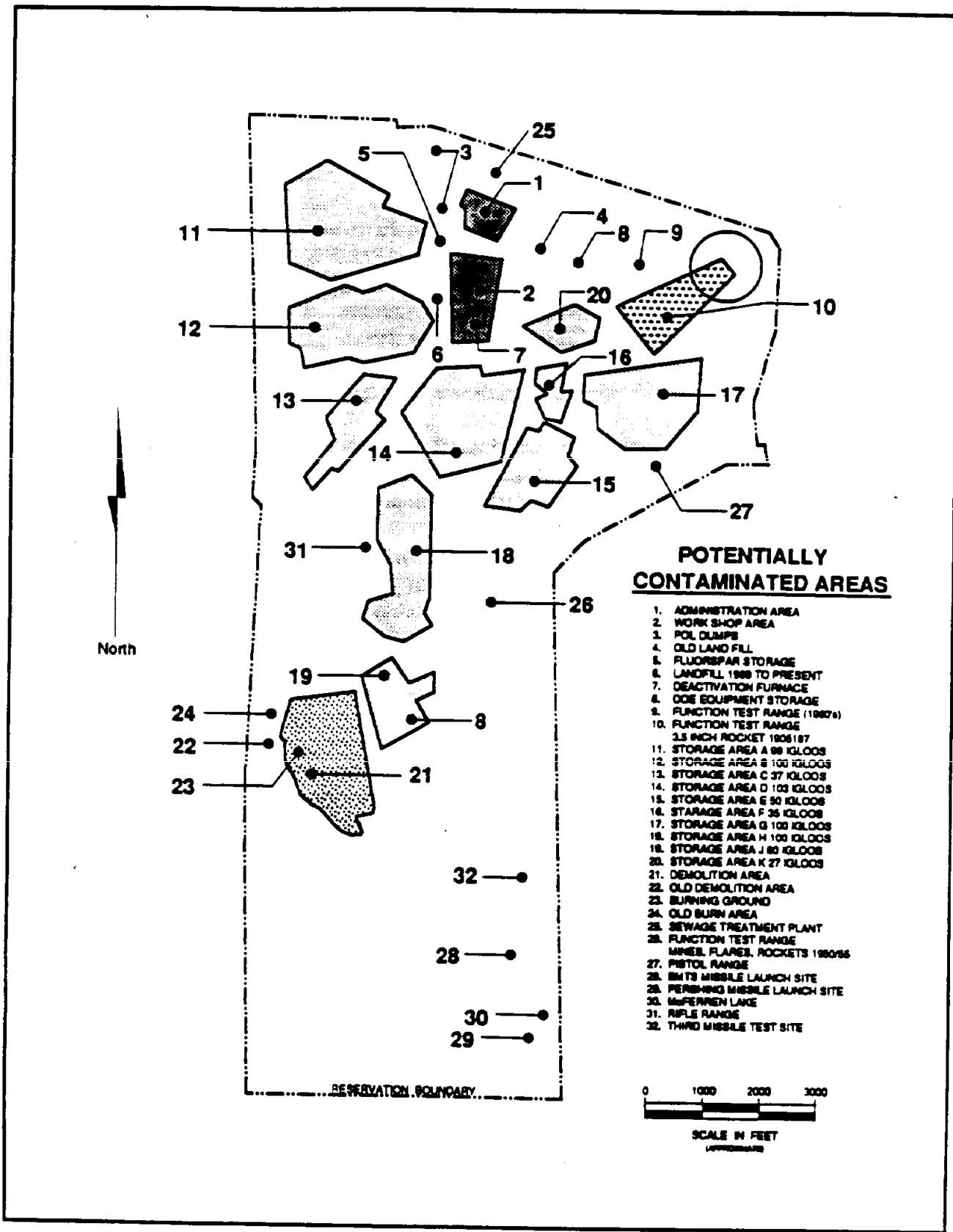


Figure 3-2. Fort Wingate Depot Activity Contaminated Areas

Suspected contaminants include grease, oils, diesel fuel, gasoline, coolants, electrolyte, propellants, detergents, solvents, paint, metal and abrasive dusts, heavy metals, explosives, explosives-contaminated dust, leachates, acids, PCBs (polychlorinated biphenyl), PCP (pentachlorophenol), asbestos, fertilizers, pesticides, septic tank/cesspool effluent, shrapnel, and unexploded ordnance. Activities producing suspected contaminants occurred over many years and some have been suspended for a long time. For example, the trinitrotoluene (TNT) washout facility was in operation from 1949 to 1967, but has since been idle. Pink water from the TNT washout was drained into three settling tanks. Water from the tanks overflowed into three leaching beds, two of which were in use until washout operations ceased in 1967. The third bed was abandoned in 1962 when the washout facility was renovated.

The present burning ground operates as a hazardous waste treatment site under the terms of a RCRA interim status permit. A RCRA Part B Permit has been submitted to the State of New Mexico, and is under review.

In a 1986 environmental compliance audit report, a Toxic Substance Control Act (TSCA) non-compliance order was issued for a leaking transformer that contained PCBs. The transformer was replaced but the PCB spill area was never sampled or cleaned up. PCB migration via the floor drain to surface water and sediments of the storm drainage system may have occurred. The PCB spill will be sampled and cleaned up as an element of the FWDA environmental restoration program. Procedures would include taking wipe samples of the floor areas where PCB transformers had been stored, determining the extent of residual contamination, cleaning up any contamination that is found, and resampling the floor after cleanup to verify the absence of PCBs. Four transformers containing PCB fluid are currently in service.

Asbestos-containing materials were used in several buildings, and for insulating exposed pipes. The nature of the asbestos used and the extent of the hazard it represents is not known. An asbestos survey was completed in July 1990. A total of 48 buildings on FWDA will require asbestos abatement. Of these, 29 are known to contain friable asbestos; 19 others contain non-friable asbestos. Eighteen buildings contain both friable and non-friable asbestos.

There are six underground and six aboveground fuel storage tanks. Three underground fuel storage tanks of approximately 12,000-gallon capacity, located at the FWDA gasoline station are currently in use, as are the smaller capacity (110- and 1,000-gallon) fuel storage tanks. Two of the tanks contain unleaded gasoline; four contain diesel fuel. The contents are inventoried daily, as of the EPA December 22, 1989 deadline. Leak testing of three underground fuel storage tanks was completed in September 1990. The three tanks and connecting lines passed the tightness test. The six aboveground tanks include two abandoned asphalt tanks, two empty diesel tanks, and two diesel tanks currently used for heating purposes.

No radon survey of buildings at FWDA has been completed. On-going surveys in the Administration Area should be completed in October, 1991.

### 3.1.12 ENERGY USAGE

The City of Gallup Electrical Power Company maintains a single 13,800-volt three-phase overhead electrical line that enters FWDA northwest of the administration area. The line connects with the main substation, located along the northwestern perimeter of the administration area. The substation contains three 200-kilovolt ampere (KVA) single-phase transformer banks. The voltage is metered at the substation and stepped down to 5,000 or 2,400 volts for use by the FWDA distribution system. An inactive secondary substation with one 5-KVA and one 3-KVA capacity transformers is located in the workshop area. FWDA has an 85-kilowatt (KW) standby generator to provide emergency services.

The Gas Company of New Mexico supplies natural gas for heating to FWDA via a 30-inch high pressure main, which enters the installation near the main gate. The line enters a utility company-owned metering station where it is distributed to FWDA.

### 3.1.13 AESTHETIC QUALITY

The presently developed portions of FWDA possess no notable aesthetic qualities. For the most part the built environment (e.g., buildings, storage igloos) detract from the picturesque geologic setting of FWDA. From viewpoints within the Puerco River Valley and along the transportation corridors, only the igloos in the lower portions of FWDA are visible, and they are somewhat camouflaged by native vegetation. The undeveloped areas possess scenic beauty as expressed by the colorful geologic formations and varied topography.

### 3.1.14 SOCIOECONOMICS

#### 3.1.14.1 Demography

The 1980 population of McKinley County and Gallup was 56,449 and 18,161, respectively, which is an increase of 30.6 and 24.4 percent, respectively since 1970. The estimated 1989 county population is approximately 63,900. Between 1980 and 1989, county population increased by 13.3 percent. The 1994 population of McKinley County is projected to be about 65,000. Native Americans, primarily from the Navajo and Zuni tribes, comprise 65.7 percent of the county's population, compared with 8.1 percent for the state. The population residing on FWDA is limited to the FWDA Commander and a Department of the Army civilian.

#### 3.1.14.2 Regional Economic Activity

Gallup is the economic center for about 90,000 people in a 15,000 square mile trade area that includes the Pueblo of Zuni and portions of the Navajo Indian Reservation.

During the past 30 years, the traditional economic base of the county has shifted from agriculture, mining, and construction to government, retail and wholesale trade, and services.

The total 1988 civilian work force in McKinley County was 17,662. Total employment that year was 15,507 persons with an unemployment level of 12.2%, or 2,155 persons. For the past several years, employment and personal income have steadily risen. However, some sectors--particularly mining, energy development, and construction--have declined. As a result, the county unemployment rate rose from 5.4 percent in 1978 to a high of 15.5 percent in 1983. Since then the unemployment rate has steadily declined. The state and county employment statistics for the period of 1978 to 1988 are described in supporting documentation. A total of 92 civilian manpower spaces, 2 military, and 8 contract service positions are attached to FWDA. Civilian staffing has been about 82 since 1986. FWDA employment represents 0.5 percent of the county workforce.

Per capita income for McKinley County in 1985 was \$4,743, which ranks below the statewide average of \$8,814. Per capita income for Gallup at \$7,549 is slightly lower than the state average (15.4 percent) but higher than the county average (62.8 percent).

### **3.1.14.3 Housing, Schools, Health Care and Public Safety**

In McKinley County, 15,078 housing units were occupied year-round during 1980. The county persons-per-household ratio of 3.75 is higher than the 2.95 state ratio. By 1985, the number of units occupied year-round in McKinley County had increased to 17,900, lowering the persons-per-household ratio to 3.57. By comparison, the state ratio dropped to 2.80. Housing in the rural areas is generally substandard. Overcrowding, deterioration, and a lack of plumbing are commonplace. In 1980, 28 percent of homes lacked complete plumbing facilities.

Six buildings on FWDA are classified permanent living quarters. Five are brick structures built in 1941. They include one single, 3-bedroom unit located over the dispensary and two duplexes. Two units in one duplex have been converted into one dwelling for the base commander. The sixth structure built in 1942 is a single-family residence of wood frame construction with asbestos shingles and siding. Three houses are currently occupied.

Public education in McKinley County is provided by the McKinley-Gallup and Zuni School Districts. Within the county are 31 public schools--18 elementary, 5 middle, and 8 high schools. During the 1987-1988 school year, total enrollment in county public schools (kindergarten through 12th grades) was 12,404. Other schools include BIA-operated boarding schools located on the NIR within McKinley County. Since there are no schools at FWDA, students residing on the installation are transported to schools in Gallup.

Three hospitals and two nursing homes are in McKinley County. The hospitals include the 70-bed Rehoboth McKinley Christian Hospital, and the U.S. Public Health Service (USPHS)-operated 136-bed Gallup Indian Medical Center and 45-bed Zuni Comprehensive Community Health Center. The nursing homes are the 60-bed McKinley

Manor and the 100-bed Red Rock Care Center. From 1987 to 1988 there were 18 physicians and 12 dentists practicing. The FWDA clinic normally employs one civilian occupational health nurse from WSMR. The position is currently unfilled and the clinic is closed. While WSMR is attempting to recruit a new nurse, it is most likely that FWDA will not have a full-time nurse. What cannot be handled by the FWDA Fire Department, EMTs will be referred to medical resources in Gallup.

Local law enforcement is provided by the McKinley County Sheriff's Office and the Gallup Police Department. The New Mexico State Police maintains a district office east of Gallup and is responsible for state and Federal highways. All law enforcement agencies in the county use the Gallup municipal jail. Maximum capacity is currently 250 persons. The county sheriff's jurisdiction excludes the city of Gallup and the Navajo and Zuni reservations. The tribes maintain their own law enforcement operations.

Fire protection for the City of Gallup and a large part of McKinley County is provided by the City of Gallup. The city operates four fire stations. Fire protection and security on FWDA are provided by civilian employees. FWDA assists McKinley County with fire protection and emergency medical services via a mutual-aid agreement. In 1989, FWDA responded to 79 fire calls and 56 emergency medical calls.

#### **3.1.14.4 Traffic and Transportation**

Gallup, the transportation hub for McKinley County, is serviced by Interstate 40/old U.S. Highway 66 to the east and west, U.S. Highway 666 to the north, and New Mexico Highway 602 to the south. The north-south road system and interconnecting roads are not extensively developed because of the rural, sparsely populated character of the county. Within FWDA are approximately 150 miles of roads (81 paved miles; 69 gravel or dirt-surfaced miles). The primary roads (asphaltic concrete or low bituminous surface; 18 to 22 feet wide) form the arterial system of the depot and link the various activity areas and igloo clusters. Most of the roads in the primary system are in poor to fair condition.

The Santa Fe railroad carries about 40 freight and 2 Amtrak passenger trains per day through McKinley County. Railroad access to FWDA is via a "Y" intertie with the Santa Fe railroad line. The internal rail system comprises 22 miles of trackage rated at 90-pound capacity, a classification yard with 306 rail car capacity, 17 loading docks, a scale, and a locomotive garage maintenance facility.

Gallup has a fully equipped airport for light aircraft. Daily commercial flights are provided by Mesa Airlines.

#### **3.1.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

Licenses, permits, leases, and easements have been issued to a number of users, including U.S. West; Gas Company of New Mexico; City of Gallup Electrical Power

Company; Santa Fe Railroad Company; New Mexico State Highway Department; USDA; and New Mexico National Guard. FWDA maintains mutual aid agreements for emergency response (fire and medical) with the City of Gallup, McKinley County, Ciniza refinery, and AMBCO (the Gallup-based ambulance company). FWDA has a cooperative agreement with NMDGF. Cooperative agreements also are in effect for support of each of the tenant activities.

### 3.2 NAVAJO DEPOT ACTIVITY, ARIZONA

The regional study area is defined as the geographic area within which environmental resources and socioeconomic conditions may be directly affected by the BRAC action. Coconino County, Arizona encompasses 18,600 square miles with about 94,400 residents in 1988. This region would experience the direct effects of closure of Navajo Depot Activity (NADA). The project area is the 28,300 acres of the activity.

#### 3.2.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY

The region is semiarid, with cold winters, mild summers, and considerable daily temperature fluctuation. Annual precipitation ranges from as low as 6.0 inches in the northern desert areas to 30 inches or more on the higher peaks. Winter minimum temperatures are frequently zero or below, summer maximum temperatures are often above 80° F. Winds are usually from the south-southwest with an average speed of 7.4 miles per hour.

The topography of the region is gently to strongly sloping or rolling plains and plateaus broken by occasional cinder cones of volcanic plugs. Portions of the northern part of the county are incised by the Colorado and Little Colorado Rivers forming the Grand Canyon and its tributaries. There are no natural permanent streams or lakes. Low-lying floodplain areas within NADA fill with water during wet years. The area around NADA is mountainous with elevations ranging from 2,000 to 12,600 feet at Humphrey's Peak, the highest of the San Francisco Peaks.

Consolidated sedimentary rocks form bedrock overlain by basaltic lava flows, pyroclastic rocks and unconsolidated alluvial material. The uppermost formations consist of the Kaibab (Permian Age) and the Moenkopi (Triassic Age). The major fresh water-bearing unit of the region is the Coconino aquifer consisting of the Coconino sandstone and the Supai formation. Kaibab limestone outcrops in a wide band across the center of NADA and in Volunteer Canyon. The surface of the depot consists of volcanic rock formations and small volcanic peaks on a sedimentary platform. Minerals in Coconino County include uranium, sand and gravel, aggregate, cinders, pumice, vanadium and bentonite. Soils of the region are primarily of volcanic origin. Several soil limitations to construction exist including shallow bedrock, high shrink and swell potential, and steep slope. Due to porous site substrata, slow permeability makes the area poor for drainfields and sewage lagoons.



## 4.1 FORT WINGATE DEPOT ACTIVITY, NEW MEXICO

This discussion of direct environmental and indirect socioeconomic consequences focuses primarily on closure of the conventional ammunition mission of Fort Wingate Depot Activity (FWDA). When the issue of land disposition at FWDA has been decided, additional NEPA documentation may be required to supplement the following discussions of the impacts of real property disposal alternatives.

### 4.1.1 CLIMATE, GEOGRAPHIC SETTING, AND GEOLOGY

The BRAC action at FWDA will not change the climate, geographic setting, or geology of McKinley County. No impacts are expected as a result of the closure action or real property disposal alternatives.

### 4.1.2 BIOLOGICAL ENVIRONMENT

#### 4.1.2.1 Terrestrial Environment

FWDA closure would not significantly impact regional terrestrial ecosystems. Elimination of those few activities that now contribute to habitat degradation and contamination (e.g., demolition, burning of explosives, herbicide treatments, training, and tank maneuvers) would result in some moderate beneficial impacts to local and migratory wildlife and vegetation. In presently disturbed areas, native vegetation would gradually become reestablished. The selection of real property disposal alternatives has not been made. In the event of unrestricted public or even private access to FWDA lands, human disturbance would increase. This would unavoidably lower wildlife utilization of the area for some species and could result in moderate adverse impacts. The cooperative plan among the Army, the U.S. Fish and Wildlife Service (USFWS), and the new Mexico Department of Game and Fish (NMDGF) for management of introduced and native game as well as predator species would have to be revised to reflect selection of the real property disposition alternative. The remediation of hazardous material contamination prior to real property disposal may also provide a moderate benefit to the terrestrial environment.

#### 4.1.2.2 Aquatic Ecosystems, Wetlands, and Floodplains

As a result of FWDA closure, environmentally degrading activities that could potentially affect perched alluvial water tables or surface water quality would be eliminated and moderate beneficial effects would accrue to wildlife dependent on aquatic, floodplain, and wetland habitat.

Depot closure would have a minimum adverse impact on the existing installation aquatic habitats. Aquatic habitat associated with sewage treatment would be eliminated. The sewage lagoon that now provides some open-water area for avifauna would evaporate. Other animals such as coyotes, foxes, and bats also use the open water and associated

vegetation. The stocking of Lake McFerren would cease. The rate of eutrophication would increase with the elimination of dredging and the embankment would likely be breached within five to ten years. Eventually, the playa, Knudsen Lake, would silt in and would cease to exist due to lack of maintenance and management. The riparian and aquatic flora and fauna dependent upon the aquatic habitats would be lost resulting in moderate adverse impacts. Actions following the selection of the real property disposition alternative could result in the maintenance of this aquatic habitat.

#### **4.1.2.3 Threatened and Endangered Species**

Closure of FWDA would not significantly affect any known threatened, rare, or endangered species residing off-depot. FWDA closure could have some minimum adverse effects on those threatened, rare, or endangered species that utilize FWDA aquatic resources. For example, the suspension of pond and dam maintenance activities would lessen the value of the area to the occasional wintering bald eagles.


Future development accompanying land disposition could have moderate to substantial adverse effects on protected and endangered species, which may occur on FWDA. For example, since appropriate soil and habitat occur within FWDA, it is highly likely that the Zuni fleabane, a Federally Endangered species, may be present and could be affected by new land disturbances associated with future uses.

#### **4.1.3 LAND AND AIRSPACE USE**

Activities associated with FWDA closure would have minimum adverse to moderate beneficial effects and would not significantly affect land and airspace use in McKinley County. Depot closure exclusive of real property disposition would involve termination of existing activities and deactivation of present facilities.

Future land use at FWDA under each of the real property disposition alternatives discussed may depend upon currently existing and any BRAC-related incremental increase in the levels of hazardous and toxic wastes on the installation. The proposed action and implementation alternatives do not affect the present Department of the Army policy; the remediation of hazardous and toxic waste to a level consistent with unrestricted land use is the Army's goal as described in the introduction to Chapter 2.

The principal real estate issues are related to disposal and alternative future use(s) rather than the closure action itself. The effects associated with those future uses could range from moderate to substantial adverse impacts. The Executive Orders that authorized the withdrawal of the land from the public domain provided for the return of the lands to the U.S. Bureau of Land Management (BLM), when they are no longer needed for military purposes. Subject to the Secretary of the Interior's determination that the lands are suitable for return and formal revocation of the withdrawal of these lands, the lands would be returned to the Bureau of Land Management. The relinquishment of the withdrawal, wholly or in part, will govern the amount of lands available for disposition by sale or otherwise.



Alternative future uses proposed during the scoping process (Section 2.1.2.2) are being studied by the Fort Wingate Redevelopment Commission. Topics of public interest included no-action, conveyance of lands to Native American tribes based on aboriginal land claims, and multi-use/occupancy (e.g., national cultural-historical research and curation facility, drug and alcohol detoxification and treatment center, industrial park, airport, and excessing the southern portion of land to the U.S. Forest Service-USFS). In formulating a balanced redevelopment plan, alternative future use planning and decision making would have to take into consideration the environmental effects on existing natural and cultural resources, as well as local economic needs.

The BRAC action is not expected to affect land use planning in McKinley County. However, possible conflicts between the real property disposition action and Federal, regional, state, and local (including Indian tribe) land and airspace use plans, policies, and controls is possible. FWDA is almost entirely surrounded by federally owned or administered lands, including both national forest and Indian trust lands. All areas of residential development within the immediate vicinity of the FWDA are on Native American lands. The nearest municipality to FWDA, the City of Gallup, is located approximately eight miles west of the FWDA. Any eastward expansion of the city is precluded by reservation, tribal, and Indian allotment lands. McKinley County presently has no zoning ordinance and no local zoning authority. However, county authority would not apply to federally owned or administered lands.

Closure of FWDA would not affect regional forests. Within the 5,800 acres of FWDA forested areas, such thinning and disease control activity as now occur would cease. The threat of forest fire would increase should current installation forest and watershed management lapse, resulting in minimum adverse impacts. The BRAC action is not expected to affect livestock grazing on FWDA. However, the impact of depot closure on grazing by the bison population on FWDA is unknown. In January 1990, the New Mexico Game and Fish Department held a public auction to thin the herd size. The size of the herd and its grazing requirements could experience minimum adverse effects depending upon the future use of FWDA land.

Closure of FWDA would have no effect on regional or installation mining activities. Real property disposition alternatives which allow future ground disturbance by mining sand and gravel could substantially adversely affect the biotic and cultural resources on FWDA. Regional recreational facilities, parks, museums, etc., would not be significantly affected by FWDA closure on the basis of the loss of demand by FWDA-related population (Section 4.1.14.1). Regional recreational facilities serve not only the local population but tourists as well. With closure, FWDA recreational facilities (horse barn, tennis court, Lakes Knudsen and McFerren) would fall into disuse and would deteriorate. Since public access has been restricted, closure of FWDA would have minimum adverse effects directed toward current installation recreational use.

The BRAC action prior to real property disposition is not expected to affect special land use agreements. The affects of real property disposition on these agreements are dependent upon the ultimate disposition of FWDA and could have substantial adverse

impacts upon current tenants. Closure of FWDA would not significantly affect regional or installation airspace use. The cessation of demolition activities that temporarily restrict flights directly over FWDA would be considered a minimum beneficial effect. Real property disposition alternatives which effect land and airspace use include (1) the feasibility of the Federal Aviation Administration acquiring a portion of FWDA for the relocation and expansion of the Gallup Municipal Airport, and (2) the interest the U.S. Air Force has expressed in utilizing a portion of FWDA for flight training. These future airspace uses could result in minimal adverse impacts to local civil aviation flight plan options.

#### 4.1.4 AIR QUALITY

Closure of FWDA would reduce impacts on both the regional and installation air quality by eliminating those activities that degrade air quality (e.g., operation of 10 small, natural-gas fueled, central heating plants; explosives detonations; and open burning of explosives propellants and explosives). Emissions of carbon monoxide, sulfur dioxide, nitrogen oxide, and hydrogen sulfide (produced as byproducts of explosives detonation and open burning) would be eliminated, resulting in minimum beneficial impacts.

Following closure, careful land management would be necessary to ensure that soils are not denuded or degraded. Most FWDA soils are highly susceptible to wind and water erosion. Until native vegetation is reestablished, unvegetated areas would be potential sources of windborne particulates, which could have minimum adverse impacts.

At present, New Mexico Environmental Improvement Division (NMEID) does not require air quality monitoring to determine if FWDA activities violate air quality or air toxic guidelines beyond FWDA boundaries. No major changes in SOPs are foreseen as a result of the minor demilitarization program. Coordination with environmental and public safety agencies is expected to continue as under the current mission.

Table 4-1 identifies the total annual emissions and contaminants expected to result from the BRAC demilitarization at FWDA. These estimates are based upon FWDA's capability described in Section 2.1.1 and the demilitarization program described in Section 2.1.2. The products of open burning and open detonation include both rapidly dissipating gaseous compounds and other substances that can contribute to potential ground contamination (Section 4.1.11). The estimates in the table are based upon the following assumptions - miscellaneous demilitarization for open detonation is divided evenly between TNT initiated by Composition B. The weight of contaminants, if any, derived from non-energetic components of the ammunition is not included.

The NMEID applies the National Ambient Air Quality Standards (NAAQS) in permitting demilitarization activities at FWDA for most emissions. The New Mexico ambient air quality standards for hydrogen ( $H_2$ ) and Hydrogen Sulfide ( $H_2S$ ) are described in parts per million (ppm) and are not compared quantitatively. Total suspended particulates are not yet calculated. Table 4-2 compares the level of emissions or contaminants (pollutants) generated during the FY92 demilitarization program scheduled

at FWDA with the standards for priority emissions or contaminants. The one-hour rates are assumed to be confined to FWDA with the maximum plume height of 260 feet. For the other rates, McKinley County is the area of confinement and the height is the average afternoon mixing height (about 7,600 feet above ground level); this is a small fraction of the total volume of the Four Corners Interstate Air Quality Region. The emissions or contaminants are slight in all cases, dissipate rapidly, and do not exceed the standard. No adverse effects on air quality at FWDA or McKinley County are expected as a result of the BRAC related demilitarization program.

Table 4-1. Weight of Emissions or Contaminants Generated by Open Burning/Open Detonation for Common Propellants and Explosives at FWDA

Annual Emissions (Short Tons)

Emission or Contaminant	FY92
Carbon Dioxide (CO <sub>2</sub> )	383.4
Nitrogen (N <sub>2</sub> )	714.9
Carbon Monoxide (CO)	73.9
Water (H <sub>2</sub> O)	93.5
Carbon Solids	0.0
Hydrogen (H <sub>2</sub> )	3.0
Methane (CH <sub>4</sub> )	0.1
Ammonia (NH <sub>3</sub> )	0.002
Liquid Lead Compounds <sup>1</sup>	0.0003
Potassium Hydroxide (KHO) <sup>1</sup>	0.004
Elemental Lead (Pb) <sup>1</sup>	0.0018
Hydrogen Sulfide (H <sub>2</sub> S)	0.0001
Gaseous Lead Oxide (PbO) <sup>1</sup>	0.000
Sulfur Dioxide (SO <sub>2</sub> )	0.001
Nitrogen Oxide (NO)	0.001
Solid Lead Oxides <sup>1</sup>	0.001
Oxygen (O <sub>2</sub> )	2.3

O<sub>2</sub>, N<sub>2</sub>, and H<sub>2</sub>O are not considered contaminants and are listed to complete the material balance only.

<sup>1</sup> Potential ground contaminants.

Table 4-2. Priority Emissions or Contaminants from BRAC Demilitarization at FWDA, Peak Year (FY92) (Comparison with Most Restrictive Standards)

Priority Emission or Contaminant	Standard Measure	Standard Units	Demilitarization Units	Demilitarization Percent of Standard
Sulfur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup> /24 hr	365	0.0000002	0.00000006
Carbon Monoxide (CO)	μg/m <sup>3</sup> /1hr	40000	4.525190	0.011
Nitrogen Oxide (NO)	μg/m <sup>3</sup> :24 hr	188.1	0	0
Lead (Pb all forms)	μg/m <sup>3</sup> :QAM	1.5	0.000002	0.00011
Hydrogen (H <sub>2</sub> )	μg/m <sup>3</sup>	None	0.001735	Negligible
Hydrogen Sulfide (H <sub>2</sub> S)	μg/m <sup>3</sup>	None	0.0000000	Negligible
Hydrocarbons (CH <sub>4</sub> )	μg/m <sup>3</sup>	None	0.003	NA
T. Suspended Particulates	μg/m <sup>3</sup> :AAM	50	NA	NA

Notes: μg/m<sup>3</sup>: micrograms/cubic meter; AAM: annual arithmetic mean; QAM: quarterly arithmetic mean.

#### 4.1.5 WATER RESOURCES

Closure of FWDA would eliminate the demand placed on the principal aquifer by the installation's use of approximately 7,800 gallons of treated water per day. Water quantities made available by closure would be reduced by the water needs of the ultimate real property disposition alternative. The closure action could result in a minimum beneficial impacts on water supplies in the region or on FWDA if alternative use does not require water. However, the disposition alternative could require at least the current demand and result in minimum adverse impacts.

Regional water quality would improve with the suspension of those activities that could cause water quality degradation. The eventual remediation of contaminated areas in conjunction with real property disposal alternatives would reduce potential risks to water supplies. Although, presently, there is no documented evidence to indicate that the deep, confined Glorieta-San Andres aquifer has been contaminated as a result of FWDA-related activities, several activities are suspected of releasing contaminants to the soil. Consequently, there is potential for migration of explosives and chemical waste contaminants to groundwater supplies. Sampling of shallow alluvial aquifers and sediments within the Puerco River would be conducted as an element of installation restoration to determine the extent, if any, of hazardous material contamination via surface runoff and percolation. This has not yet been scheduled. BRAC-related demilitarization activities have potential to

affect the local groundwater via additional releases of explosives contaminants. However, these short-term potential minimum adverse impacts to water quality will cease upon closure and result in a minimum beneficial impact. Future uses of FWDA such as for industrial development could also have minimum adverse impacts upon local water quality.

#### 4.1.6 NOISE

With FWDA closure, FWDA-generated noise-producing activities (e.g., shop and maintenance activities, ammunition renovation and demolition, small-arms firing, rail and motor vehicle traffic) would cease resulting in minimum beneficial impacts. Externally produced noise (e.g., Interstate-40/U.S. Highway 66; Santa Fe Railroad traffic) would not be affected by FWDA closure. USAEHA, Bio-Acoustics Division, has prepared an updated ICUZ noise analysis for the projected BRAC-related demilitarization program. The environmental noise contours for demolition activity at FWDA were generated by the BNOISE computer model. The contours represent acoustic averages and do not take into account the effects of wind or terrain on blast propagation. Nor can they predict damage to structures from one large blast. The radius of the 62 dBC contour (e.g., boundary between Noise Zone I and II) is 2,000 meters (6,560 feet); the radius of the 70 dBC contour, the boundary between Noise Zone II and III is 1,000 meters (3,280 feet). This is based upon the projected 4,000 pound per day (2,000 pounds of explosives per pit) detonation limit. These levels closely approximate and are within the current noise contours described in Section 3.1.6. Detonation noise would result in short-term minimum adverse impacts on the few residents occupying the scattered residential housing in Zone II. If the Hogback does not provide an adequate natural sound barrier, noise reduction measures may be necessary to avoid potentially significant impacts. No long-term significant noise impacts are expected from the BRAC action. The possible relocation and expansion of the Gallup airport as an alternative reuse of FWDA land could result in minimum to moderate adverse noise impacts.

#### 4.1.7 CULTURAL RESOURCES

FWDA closure would have minimum to moderate impacts on installation cultural resources, which have been afforded protection within a secured, limited-access area. Unless protection and security of the lands are continued, closure without protection would undoubtedly precipitate vandalism, pot hunting, and site destruction. The disturbance of land for future land uses such as development of a prison, airport, or interim low level nuclear waste storage site could result in moderate to substantial adverse impacts to cultural resources. Development of a national cultural historical resource facility and artifact repository suggested during scoping as a possible future use of facilities at FWDA could have moderate to substantial beneficial impacts to cultural resources.

Procedural requirements of Public Law 96-515 (National Historic Preservation Act of 1966, as amended) have not been completed. After land disposition has been decided, known problems and inconsistencies in the current cultural resource data base regarding site

locations and site descriptions will be resolved. The Department of the Army, the National Conference of Historic Preservation Officers, and the Advisory Council on Historic Preservation (ACHP) have developed, and executed a Programmatic Agreement for BRAC (Appendix C). This agreement stipulates the measures that will be taken to alleviate adverse effects to historic properties for all BRAC actions. Implementation of the programmatic agreement at FWDA constitutes compliance with Sections 106 and 110 of the National Historic Preservation Act. An installation specific Memorandum of Agreement for FWDA is being developed between the Army, the New Mexico SHPO, and the ACHP.

#### 4.1.8 NATIVE AMERICAN CONCERNS

FWDA closure would not directly affect Native American cultural and religious values. However, disposal of the property and the resulting new future use could affect traditional and non-traditional values in as yet unidentified ways. The primary Native American concerns pertain to future land disposition and possible sacred sites. Historically, Navajo use of the region appears to date from at least the late 18th century, while Zuni use of the area is perhaps even earlier.

No Native American lands for which the Secretary of Interior has trust responsibility would be directly impacted by the proposed action. In 1970 the Navajo Tribe filed a claim to the Indian Claims Commission for compensation for approximately 40 million acres of land to which the tribe allegedly held aboriginal title at the time of the Treaty of 1868. FWDA is included within the claim boundaries. The Indian Claims Commission held that the Tribe had held aboriginal title to most of the 40 million acres claimed, that the land had been ceded by the Tribe to the United States under the 1868 treaty, and that the Tribe had not been paid fairly for the land, and was entitled to additional compensation. In 1981 the Indian Claims Commission entered judgment in favor of the Navajo Tribe for \$14.8 million for the loss of its land; the United States paid this sum. The Indian Claims Commission Act reflected a Congressional policy that Indian tribes with valid claims to lands taken from them without adequate payment would be compensated in money, and that no lands would be returned to the tribes.

Comprehensive archeological survey, testing, and data recovery in concert with ethnographic studies would identify and possibly confirm the presence and nature of sacred or sensitive sites. Mitigation of impacts to those resources endowed with cultural or religious value would be achieved in consultation with affected tribes. The Navajo Nation and Zuni Tribe have been invited to participate in the FWDA Memorandum of Agreement, described in Section 4.1.7, as concurring parties.

#### 4.1.9 WASTEWATER DISPOSAL

The 5,600 gallons treated by the FWDA sewage treatment facility and functioning septic tank/drainfield systems would no longer be released into evaporation ponds or the South Fork of the Puerco River, resulting in minimum beneficial impact to local water



quality. Discharge of industrial wastewater is not a consideration because this activity was suspended in 1967. A minimum adverse effect would be the loss of potential aquatic habitat when the evaporation lagoon dries up. Future land use alternatives for FWDA such as light manufacturing could result in increased wastewater disposal resulting in minimum to moderate adverse impacts.

#### 4.1.10 SOLID WASTE DISPOSAL

The existing FWDA sanitary landfill, which is used solely for non-perishable, non-hazardous waste, would be closed. The City of Gallup no longer provides refuse pickup. It is now done by a private contractor on the same one pickup per week schedule. Closure of FWDA might prolong the life of the Gallup city landfill resulting in minimum beneficial impacts. However, the land use alternatives such as prison facilities or light manufacturing could result in minimum adverse impacts to the life of the existing landfill.

#### 4.1.11 HAZARDOUS WASTES AND THEIR DISPOSAL

Closure of FWDA would cease actions that generate hazardous wastes discussed in Section 3.1.11. Before closure, minor BRAC-related demilitarization activities would continue to release known explosives contaminants to the soil in the ammunition demolition area in previously contaminated areas (Table 4-1). Impacts from BRAC-related demilitarization with FWDA prior to closure would be minimum adverse but not significant. Ceasing demilitarization activities following closure would have a minimum beneficial effect. Wastes would comprise primarily of heavy metals derived from the approximately 500 tons of non-energetic components of ammunition. Liquid and solid fragments of incompletely detonated explosives also would be present. Future consequences could include potential groundwater contamination via runoff and percolation. If hazardous waste generating activities cease, the potentially contaminated areas such as OB/OD sites must be closed in accordance with applicable RCRA regulations under 40 CFR Part 265. Thus, remediation of BRAC-related contamination would be integrated and concurrent with the present ongoing Installation Restoration Program (IRP). Regardless of the reuse alternative selected, the IRP must be completed by U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) and approved by Federal and New Mexico agencies before property transfer. Depending upon the reuse alternative selected, the appropriate environmental restoration studies are to be conducted in support of base closure by USATHAMA and approved by Federal and New Mexico agencies before property transfer.

#### 4.1.12 ENERGY USAGE

Closure of FWDA would result in a net decrease in energy consumption of 18,000 MBTUs per year. This correlates to approximately \$1,200 per month in electrical charges and \$12,000 per month during the winter months for natural gas. This decrease of energy consumption would not significantly impact the regional utility systems. One minimum

benefit of closure on regional air quality from the cessation of natural gas burning at FWDA would be the elimination of emission products, particularly carbon monoxide. Future real property disposition alternatives such as light manufacturing could result in increased energy consumption and moderate adverse effects on air quality.

#### **4.1.13 AESTHETIC QUALITY**

Closure of FWDA would have no impact on visual aesthetic quality. Alternative future use(s) of FWDA could potentially affect visual aesthetic quality. Expansive, large-scale building and development would alter the existing cultural landscape as new construction, architectural styles, and landscaping are introduced and could result in minimum adverse to moderate beneficial impacts upon visual aesthetic quality. Should the new land use result in a more aesthetically pleasing landscape, the changes could be viewed as minimally beneficial.

#### **4.1.14 SOCIOECONOMICS**

The only indirect effects of FWDA closure are socioeconomic which are not considered significant. These effects are analyzed in the Socioeconomic Effects Analysis, Fort Wingate Depot Activity Related BRAC Actions.

##### **4.1.14.1 Demography**

A net total of 95 authorized manpower positions (93 civilian; 2 military) would be eliminated by FWDA closure. Currently, 82 civilian and 1 military positions are occupied. FWDA closure and subsequent out-migration of the current staffing of 82 civilian and 1 military personnel as well as all secondary employees and their families would reduce county population by an estimated 305 persons, or 0.5 percent. A 1989 Census Bureau estimated population growth in the county to be 833 persons per year from 1980 to 1989. At this rate, population growth would replace the FWDA population in less than three months.

##### **4.1.14.2 Regional Economic Activity**

Depot closure would eliminate the FWDA payroll and the payrolls generated from secondary employment in the area. If all affected employees migrated from the area, McKinley County would lose \$4.9 million in retail sales, or 0.5 percent of the 1987 total sales in the county. From the period between 1980 and 1987, annual sales have grown by 8.8 percent. If this rate is maintained, base closure would result in a net loss of retail activity equivalent to slightly less than one month of growth. This modest impact would be mitigated somewhat if 100 percent out-migration did not occur and if the FWDA-related employees remaining in the area collected unemployment benefits or found other work.

It is estimated that the number of civilian and military personnel holding second jobs would decrease by two full-time jobs. The number of working dependents is expected to

decrease by 53 person-years. These job changes will decrease regional wages and salaries by \$750 thousand.

Total employment impact at FWDA is thus estimated at 83 direct and 55 secondary employees, for a total of 138. This represents less than 1 percent of the total employment in McKinley County in 1988. Closure of FWDA would result in the loss of the 83 jobs at the depot. If these individuals were not able to find alternative employment and had to leave the area, the 55 secondary jobs would also be eliminated. This would result in a 1.0 percent decline in employment in McKinley County and a minimum adverse impact. If all 138 job-holders left the county, the 1988 unemployment rate would rise from 12.2 percent to 12.3 percent due to the decline in the labor force.

The total income impact of FWDA is made up of direct gross payrolls of \$2.0 million and gross secondary payrolls estimated at \$750 thousand. Total income impact amounts to \$2.7 million, or 1.1 percent of total personal income in 1987 for McKinley County residents. This decrease in income would not significantly affect total income levels in McKinley County.

#### 4.1.14.3 Housing, Schools, Health Care, and Public Safety

Assuming out-migration of all direct civilian employees, 82 housing units (32 owner-occupied and 50 renter-occupied) would be vacated. This impact represents 0.5 percent of the 17,059 existing units in McKinley County (1980 census), increasing the vacancy rate to 12.1 percent. The three currently occupied housing units on post would be vacated. Two other FWDA residential units, currently vacant, would remain vacant.

In 1988, the Gallup School District had 39 students from the families of the 83 employees of FWDA. Based on the district's average per-pupil expense factor of \$2,860, the cost to educate these students was \$111,540. This represents only 0.3 percent of the students and operating budget of the district. Closure of the depot and 100 percent out-migration of depot employees and their families would decrease enrollment in the Gallup School District by 39 students, or 0.3 percent of the total enrollment, and would also eliminate an estimated \$111,540, or 0.02 percent, of school district expenditures.

Hospital beds in McKinley County number 251, or one for every 255 persons. The total impact on area population from direct and indirect employment at FWDA was determined to be 305. This number of people would create demand for 1.2 hospital beds in McKinley County. With 18 physicians in private practice, or one for every 3,553 persons in the county; FWDA theoretically creates a demand for 0.09 physicians. The regional impact of depot closure would be considered negligible, since no decline in beds or physicians would probably occur.

FWDA closure would affect regional public safety to the extent FWDA civilian personnel assist McKinley County with fire protection and emergency medical services. FWDA public safety (security, emergency, medical, and fire protection) functions would be eliminated with closure. Measures to exclude and prohibit pedestrian and vehicular trespass

within contaminated areas in the interim between closure and land disposal v implemented. In addition, security would be necessary to safeguard property (i.e., and facilities) from vandalism.

#### 4.1.14.4 Traffic and Transportation

Regional traffic and transportation would not be significantly affected by closure. The 1988 average daily traffic volume on Interstate Highway 40 in the vicinity immediately north of FWDA was 11,478, of which 36.3 percent (4,167) were commercial vehicles. The 1988 volume of heavy commercial traffic on U.S. Highway north of Gallup was 6,674 vehicles, of which 6.2 percent (414) were heavy commercial vehicles.

The peak annual movement of ammunition from FWDA would occur during and would be about 8,000 tons below the baseline capability of 28,000 tons per year greater than the peak historical ammunition movement (14,000 tons) experienced from 1984 through 1989. Of the 20,000 ton total shipment requirement, almost all are BRAC-related; only about 50 tons are normal shipments. Therefore, increased transportation effects are anticipated as a result of the total movements including those which are BRAC-related. Assuming 100 percent truck transportation, 18 tons per truck, and 260 days per year, annual truck transportation requirements would be less than 5 trucks per day. The current weekly shipment goal is 540 tons (30 trucks per week). The total would be equivalent to the peak FY84-89 movement level from FWDA. Of these, the majority would be BRAC-related. The added volume of traffic contributed by the transportation of FWDA ammunition is considered a minimum adverse impact which is not significant.

Although, historically, there have been no accidents involving commercial shipments of hazardous materials from FWDA, the FWDA emergency response team (fire department personnel) and Ft. Bliss, Texas, Explosive Ordnance Disposal (EOD) team would be dispatched to assist local, Federal, state, or county agencies in the event of a hazardous materials spill on or near FWDA. The FWDA fire department would continue to provide emergency response capability at and near FWDA.

Upon closure internal rail and heavy truck traffic relating to ammunition shipments would cease resulting in minimum beneficial impacts. Depot closure would not negatively affect existing Santa Fe railroad operations or local trucking company revenues. Traffic from tenant activities would continue as is until the issue of land disposition is resolved.

Beneficial effects of FWDA closure would also accrue. One minimum beneficial effect following the closure action would be the reduced risk of motor vehicle accidents involving ammunition transport units. Another would be the temporary increase in revenues to trucking firms selected to haul BRAC ammunition prior to closure. A minimum adverse effect would be the termination of emergency response services currently provided by the FWDA fire department personnel.

#### **4.1.15 SPECIAL INSTALLATION AGREEMENTS OR COMMITMENTS TO OTHER ORGANIZATIONS**

The special installation agreements would require modification depending upon the ultimate disposition of FWDA real property. Until that time no effects are expected on the current agreements or commitments by the BRAC action.

#### **4.1.16 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS**

Closure of FWDA would not result in any unavoidable adverse effects.

#### **4.1.17 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

Irreversible commitments are resource uses that would affect nonrenewable resources such as soils and cultural properties. There are no identifiable irreversible commitments associated with closure of FWDA that would affect regional or installation nonrenewable resources. Irretrievable commitments are the lost productions or uses of renewable resources. The decisions that commit these irretrievable resources are reversible, but the opportunities to produce these resources are irretrievable. There are no identifiable reversible decisions that would provide for any production or use of regional or installation renewable resources.

However, the potential for irreversible or irretrieval commitment of nonrenewable soil and cultural resources exists as a consequence of disposition and reuse alternatives. These activities would have to incorporate appropriate soil management techniques and proper design of drainage systems to divert and channelize runoff. Without proper soil management, devegetation and increased siltation could result. Cultural resources or information regarding these resources could be irretrievably committed if the area were to be disposed of or developed prior to completion of an adequate inventory and assessment. In order to avoid irreversible commitments of renewable resources to future uses, selected uses following disposition should have the least destructive effect on plant and wildlife resources.

#### **4.1.18 MITIGATION MEASURES**

The Army is committed to continue the Installation Restoration Program, which includes identification, assessment, and feasibility studies and remedial action of all contaminated sites on FWDA as described in Chapters 2 and 3. While the IRP is independent of the proposed BRAC action, the program will include measures which mitigate the effects of BRAC-related conventional ammunition demilitarization upon land use and water quality at FWDA before real property disposition.

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An intensive survey to identify threatened or endangered plant species, particularly the Zuni fleabane (Erigeron rhizomatus), which is likely to be found within FWDA, will be conducted prior to land disposition. Consultation with the U.S. Fish and Wildlife Service (USFWS) to identify mitigation features that will offset potential impacts from real property disposal will be initiated as appropriate following this survey in conjunction with subsequent NEPA analysis.

To prevent a possible increase in vandalism and archaeological artifact and site destruction resulting from closure, protective measures will be maintained as necessary. To assure mitigation of any impacts to cultural resources resulting from land disposition and to comply with the National Historic Preservation Act of 1966, as amended, a two-phased program will be implemented that will include survey, testing, ethnographic investigation and determination of an appropriate mitigation strategy. The mitigation strategy will be determined in consultation with the Advisory Council on Historic Preservation (ACHP), the New Mexico State Historic Preservation Officer (SHPO), and interested parties.

Phase I will include sample and appropriately-scaled intensive archeological survey of the installation to identify all sites within FWDA that are potentially eligible for inclusion to the National Register. Sample surveys will be stratified by elevation, landform, and vegetation and provide statistically valid data on site frequency and type from which probability statistics or predictions of site type and density can be made. This sample would be compatible with a number of statistical manipulations that would provide estimates with known confidence levels for site frequency, site types, age, landform, and vegetative associations. The sample survey will condition the level of effort to be expended on the intensive survey. Phase II will include any further assessment and mitigation activities appropriate to the nature of the real property disposition action as determined through implementing the Programmatic Agreement (Appendix C).

To assure consideration of any possible impacts to Native American sacred or sensitive sites, the affected Indian tribes will be consulted to discuss their interests, including ways to avoid or mitigate potential harm to recognized sacred or sensitive sites. Comprehensive archeological survey, testing, and data recovery in concert with consultation and ethnographic studies will identify and possibly confirm the presence and nature of sacred or sensitive sites. Mitigation of impacts to those resources ascribed with cultural or religious value will be achieved in consultation with affected tribes.

#### 4.2 NAVAJO DEPOT ACTIVITY, ARIZONA

The following assessment of direct environmental and indirect socioeconomic consequences focuses upon closure of the active Army ammunition mission at NADA and includes discussions of three real property reuse alternatives. Those alternatives are: (1) amendment of the license with the State of Arizona for use by the Arizona National Guard (AZNG) (the preferred alternative), (2) the return of the property to the U.S. Forest Service (USFS), which presumes the cessation of all National Guard activity, and (3) joint management by the AZNG and USFS. When the issue of land disposition at NADA has