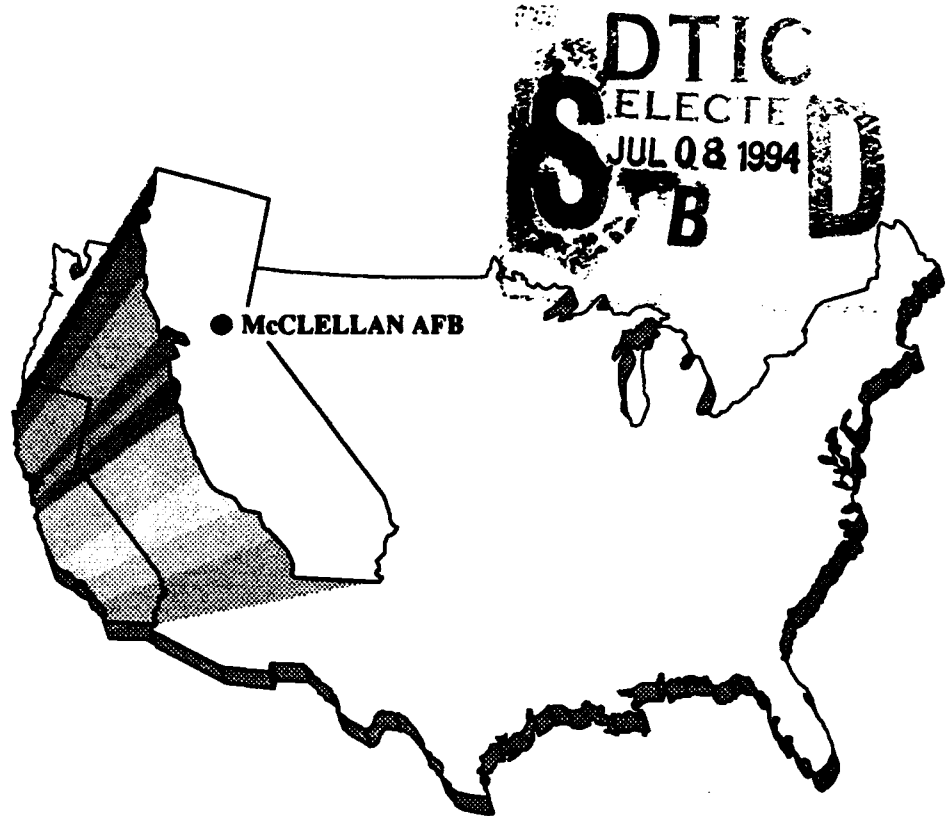


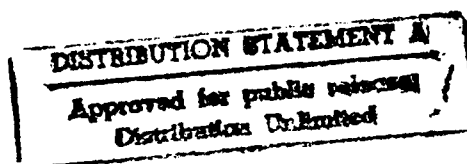
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ENVIRONMENTAL ASSESSMENT
for the **REALIGNMENT** of
SACRAMENTO ARMY DEPOT ACTIVITIES to
McCLELLAN AIR FORCE BASE, CALIFORNIA
December 1992



McCLELLAN AIR FORCE BASE, CALIFORNIA



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COVER SHEET

ENVIRONMENTAL ASSESSMENT
REALIGNMENT OF SACRAMENTO ARMY DEPOT ACTIVITIES
TO
MCCLELLAN AIR FORCE BASE, CALIFORNIA

- a. Responsible Agency: Department of the Air Force.
- b. Proposed Action: Realignment of Sacramento Army Depot Activities to McClellan Air Force Base (AFB), California.
- c. Written comments and inquiries regarding this document should be directed to: Brian Hovander, SM-ALC/EMRP, 3200 Peacekeeper Way, Suite 11, McClellan AFB, California, 95652-1036, (916) 643-0836.
- d. Report Designation: Environmental Assessment (EA).
- e. Abstract: Pursuant to the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, Title XXIX), ten maintenance workloads (electronic maintenance and testing) must be realigned from Sacramento Army Depot, California, which is scheduled to close in 1997. The realignment of nine maintenance workloads would be accomplished by competition among six Department of Defense military installations, including McClellan AFB, California, to ensure the most cost-effective distribution of work. The remaining workload, the Television-Audio Support Activity, would not be included in the competition, but would be realigned to McClellan AFB. Although any number of these maintenance workloads, from one to ten, could be relocated to McClellan AFB, this EA analyzes the potential impacts from realignment of all ten in order that the maximum potential environmental impacts from realignment to McClellan AFB are assessed. As part of the realignment of these maintenance workloads, McClellan AFB is planning to use existing buildings, three of which would require minor modifications, and establishment of laser and radar test ranges. Under the No-Action Alternative, the ten maintenance workloads would not be realigned to McClellan AFB, and would be relocated to competing military installations outside the Sacramento region. This EA analyzes potential impacts from proposed activities on air quality, biological resources, cultural resources, hazardous materials/waste management, health and safety, infrastructure (including transportation), land use, and socioeconomics. No significant impacts to these resources would result from the Proposed Action if specific mitigation measures are implemented, or from the No-Action Alternative.

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SUMMARY

This environmental assessment (EA) has been prepared to analyze the environmental consequences associated with realignment of ten maintenance workloads (electronic maintenance and testing) from the Sacramento Army Depot, California, to McClellan Air Force Base (AFB), California. This document has been prepared in compliance with the National Environmental Policy Act (NEPA) and the regulations of the President's Council on Environmental Quality (CEQ) for NEPA compliance, and Air Force Regulation 19-2, which implements these laws and regulations. Section 1.0, Purpose and Need for the Proposed Action, presents the purpose and need, scoping process for the EA, and applicable regulatory compliance and coordination. Section 2.0, Description of the Proposed Action and Alternatives, describes the project in detail, addresses alternatives, and summarizes project impacts and mitigation measures. Section 3.0, Affected Environment, provides a description of the potentially affected physical and human environments. Section 4.0, Environmental Consequences, describes the potential impacts of implementing the Proposed Action and No-Action Alternative and any mitigation measures required.

Due to the changing international political scene and the resultant shift toward a reduction in defense spending, the Department of Defense must realign and reduce its military forces pursuant to the Defense Base Closure and Realignment Act (DBCRA) of 1990 (Public Law 101-510, Title XXIX). Among the Commission's recommendations was the closure of Sacramento Army Depot and subsequent realignment of its ten electronics systems maintenance workloads. One of the ten activities, the Television-Audio Support Activity, would realign to McClellan AFB. The remaining nine workloads would be realigned by competition to ensure the most cost-effective distribution of work. The Commission recommended McClellan AFB as one of the six competing installations to support the realignment of the remaining nine Sacramento Army Depot activities. Any number of the nine workloads, including none, may be realigned along with the Television-Audio Support Activity to McClellan AFB. Five Army installations would be competing with McClellan AFB for these workloads.

This EA would support the following decisions to be made by the Air Force regarding the realignment of the Sacramento Army Depot: (1) evaluate the siting and operational alternative that most effectively minimizes potential adverse effects of realigned activities while maintaining operational requirements; (2) select all or some of the operations from the Sacramento Army Depot that are open for competition through DBCRA; and (3) select mitigation measures, to be implemented as part of the action, which would avoid, minimize, rectify, or reduce potential significant adverse effects to the environment. Based on these decisions, the Air Force would submit a proposal to the source selection authority to support realignment of certain Sacramento Army Depot activities to McClellan AFB. Separate environmental documentation would be prepared to support the proposals of other military installations to receive realigned activities from Sacramento Army Depot.

This EA describes and addresses the potential environmental impacts of the Proposed Action, which is realignment of the ten Sacramento Army Depot maintenance activities to McClellan AFB. Although any number of these activities, from one to ten, could be relocated to McClellan AFB, this EA considers the Proposed Action as realignment of all ten in order that the maximum potential environmental impacts from realignment to McClellan AFB are assessed. This action would require use of existing facilities, three of which would require minor interior modifications, as well as establishment of a laser test range, and radar test range which would require construction of two concrete pads, a quarter-mile track and demolition of two ammunition storage bunkers. The EA also evaluates the potential environmental impacts of the No-Action Alternative, under which none of the activities would be

realigned to McClellan AFB but would be relocated to competing military installations outside the Sacramento region.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Potential impacts to the natural and human environments resulting from the implementation of the Proposed Action would be minimized through project design and/or the application of existing federal, state, and Air Force rules and regulations, and/or mitigation measures. A brief summary of the potential impacts of the Proposed Action and No-Action Alternative for assessed resources is presented below. Because the Proposed Action is defined as realignment of all ten Sacramento Army Depot workloads, the environmental impacts from the Proposed Action represent the maximum potential impacts from realignment. If any less than all ten workloads were to be realigned to McClellan AFB, environmental impacts would be less than those discussed for the Proposed Action.

Air Quality. Both McClellan AFB and the Sacramento Army Depot are within the Sacramento Valley Air Basin (SVAB). Under the Proposed Action, the increase in maintenance operation emissions (mostly painting) at McClellan AFB would be offset by a similar decrease in emissions at the Sacramento Army Depot. The net result would be no increase in air pollutants in the SVAB. Workload operations would be conducted to comply with air quality management district regulations. Potential fugitive dust and construction emissions would be short term, and fugitive dust would be controlled by the application of water. Under the No-Action Alternative, Sacramento Army Depot activities would leave the region and there would be a net decrease in emissions in the SVAB.

Biological Resources. No threatened or endangered species or sensitive habitats exist within the project area; therefore, no significant impact to these resources would occur from implementation of the Proposed Action. However, under the Proposed Action there is the potential for harm to a small number of birds as a result of testing laser target designators. However, a bird would have to look directly into the laser beam to be affected, so the possibility of harm is almost negligible and any impacts to bird populations would be insignificant. Under the No-Action Alternative, current operations at McClellan AFB would not change; therefore, impacts to biological resources would not occur.

Cultural Resources. The cultural resources Area of Potential Effect associated with realignment of Sacramento Army Depot activities includes approximately 1 acre of ground disturbance required for the construction of the radar test range and the use of 14 buildings. Nine of the buildings would require no modification (Buildings 237, 251, 258, 637, 640, 651, 655, 677, and 1093), three would require interior modification only (Buildings 252, 628, and 716), and two ammunition storage bunkers would require demolition (Buildings 742 and 743). All ground disturbing activities would take place on pavement or areas disturbed through previous activities; these areas have been recently surveyed and found to be devoid of any prehistoric or historic archaeological materials. Renovation of one building (Building 252), which is listed on the National Register of Historic Places (National Register) and demolition of the two bunkers (Buildings 742 and 743), which are considered potentially eligible to the National Register, until determined otherwise, would be coordinated with the California State Historic Preservation Officer (SHPO) and, if appropriate, the Advisory Council on Historic Preservation before any modifying activities take place; SHPO consultation has been initiated. Because of the above-described conditions, no adverse effects are expected to occur to any historic properties as a result of the Proposed Action. Under the No-Action Alternative, no ground disturbance, renovation, or demolition would take place, and no adverse effects to historic properties would occur.

Hazardous Materials/Waste Management. Additional hazardous waste generated from implementation of the Proposed Action, including radioactive hazardous wastes, would not affect the hazardous waste management program on base. Buildings would be surveyed for asbestos, lead-based paint, and polychlorinated biphenyls, prior to renovation/demolition and, if these materials would be disturbed during these activities, they would be removed and disposed of in accordance with applicable regulations. The Proposed Action would have no effect on Installation Restoration Program activities. No significant impacts to hazardous materials/waste management would occur. Under the No-Action Alternative, no additional waste would be generated; therefore, no impacts would occur.

Health and Safety. Implementation of the Proposed Action presents a potential for increased safety risk from radar and laser maintenance and testing, and radiation measurement equipment calibration. All radar and laser testing would be conducted in accordance with American National Standards Institute and Air Force Occupational Safety and Health guidelines; this includes establishing safe operating zones and posting signs and warning lights around testing areas to inform personnel that hazardous activities are taking place. Calibration of radiation measurement equipment, which involves exposing these devices to a source of ionizing radiation with a known exposure rate, would be conducted with the guidance of the Air Force Radioisotope Committee and the Nuclear Regulatory Commission. Because Buildings 640 and 651 are located within close proximity to the airfield (within the clear zone), there is the potential for noise and safety impacts. However, personnel within these buildings would be provided with noise hazards briefings and hearing protection, and waivers have been applied for to address use of these buildings within a clear zone (see Land Use). Under the No-Action Alternative, there would be no increased safety risk and, therefore, no impacts would occur.

Infrastructure. Under the Proposed Action, there would be an 8-percent increase in infrastructure demand from additional personnel and a minor increase from operational activities. However, the base and local off-base infrastructure capacities, including transportation, are adequate to handle the increase in demand; therefore, no significant impacts would occur from the realignment. Demand to the county system would remain unchanged. Under the No-Action Alternative, the Sacramento Army Depot activities would be relocated outside the region; therefore, there would be less demand on the regional infrastructure from the maintenance activities, although most of the associated personnel would remain in the Sacramento region.

Land Use. Except for use of Buildings 640 and 651, the Proposed Action would not change any land uses or cause any land use conflicts. Buildings 640 and 651 are both located partially within airfield clear zones. Use of these buildings would be allowed under waivers which address the health and safety, land use, and noise concerns associated with locating personnel and activities in buildings in clear zones. However, if the waivers are denied, other facility options would need to be developed and evaluated to conduct the activities proposed for these buildings. Use of Buildings 640 and 651 would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover these actions. Under the No-Action Alternative, there would be no land use changes or conflicts.

Socioeconomics. Under the Proposed Action, 967 personnel functions would be transferred to McClellan AFB to support the activities realigned from Sacramento Army Depot. It is assumed that most of these positions would be filled by personnel already working at the Depot and residing in the Sacramento Metropolitan Statistical Area (MSA). Under the No-Action Alternative, the workload activities would be transferred out of the Sacramento region, but most personnel would not transfer. The result would be an increase of up to 0.1 percent in unemployment in the Sacramento MSA.

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-containing material
AFB	Air Force Base
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zones
AFR	Air Force Regulation
ANSI	American National Standards Institute
APE	Area of Potential Effect
ARG	Air Refueling Group
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon monoxide
DBCRA	Defense Base Closure and Realignment Act
DNL	Day-night average noise level
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMR	Electromagnetic radiation
EPA	Environmental Protection Agency
FONSI	Finding of No Significant Impact
HVAC	Heating, ventilation, and air conditioning
IRP	Installation Restoration Program
MGD	Million gallons per day
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO₂	Nitrogen dioxide
NO_x	Nitrogen oxides
O₃	Ozone
PCB	Polychlorinated biphenyl
PM₁₀	Particulate matter less than 10 microns in diameter
RCRA	Resource Conservation and Recovery Act
ROG	Reactive organic gases
SHPO	State Historic Preservation Officer
SM-ALC	Sacramento Air Logistics Center
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO₂	Sulfur dioxide
SPlan	Special Plan
SRCSD	Sacramento Regional County Sanitation District
SVAB	Sacramento Valley Air Basin
TASA	Television-Audio Support Activity
TMDE	Test Measurement Diagnostic Equipment
U.S.	United States

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

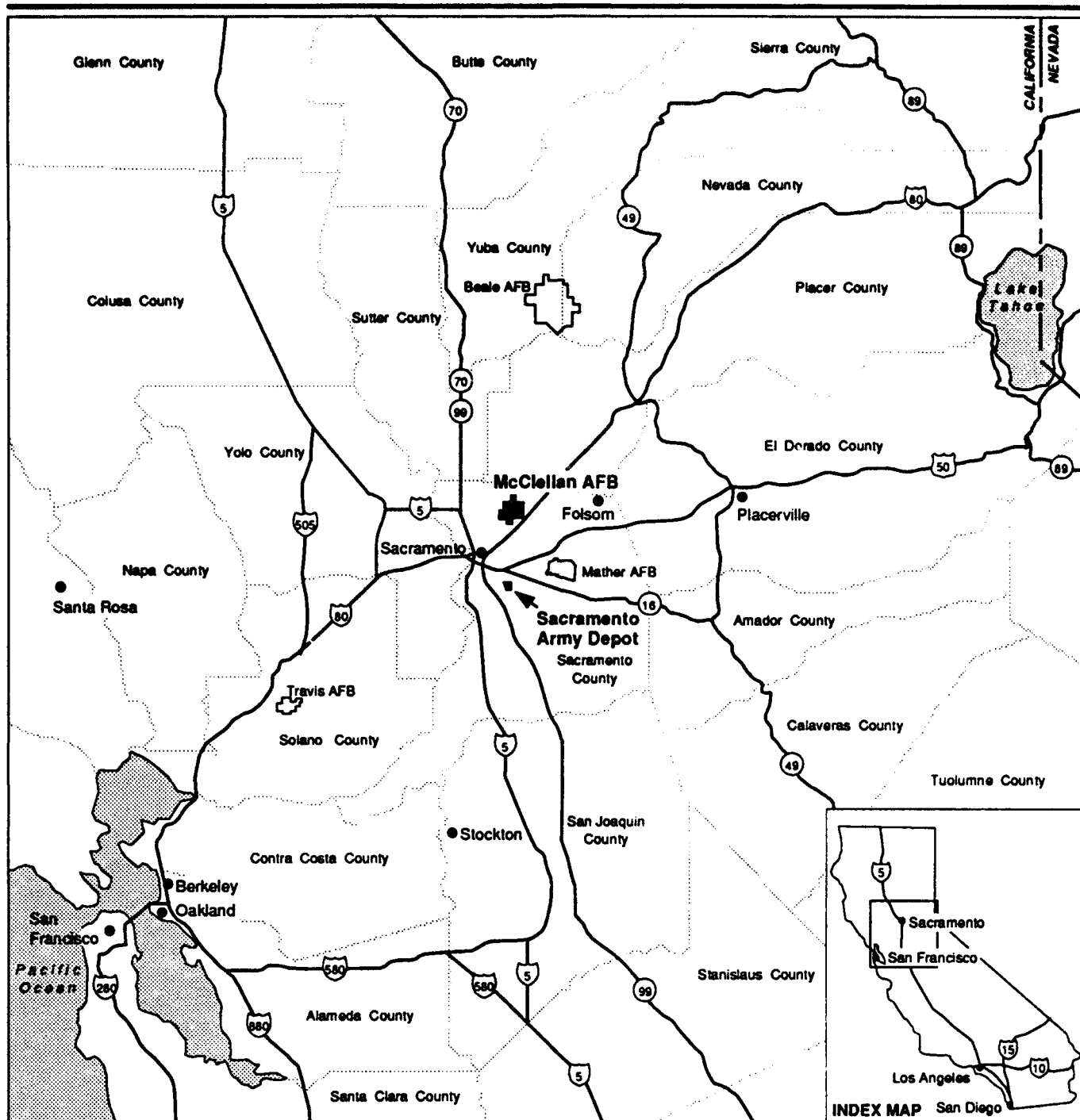
The National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations implementing the Act (40 Code of Federal Regulations [CFR], Parts 1500-1508), Department of Defense (DOD) Directive 6050.1, and Air Force Regulation (AFR) 19-2, which implements these laws and regulations, direct that DOD and U.S. Air Force officials consider environmental consequences when authorizing or approving federal actions. Accordingly, this Environmental Assessment (EA) analyzes the potential environmental consequences of the realignment of the operations of ten electronic system maintenance workloads from the Sacramento Army Depot to McClellan Air Force Base (AFB), California (Figure 1-1).

1.1 PURPOSE AND NEED

Due to the changing international political scene and the resultant shift toward a reduction in defense spending, the DOD must realign and reduce its military forces pursuant to the Defense Base Closure and Realignment Act (DBCRA) of 1990 (Public Law 101-510, Title XXIX). The Act established new procedures for closing and realigning military installations in the United States. DBCRA established an independent Defense Base Closure and Realignment Commission ("Commission") to review the Secretary of Defense's base closure and realignment recommendations. After reviewing these recommendations, the 1991 Commission forwarded its recommended list of base closures and realignments to the President, who accepted the recommendations and submitted them to Congress on July 12, 1991. Since Congress did not disapprove the recommendations within the time period provided under DBCRA, the recommendations have become law.

Among the Commission's recommendations was the closure of Sacramento Army Depot and subsequent realignment of its ten electronics systems maintenance workloads. One of the ten activities, Television-Audio Support Activity (TASA), would realign to McClellan AFB. The remaining nine workloads would be realigned by competition to ensure the most cost-effective distribution of work. The Commission recommended McClellan AFB as one of the six competing installations to support the realignment of the remaining nine Sacramento Army Depot activities. Any number of the nine workloads, including none, may be realigned along with TASA to McClellan AFB. Five Army installations will be competing with McClellan AFB for these workloads.

The realignment is part of the DOD's plans to streamline its force structure and defense capability. These measures are being implemented in response to the evolving national security atmosphere and a need to reduce the budget and deficit. Sacramento Army Depot is scheduled for closure in 1997. Closure of Sacramento Army Depot would require the realignment of activities currently conducted at the depot in order to maintain the Army's supply maintenance, inventory control, information systems, and test and evaluation activities.



EXPLANATION

..... County Boundary

Regional Map

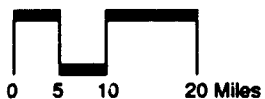


Figure 1-1

1.2 DECISIONS TO BE MADE

This EA will support the following decisions to be made by the Air Force regarding the realignment of the Sacramento Army Depot: (1) evaluate the siting and operational alternative that most effectively minimizes potential adverse effects of realigned activities while maintaining operational requirements; (2) select all or some of the operations from the Sacramento Army Depot that are open for competition through DBCRA; and (3) select mitigation measures, to be implemented as part of the action, which would avoid, minimize, rectify, or reduce potential significant adverse effects to the environment. Based on these decisions, McClellan AFB would submit a proposal to the source selection authority to support realignment of certain Sacramento Army Depot activities to McClellan AFB.

Separate environmental documentation will be prepared to support the proposals of other military installations to receive realigned activities from Sacramento Army Depot. The alternative locations recommended by the Commission for the realignment are Tobyhanna Army Depot, Pennsylvania; Anniston Army Depot, Alabama; Red River Army Depot, Texas; Letterkenny Army Depot, Pennsylvania; and Corpus Christi Army Depot, Texas. The source selection authority will decide which installations will support realigned activities, based on operational, cost, and environmental considerations.

1.3 SCOPE OF THE ENVIRONMENTAL REVIEW

This EA describes and addresses the potential environmental impacts of the Proposed Action, which is realignment of the ten Sacramento Army Depot maintenance activities to McClellan AFB. Although any number of these activities, from one to ten, could be relocated to McClellan AFB (see Section 1.1), this EA considers the Proposed Action as realignment of all ten in order that the maximum potential environmental impacts from realignment to McClellan AFB can be assessed. It also evaluates the potential environmental impacts of the No-Action Alternative, under which none of the activities would be realigned to McClellan AFB. This EA does not address the environmental impacts of realigning the Sacramento Army Depot to the other competing military installations. The environmental impacts from the realignment at these locations will be covered under separate documentation, as discussed in Section 1.2.

Consistent with AFR 19-2 and the CEQ regulations, the scope of analysis presented in this EA is defined by the range of potential environmental impacts that would result from implementation of the Proposed Action and alternatives. Resources that have a potential for impacts were considered in the analysis in order to provide decision makers with sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) (40 CFR, Part 1508.9). The resources analyzed in detail are: air quality, biological resources, cultural resources, hazardous materials/waste management, health and safety, land use, infrastructure (including transportation), and socioeconomics. Descriptions of the affected environment and the potential environmental consequences relative to these resources are addressed in Sections 3.0 and 4.0, respectively. Mitigation measures are suggested to reduce or eliminate potential environmental impacts identified as a result of the analysis.

Initial analysis indicated that the proposed maintenance workload activities would not result in either short- or long-term impacts to airspace, noise, physical resources (i.e., soils and

topography), or water resources. The rationale for not addressing these resources is presented below.

Resources Excluded from Further Analysis

Airspace. The Proposed Action would increase air traffic at McClellan AFB by two flights per year, resulting in a less than 0.05-percent increase in air traffic at McClellan AFB. This would not represent a significant change to regional or McClellan AFB airspace management.

Noise. The major noise source on McClellan AFB and the surrounding community is associated with existing aircraft noise. The majority of activities associated with the Proposed Action are industrial, similar to those already occurring on McClellan AFB, and would not increase existing noise levels. Because the proposed activities would increase aircraft traffic by only two flights per year, and would not increase ambient noise levels, no noticeable impacts to the noise environment would occur.

Physical Resources. The topography at McClellan AFB is characteristic of a relatively flat alluvial plain that has been dissected by tributaries of the Sacramento and American rivers. Soils are alluvial deposits, which consist of silt, sand, clay, and gravel deposited by streams that drain the Sierra Nevada Mountains. The only ground disturbances associated with the Proposed Action would be those for the development of the radar test range. Because these disturbances would be temporary and would affect a flat and limited area, impacts to physical resources are not expected and are not analyzed in further detail.

Water Resources. There are several creeks on McClellan AFB, as well as a 100-year floodplain. Discharge to the creeks is in compliance with Sacramento Regional Water Control Board and National Pollutant Discharge Elimination System requirements. Potable groundwater occurs at a depth of about 90 feet below ground surface; recharge is from infiltration from local streams. Hazardous contamination has been identified in the groundwater and several wells have been shut down.

Proposed construction activities would not be located near any surface water or floodplain areas. Further, activities realigned from Sacramento Army Depot would not result in any discharge to surface waters. Hazardous materials and wastes associated with the proposed activities would be managed in accordance with established base procedures and would not contribute to groundwater contamination conditions. Impacts to water resources are not expected and are not analyzed in further detail.

1.4 APPLICABLE REGULATORY REQUIREMENTS AND COORDINATION

In order to implement the proposed facility renovations and operational activities of the Proposed Action, specific regulatory requirements must be met and are discussed below.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) has jurisdiction over the air quality aspects of the Proposed Action. The Proposed Action would have to meet the requirements of both the McClellan AFB Environmental Quality Protection Plan and the Sacramento 1991 Air Quality Attainment Plan. The Sacramento 1991 Air Quality Attainment

Plan provides the basis for complying with the mandates of the California Clean Air Act and the federal Clean Air Act and Amendments.

Prior to initiating activities associated with Sacramento Army Depot realignment, McClellan AFB would obtain any required permits to construct and permits to operate from the SMAQMD to ensure compliance with the Sacramento 1991 Air Quality Attainment Plan.

The SMAQMD is also the enforcing agency regarding asbestos-containing materials (ACM) management. In accordance with the National Emission Standards for Hazardous Air Pollutants for asbestos (40 CFR Part 61, Subpart M), the SMAQMD would be notified through a Notification of Demolition and Renovation of any proposed renovation or demolition project.

Some of the buildings identified to support the activities from Sacramento Army Depot are within the Sacramento Air Depot Historic District or could be potentially eligible for the National Register of Historic Places. Any renovations to these buildings must be coordinated with the California State Historic Preservation Officer (SHPO).

Because Buildings 640 and 651 are located in an airfield clear zone, McClellan AFB has applied for waivers with Major Command in order to conduct activities in these facilities.

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

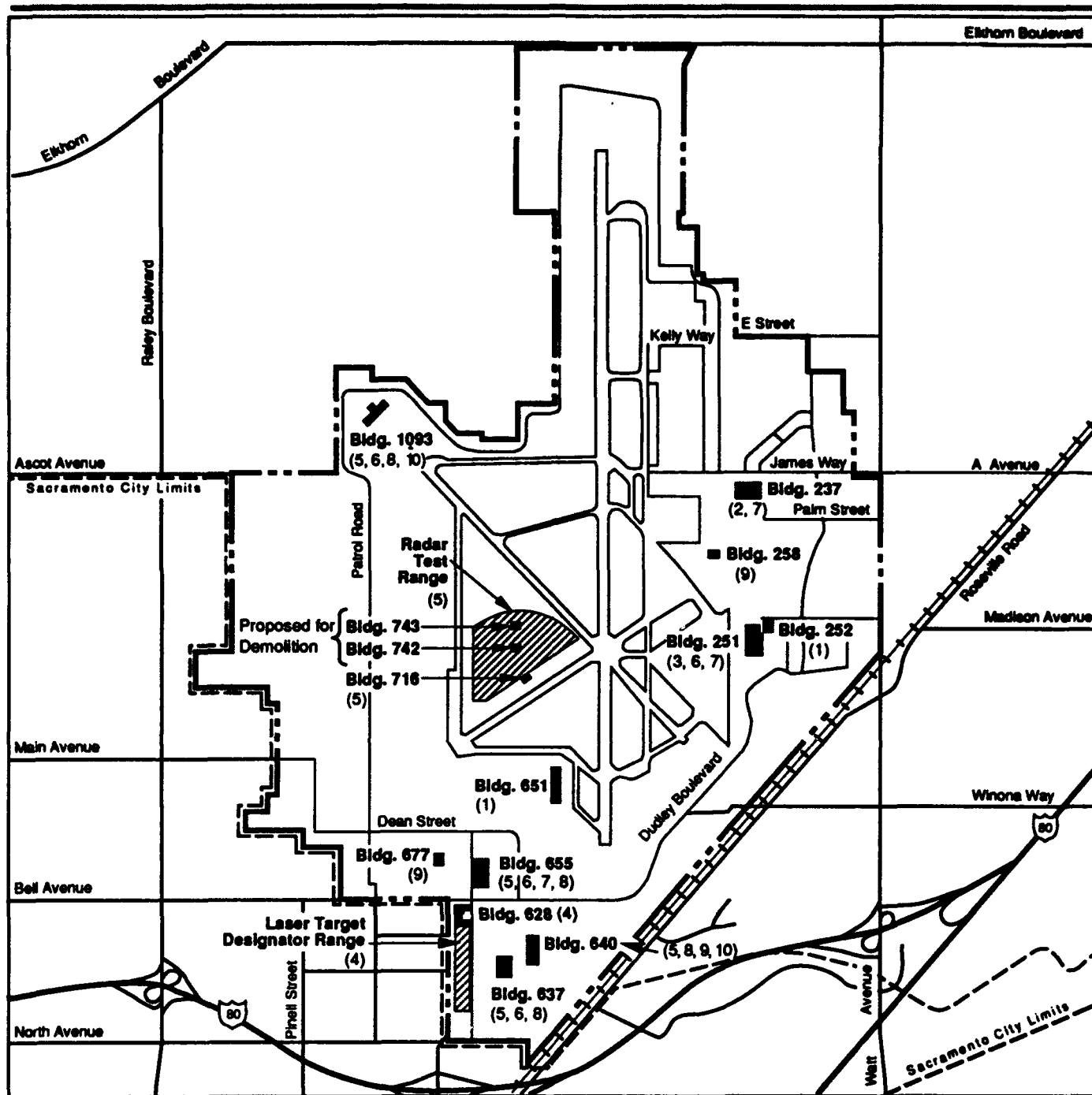
2.1 DESCRIPTION OF THE PROPOSED ACTION

In accordance with Public Law 101-510, Title XXIX, the Sacramento Army Depot will be closed and its operations realigned to other military installations. As discussed in Section 1.3, any number of Sacramento Army Depot activities, from TASA only, to all ten could be realigned to McClellan AFB. In this EA the Proposed Action is defined as realignment of all ten activities in order that the EA may evaluate the maximum potential environmental impacts that realignment to McClellan AFB presents. The transfer of maintenance mission responsibilities to McClellan AFB would involve relocating plant equipment, relocating repair parts and supplies that support the maintenance programs, rearranging existing facilities and plant layout, and restructuring the work force to accommodate new work prior to the closure of the Sacramento Army Depot in 1997. This workload is similar to the electronics maintenance work presently being performed at McClellan AFB. Both new construction and use of existing buildings at McClellan AFB would be required to support the realignment (Figure 2-1).

2.1.1 Sacramento Army Depot Activities

The Sacramento Army Depot is a high-technology center for maintenance and repair of communications-electronics equipment for Army and other DOD services. The depot is the unique DOD repair service for night vision and electro-optics, and also provides repair services for laser systems, avionics, electronic warfare, and signal intelligence systems. The depot also designs, fabricates, and produces a variety of static and mobile communications, electronics, and audiovisual systems. Personnel and construction/renovations associated with the realignment of Sacramento Army Depot operations to McClellan AFB are shown in Table 2-1. TASA would realign to McClellan AFB but not under competition. The other nine operations may be realigned under competition to McClellan AFB or another installation. A more detailed description of these ten Sacramento Army Depot operations is presented below.

Television-Audio Support Activity - TASA's operations include warehousing and providing administrative and technical support to DOD audio and visual information equipment outlets worldwide. TASA's operations at McClellan AFB would include providing continued support for the U.S. Army Broadcasting Service and a U.S. Navy Broadcast Detachment. These operations would be housed in Buildings 252 and 651 at McClellan AFB. A heating, ventilation, and air conditioning (HVAC) system and new interior walls would be added to Building 252 to accommodate the realigned activities. No renovations are proposed for Building 651. However, because the building is located within an airfield clear zone, McClellan AFB has applied for a waiver to allow continued use of the building. The waiver request addresses the health and safety, land use, and noise issues associated with conducting activities in a facility located within an airfield clear zone. However, if the waiver is denied, other facility options would need to be developed and evaluated to conduct the activities proposed for this building. Use of Building 651 would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover this action.



EXPLANATION

-  Existing Buildings
-  Test Range Areas
-  Base Boundary



Workloads

1. Television - Audio Support Activity
2. Airborne Electronics/Avionics
3. Fighting Vehicle Electronics
4. Electro-Optics/Night Vision
5. Radar
6. Radio
7. Gyro/Indicators
8. Intelligence/Electronic Warfare
9. Test Measurement Diagnostic Equipment and Radiation Measuring Equipment
10. Wire Communication Equipment

Proposed Sacramento Army Depot Facility Locations- McClellan AFB

Figure 2-1

**Table 2-1. Personnel and Building Modifications Associated with the Realignment of
Sacramento Army Depot**

Repair Function/Task	Facility	Personnel	Construction/Renovations Required
Television-Audio Support Activity*	252, 651	120	Interior renovations (Building 252 only)
Airborne Electronics/Avionics	237	60	None
Fighting Vehicle Electronics	251	17	None
Electro-Optics/Night Vision	628, laser target designator range	250	New heating/ventilation/air conditioning system; interior paint booth. 1,640 linear-foot laser target designator range
Radar	637, 640, 655, 716, 1093, radar test range	80	Interior renovations (Building 716 only) Radar test range would require construction for tower, underground cable, Munson track, and radar test pad, and would require demolition of Buildings 742 and 743 and removal of a portion of fenceline
Radio	251, 637, 655, 1093	250	None
Gyro/Indicators	237, 655, 251	50	None
Intelligence/Electronic Warfare	637, 640, 655, 1093	15	None
Test Measurement Diagnostic Equipment and Radiation Measuring Equipment	258/677, 640	65	None
Wire Communication Equipment	640, 1093	<u>60</u>	None
Total Personnel		967	

* This workload includes U.S. Army Broadcasting Service, and U.S. Navy Broadcast Detachment operations.

Airborne Electronics/Avionics - This operation involves performing testing, diagnostics, and repair functions on small-item airborne electronics and avionics equipment. These activities would be performed in Building 237, which is currently used to perform similar activities at McClellan AFB. No building renovations would be required to accommodate the realignment.

Fighting Vehicle Electronics - This operation involves performing testing, diagnostics, and repair functions on fighting vehicle electronics. These operations would be conducted in Building 251, where similar activities are currently performed. No building renovations would be required to accommodate the realignment.

Electro-Optics/Night Vision - This operation involves performing testing, diagnostics, and repair functions on electro-optics and night vision electronics. This activity would require a new paint booth for chemical agent resistant coating of the electronics equipment. Building 628, which would house this operation, would require some interior renovation as well as a new HVAC system and paint booth.

One of the Electro-Optics/Night Vision functions is the testing and repair of laser target designators and rangefinders. This operation requires an open area 1,640 feet long to conduct laser testing. Buildings 626A and 626B, adjacent to Building 628, are World War II warehouses that are scheduled for demolition in 1995 as part of planned facility improvements, and not as part of this program. The concrete pads under these buildings would provide adequate open area to conduct laser target designator testing. Fixturing limits and apertures would ensure that laser beams remain safely within the test range boundaries at all times. A security fence would be constructed on pavement around the testing area. In addition, warning signs and lights would be posted around the area to inform personnel that hazardous activities are being conducted. For further discussion on laser testing, see Section 2.1.3, Non-Ionizing Radiation.

Radar - These operations involve performing testing, diagnostics, and repair functions on electronic equipment and radar antennae. The electronics are housed in mobile containers (shelters) mounted on trucks. When a truck-mounted container arrives for maintenance (approximately seven per year), the electronics are dismantled and sent for testing and repair and the container is overhauled. This overhaul consists of complete disassembly, repair or replacement of damaged parts, air conditioning repair, and paint stripping and repainting using existing permitted equipment at McClellan AFB. These operations would be performed in Buildings 637, 640, and 655, where similar activities are currently performed. None of these buildings would require renovations to accommodate the realignment; however, Building 640 is located within an airfield clear zone. McClellan AFB has applied for a permanent waiver to continue using Building 640. The waiver request addresses the health and safety, land use, and noise issues associated with conducting activities in a building located within an airfield clear zone. However, if the waiver is denied, other facility options would need to be developed and evaluated to conduct activities proposed for this building. Use of Building 640 would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover this action.

Paint stripping and repainting of the mobile containers consists of using plastic media blasting to strip the paint off the container and repainting in existing spray booths in Building 655. The plastic beads used to strip the paint are recycled, and the paint fragments are containerized as hazardous waste. The containerized wastes are then disposed in accordance with applicable federal, state, and local regulations.

Air conditioning repair consists of dismantling the unit, repair and/or replacement of parts, and recharge. McClellan AFB currently conducts similar activities and recycles the refrigerant (freon), in accordance with applicable federal, state, and local regulations.

Building 1093 would be used to conduct near-field radar testing in an anechoic (no echo) test chamber. McClellan AFB currently uses off-base, private contractors to test eight to ten radar antennae per year. However, as part of McClellan AFB facility improvements (not part of this program) and in order to conduct testing on site, the base plans to construct a test chamber

in fiscal year 1994. The new test chamber would also be used to support the radar testing requirements that would be relocated from the Sacramento Army Depot. This test chamber is a 2,500-square-foot building that will be attached to the southwest end of Building 1093, and will be constructed on an existing concrete parking lot. For a discussion of testing operations, see Section 2.1.3, Non-Ionizing Radiation.

In addition to near-field testing, radar testing requires use of a radar test range. This testing would be conducted in an area west of the main runway, bounded by three taxiways (Taxiways K, L, and P). This area is currently an inactive ammunition storage area, surrounded by a fence. The radar test range facility requirements are listed below:

- A 20-foot by 50-foot concrete pad for the radar antenna.
- A new 70-foot tall transmitter tower on an 8-square-foot concrete pad, located 1,000 feet from the radar antenna. This tower would contain a parabolic dish that transmits a signal to the radar antenna.
- A new quarter-mile long, oval Munson track that is three-quarters dirt, and one-quarter asphalt with calibrated potholes and speed bumps. The radar antenna would be transported over this track to simulate field travel.
- Interior renovations to Building 716 to house operations personnel and test equipment.
- A 1,000-foot long cable located underground between the tower and radar antenna test pad.
- Demolition of two ammunition storage bunkers, Buildings 742 and 743.
- Removal of a portion of the fence currently surrounding the ammunition storage area.

An additional discussion of radar testing activities is found in Section 2.1.3, Non-Ionizing Radiation.

Radio - These operations involve performing testing, diagnostics, and repair functions on small item and radio electronics located in truck-mounted containers. These operations would be conducted in Buildings 251, 637, 655, and 1093, where similar activities are currently performed. These buildings would require no renovations to accommodate the realignment.

Gyro/Indicators - These operations involve performing testing, diagnostics, and repair functions on north-seeking gyros and horizontal indicators. These operations would be conducted in Buildings 237, 655, and 251, where similar activities are currently performed. These buildings would require no renovations to accommodate the realignment.

Intelligence/Electronic Warfare - These operations involve performing testing, diagnostics, and repair functions on radar jamming electronics. These operations are similar to those performed for radar operations described above and, except for the radar test range facilities, would be

performed in the same buildings at McClellan AFB. The Intelligence/Electronic Warfare operations utilize the electronics within C-12 aircraft in addition to the truck-mounted containers. One C-12 system a year is planned for the depot, resulting in an increase to McClellan AFB's flight operations of only two flights per year. Once the C-12 arrives at McClellan AFB, the aircraft is defueled prior to overhaul procedures with the removed fuel being placed in a portable tank and reclaimed for use by fuels management. With the exception of the C-12 electronics operations, these same types of operations are currently performed at McClellan AFB.

Test Measurement Diagnostic Equipment (TMDE) and Radiation Measuring Equipment - The TMDE activity involves maintenance of electronic equipment (e.g., oscilloscopes). This would be conducted in Building 640. Radiation Measuring Equipment, such as Geiger counters and dosimeters, are used to measure the amounts of ionizing radiation in the atmosphere. This activity involves maintenance, including calibration, of this equipment. This would be performed in Building 258 or Building 677. No renovations to the above buildings would be required to accommodate these activities, although use of Building 640 would require a waiver as discussed under Radar. For a further discussion of Radiation Measuring Equipment, see Section 2.1.4, Ionizing Radiation.

Wire Communication Equipment - These operations involve performing testing, diagnostics, and repair functions to wire communications equipment (i.e., telephone, teletype, and control switches). These operations would be conducted in Buildings 640 and 1093, where similar activities are currently performed. These buildings would require no renovations to accommodate the realignment, although use of Building 640 would require a waiver as discussed under Radar.

2.1.2 Hazardous Materials and Wastes

The quantities of hazardous wastes routinely generated by Sacramento Army Depot maintenance activities and related support functions are shown on Table 2-2. Because hazardous wastes generated at Sacramento Army Depot cannot be differentiated by workload, the total of approximately 315,000 pounds of hazardous wastes generated in 1991 includes amounts from other activities that are not part of the maintenance workloads and related support functions to be realigned. The Proposed Action would consolidate some duplicate maintenance and support activities currently conducted at both Sacramento Army Depot and McClellan AFB. For these reasons, quantities of hazardous waste generated by the Proposed Action would be somewhat less than this total quantity.

Hazardous waste generated would be handled in accordance with the Sacramento Air Logistics Center, McClellan AFB, Hazardous Waste Management Plan (U.S. Air Force 1992b); McClellan AFB's Resource Conservation and Recovery Act (RCRA) permit; and applicable federal, state, and local regulations. Once hazardous waste is placed in containers, it would be transferred to the McClellan AFB Conforming Storage Facility, where it would be handled by the Defense Reutilization and Marketing Office (DRMO). Any hazardous materials/waste spills would be remediated in accordance with the Sacramento-Air Logistics Center (SM-ALC)/McClellan AFB Special Plan (SPlan) 19-2, Spill Prevention, Control, and Countermeasures SPlan 19-2 (U.S. Air Force, 1991b). In addition, each transferring operation would be required to provide a spill prevention plan for its activities and submit the plan to the Environmental Management Office

**Table 2-2. Hazardous Waste Generated by Sacramento Army Depot
Maintenance Activities in 1991**

Hazardous Waste Stream	Amounts Generated (pounds)
Spent Acid with Metals	71,446
Blasting Booth Media	44,500
Wastewater Sludge	33,061
Caustic Waste with Metals	7,489
Solvents, Flammable	6,550
Solvents, Halogenated	599
Cyanide Waste	393
Cyanide Filters	194
Soaps and Detergents	23
Liquid Paint	51,298
Solidified Paint	23,056
Paint Thinner	17,114
Aerosols, Flammable	1,418
Waste Oil	42,375
Waste Antifreeze	4,144
Oil Filters/Rags	2,705
Gasoline, Waste	1,629
Spent Lead-Acid Batteries	365
Adhesives, Silicone	3,156
Adhesives, Flammable	1,613
Lubricants, Silicone	993
Grease	<u>540</u>
Total	314,661

Source: Sacramento Army Depot, 1992.

for approval by the McClellan AFB Environmental Protection Committee. Personnel safety procedures for all Sacramento Army Depot operations would be conducted in accordance with applicable Occupational Safety and Health Administration, and U.S. Air Force Occupational Safety and Health (AFOSH) regulations.

In addition to other hazardous wastes generated, small quantities of radioactive waste are associated with the Proposed Action. The TMDE and Radiation Measuring Equipment activity includes repair and maintenance of radiation measuring equipment such as Geiger counters that contain radioactive sources within them. Small quantities of low level radioactive waste (e.g., rinsewater, gloves, wipes) may be generated during repair and maintenance of this equipment. Generation of hazardous waste may also occur when a known standard of radiation ("source") is no longer usable for radiation measuring equipment calibration due to radioactive decay, or when an optical component coated with the slightly radioactive Thorium 232 is damaged. Any radioactive waste generated would be handled and disposed of in accordance with AFR 161-16, Control of Radioactive Material (U.S. Air Force, 1988) and Technical Order 00-110N-2, Radioactive Waste Disposal (U.S. Air Force, 1991c) which incorporates Nuclear Regulatory Commission (10 CFR) and Department of Transportation (49 CFR) regulations dealing with radioactive wastes.

2.1.3 Non-Ionizing Radiation

Two Sacramento Army Depot operations, Electro-Optics/Night Vision, which utilizes a laser target designator, and Radar, which utilizes a near-field test range and a radar test range, involve the use of electromagnetic radiation (EMR), in the form of laser light and microwave radiation. Operational procedures for these workloads at McClellan AFB are discussed below.

Laser Target Designator. The use of a laser target designator involves the laser itself and a target receiver. The laser would be mounted on the second floor of Building 628, and aimed at a target receiver located at ground level, 1,640 feet south of Building 628. Testing would be performed to ensure targeting precision after repair. As described under Electro-Optics/Night Vision in Section 2.1.1, fixturing limits, apertures, and pointing the beam to ground level would ensure that laser beams remain safely within the test range boundaries at all times. A security fence will be constructed around the testing area, and warning signs and lights would be posted around the area to inform personnel that hazardous activities are being conducted. All testing would be performed in accordance with American National Standards Institute (ANSI) guideline Z136.1-1986 (Standards for Safe Use of Lasers), AFOSH Standard 161-10 (Health Hazards Control for Laser Radiation), and Military Standard 1425 (Safety Design Requirements for Military Lasers and Associated Equipment).

Near-Field Test Range. The near-field test range is used to test radar antennae after repair. Testing consists of a 4- to 16-hour continuous scan during which all components of the antennae are analyzed for performance and accuracy. Testing would be performed in an anechoic chamber. This chamber would be completely enclosed and would shield any EMR from escaping during testing or from entering the chamber from the outside, which would skew testing results. After testing there is no EMR remaining in the chamber. McClellan AFB currently uses private contractors off-base to test eight to ten antennae units per year. The new anechoic chamber (previously discussed in Section 2.1.1) would be used to test these antennae as well as the approximately seven van-mounted antennae associated with Sacramento Army Depot operations. All testing would be performed in accordance with ANSI guidelines and AFOSH Standard 161-9, Radio-Frequency Radiation Exposure.

Radar Test Range. A new radar test range would be used for operational system testing after antenna repair. These tests require that the antenna be operable in an unobstructed 90-degree

scan using a 70-foot transmitter tower that would be located 1,000 feet from the radar antenna. An open safety area of approximately 1,300 feet in a 90-degree scan in front of the radar antenna would be established and would provide a Radio-Frequency Hazard Safe Operating Zone. This zone would not extend to any of the taxiways surrounding the radar test range. In addition, while tests would be conducted, warning signs and lights would be used to inform McClellan AFB personnel of the radio-frequency hazards. All antenna testing would be performed in accordance with ANSI guidelines and AFOSH Standard 161-9.

2.1.4 Ionizing Radiation

As part of the TMDE and Radiation Measuring Equipment workload, ionizing radiation would be used to test and calibrate radiation measuring equipment (Geiger counters and dosimeters). The testing process would involve exposing the equipment to a known standard of radiation and measuring the precision of the equipment. Testing would be performed under guidance from the Air Force Radioisotope Committee, and in accordance with applicable federal, state, and local regulations. Radioactive hazardous wastes associated with the Proposed Action were previously discussed in Section 2.1.2, Hazardous Materials and Waste.

2.1.5 Personnel Summary

Realignment of the ten Sacramento Army Depot activities would include adding approximately 967 personnel functions to McClellan AFB (see Table 2-1 for the number of personnel associated with each workload involved in the realignment). Personnel function transfers would be phased by workload, from approximately March 1993 to February 1997, as each workload is awarded. The personnel associated with the realignment would continue to use current housing in the Sacramento region.

2.1.6 Facility Construction, Renovation, and Demolition

Under the Proposed Action, Buildings 252, 628, and 716 would be renovated (see Table 2-1) in order to permanently support Sacramento Army Depot activities. Development of the radar test range would require construction and demolition of facilities as discussed in Section 2.1.1. Figure 2-1 shows the proposed facility locations of the Sacramento Army Depot operations at McClellan AFB. These activities are planned to begin in fiscal year 1993, and would be completed in October 1997. These projects would be phased over this period as each workload is awarded. The amount of construction personnel and equipment required for any phase of construction would be small.

Construction, renovation, and demolition requirements to support the realignment would include the following:

- During construction, erosion control would consist of silt fences, hay bales, or other such means or methods as determined by the designer. Dust would be controlled by watering.
- Solid and hazardous construction waste would be containerized and disposed of off base by McClellan AFB personnel in accordance with federal, state, and local regulations.

- If a hazardous material/waste spill should occur from construction, the contractor would notify the base Fire Department.
- Staging areas for construction equipment and supplies would utilize concrete areas or previously disturbed areas.
- Ventilation and plastic dust curtains would be utilized during interior building renovations. The buildings proposed for renovation or demolition may contain asbestos, lead-based paint, or polychlorinated biphenyls (PCBs). These buildings would be surveyed prior to final design review. If asbestos, lead-based paint, or PCBs are found in the areas where it would be mechanically disturbed, it would be removed and disposed by McClellan AFB personnel or a certified contractor (lead-based paint would be removed by the contractor) in accordance with applicable federal, state, and local regulations.
- Renovation of Building 252, part of a historic district listed on the National Register of Historic Places, would be coordinated with the SHPO and any adverse effects mitigated through the consultation process. The SHPO has been consulted on this aspect of this undertaking and has requested a review of renovation plans before activities take place.
- Demolition of Buildings 742 and 743, potentially eligible for the National Register of Historic Places, would be coordinated with the SHPO, and if applicable, the Advisory Council of Historic Preservation.
- In the event there are any cultural resources encountered during the course of construction/demolition, activity should cease in the immediate area and a qualified archaeologist consulted. Subsequent actions would comply with 36 CFR Part 800.11 and the Native American Graves Protection and Repatriation Act.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER STUDY

Siting criteria for realignment of Sacramento Army Depot operations at McClellan AFB specify facilities where workspace is available to house all components of individual workloads, and where operations and test equipment similar to those currently performed at Sacramento Army Depot are located. After review of all facilities at McClellan AFB, only those facilities that meet the siting criteria were selected as part of the Proposed Action.

Construction of new facilities to accommodate realigned activities, except for the radar test range, was not considered because of the higher costs involved, limited open space on the base, and increased potential for significant environmental impacts from the construction of new facilities. A new radar test range was proposed because the existing radar test range on-base is not sufficient in range and sweep to accommodate the test requirements of the Sacramento Army Depot radar workload.

2.3 NO-ACTION ALTERNATIVE

For this EA, the No-Action Alternative addresses the environmental impacts of the Sacramento Army Depot workloads, including TASA, not being realigned to McClellan AFB, and being relocated outside the Sacramento region. Personnel currently performing these activities at

Sacramento Army Depot would not be transferred. The environmental consequences of the No-Action Alternative can be used as a benchmark against which the decision maker can compare the magnitude of environmental effects of the realignment.

2.4 COMPARISON OF ENVIRONMENTAL IMPACTS

This section presents comparative analysis of the Proposed Action and the No-Action Alternative. A summary comparison of potential environmental effects resulting from implementation of the Proposed Action and No-Action Alternative is presented in Table 2-3. Detailed discussion of potential effects is presented in Section 4.0, Environmental Consequences.

Table 2-3. Potential Impacts of Alternatives
Page 1 of 2

	Proposed Action		No-Action	Mitigation
	Impact	Mitigation	Impact	Mitigation
Air Quality	Fugitive dust from ground-disturbing activities. No net emissions increase in the Sacramento Valley Air Basin.	Dust control by watering disturbed areas.	Decreased regional emissions.	None
Biological Resources	Negligible potential for impacts to birds from laser testing. Loss of approximately one acre of common grassland/weedy species. Potential for loss of mice, ground squirrels, reptilian species, and displacement of more mobile species from construction. Short-term construction-related noise disturbance to wildlife species.	None	None	None
Cultural Resources	Potential impacts to historic properties through renovation/demolition. No impacts identified for prehistoric resources; however, slight potential to uncover cultural material during ground disturbing activities does exist.	Coordinate with the SHPO/Advisory Council on Historic Preservation and mitigate adverse effects through consultation process. If any cultural materials are unexpectedly discovered during the course of the program activities, construction should cease in the immediate area and a qualified archaeologist consulted. Subsequent actions would comply with 36 CFR, Part 800.11 and the Native American Graves Protection and Repatriation Act.	None	None

Table 2-3. Potential Impacts of Alternatives
Page 2 of 2

	Proposed Action		No-Action	
	Impact	Mitigation	Impact	Mitigation
Hazardous Materials/Waste Management	No significant impacts from additional hazardous materials and waste generated by construction/renovation and operational activities.	None	None	None
Health and Safety	No significant impacts from radar and laser testing and radiation measuring equipment calibration. Potential for noise and safety impacts to workers in Buildings 640 and 651 because of the close proximity to the airfield (within the clear zone).	For Buildings 640 and 651 provide personnel with noise hazard briefings and hearing protection devices as required. Apply for waivers to allow use in airfield clear zone (see Land Use).	None	None
Infrastructure	Increase in demand on base infrastructure of 8 percent is within system capacities. No significant impacts.	None	Negligible decrease in regional infrastructure demand.	None
Land Use	Buildings 640 and 651, proposed for use, are located within an incompatible airfield clear zone land use.	McClellan AFB has applied for waivers to address continued use of these facilities. If the waivers are denied, other facility options would need to be developed and evaluated to conduct activities proposed for these buildings. Use would be limited to the time frame required to acquire facility options.	None	None
Socioeconomics	None	None	Unemployment would increase by 0.1 percent in Sacramento region.	None

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3.0 AFFECTED ENVIRONMENT

This chapter describes the existing environmental conditions at McClellan AFB. The components addressed include the relevant aspects of the natural and human environments that are likely to be affected by the Proposed Action. Based on the installation and operational characteristics of the Proposed Action (see Section 2.0), it was determined that there is the potential for the following resources to be affected: air quality, biological resources, cultural resources, hazardous materials/waste management, health and safety, infrastructure (including transportation), land use, and socioeconomics.

3.1 LOCATION, HISTORY, AND CURRENT MISSION OF THE INSTALLATION

3.1.1 Location

McClellan AFB occupies approximately 2,856 acres at the northeast corner of the city of Sacramento (see Figure 2-1). The installation is located immediately north of Interstate 80 and is near a main railroad line operated by the Southern Pacific Railroad Company. Lands surrounding the installation are within the jurisdiction of the City of Sacramento or are unincorporated and within the jurisdiction of the County of Sacramento.

3.1.2 History

McClellan AFB was authorized for construction by Congress in 1936, and the Sacramento Air Depot, the primary base activity, was dedicated in 1939. That same year, the base was named McClellan Field in honor of Major Hezekiah McClellan (U.S. Air Force, 1987).

During World War II, the base provided air logistics support to the Pacific region. After the war, activity decreased, then increased in 1947 when the Air Force was established. In the 1950s, activity shifted from bomber to fighter support. The depot was redesignated SM-ALC in 1965, and responsibilities increased to providing logistics support at combat theaters. In the late 1960s, the SM-ALC gained responsibility for certain ballistic missile activities, F-111 fighter bomber aircraft, and space programs. Today, the center continues to be a fighter maintenance and support facility, and manages F/FB/EF-111, A-10, A-7, KC-135, and F-117A maintenance.

Base employment during World War II went from a few thousand to more than 18,000 employees. Following World War II, base employment increased to over 23,000 personnel in 1987. Of this total, approximately 14,700 employees were civilian personnel, approximately 1,500 were contract support service employees, and the remaining 7,000 were military personnel (U.S. Air Force, 1987). In 1991, total installation employment was approximately 16,400 personnel. Currently, there are approximately 12,500 personnel employed at McClellan AFB.

3.1.3 Current Mission

The mission of the SM-ALC is twofold: (1) to provide worldwide logistics support of assigned weapons systems, equipment, and commodity items; and (2) to perform industrial activities including materials fabrication, metal plating, electronics assembly, and materials storage that relate to providing maintenance, supply, and contracting services essential to Air Force logistics. Logistics management responsibilities include supporting several types of aircraft, as well as providing ground communications-electronics support worldwide. SM-ALC provides communications-electronics logistics and maintenance support to space support programs and communications systems networks, and provides radar, navigational, and communications equipment to 37 countries.

SM-ALC is the host unit at McClellan AFB. The many tenant and associated units at the base include Air Force rescue, weather, training, and communications units; Air Force Reserve tactical rescue, weather, logistics, and special operations units; Coast Guard search and rescue operations; and California Highway Patrol and Sacramento County Sheriff's Department air units.

3.2 ENVIRONMENTAL SETTING

3.2.1 Air Quality

The main pollutants considered in this EA are ozone (O_3), carbon monoxide (CO), nitrogen oxides (NO_x), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter less than 10 microns in diameter (PM_{10}). NO_x , which include all oxide species of nitrogen, and hydrocarbons, or more specifically reactive organic gases (ROG), are considered in the air quality analysis in terms of their potential contribution to O_3 formation. Only that portion of total NO_x which is measurable as the species NO_2 is subject to federal and state standards. The National Ambient Air Quality Standards (NAAQS) are established by the U.S. Environmental Protection Agency (EPA). State standards are established by the California Air Resources Board (CARB) and are termed the California Ambient Air Quality Standards (CAAQS). The NAAQS and CAAQS are presented in Table 3-1.

For the purpose of air quality analysis, the region of influence for emissions of O_3 precursors would be the existing airshed surrounding McClellan AFB. This airshed is the Sacramento Valley Air Basin (SVAB) which includes Shasta, Tehama, Glenn, Butte, Colusa, Sutter, Yuba, Yolo, and Sacramento counties, as well as portions of Placer and Solano counties. The Sacramento County portion is under the jurisdiction of the SMAQMD. The region of influence for emissions of CO, SO_2 , and PM_{10} is limited to the more immediate area of McClellan AFB which is the Sacramento County portion of the SVAB (U.S. Air Force, 1992c). Current Sacramento Army Depot operations are also conducted in the Sacramento County portion of the SVAB, approximately 10 miles south of McClellan AFB.

Regulations. The federal Clean Air Act, as amended in August 1977 and November 1990, dictates that project emission sources must comply with the air quality standards and regulations established by federal, state, and local regulatory agencies. These standards and regulations focus on the maximum allowable ambient pollutant concentrations resulting from

Table 3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^{a,d}	National Standards ^{a,e}	
			Primary ^{a,f}	Secondary ^{a,f}
Ozone (O ₃)	1-hour	0.09 ppm (180 µg/m ³)	0.12 ppm (235 µg/m ³)	Same as primary standard
Carbon monoxide (CO)	8-hour	9 ppm (10 µg/m ³)	9 ppm (10 mg/m ³)	—
	1-hour	20 ppm (23 µg/m ³)	35 ppm (40 mg/m ³)	—
Nitrogen dioxide (NO ₂)	Annual average	—	0.053 ppm (100 µg/m ³)	Same as primary standard
	1-hour	0.25 ppm ^g (470 µg/m ³)	—	—
Sulfur dioxide (SO ₂)	Annual average	—	0.03 ppm (80 µg/m ³)	—
	24-hour	0.04 ppm ^g (105 µg/m ³)	0.14 ppm (365 µg/m ³)	—
	3-hour	—	—	0.5 ppm (1,300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	—	—
Particulate matter (PM ₁₀)	Annual	30 µg/m ³ ^h	50 µg/m ³ ^h	Same as primary standard
	24-hour	50 µg/m ³	150 µg/m ³	—
Sulfates	24-hour	25 µg/m ³	—	—
Lead	30-day	1.5 µg/m ³	—	—
	Quarterly	—	1.5 µg/m ³	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	—	—
Vinyl chloride	24-hour	0.010 ppm (26 µg/m ³)	—	—
Visibility ^a	8-hour (10 a.m. to 6 p.m.)	In sufficient amount to produce an extinction coefficient of 0.23 per km due to particles when the relative humidity is less than 70 percent. CARB Method V.	—	—6

Notes:

- California standards for ozone, carbon monoxide, sulfur dioxide (1 hour), nitrogen dioxide, and particulate matter are values that are not to be exceeded. The sulfates, lead, hydrogen sulfide, vinyl chloride, and visibility reducing particles standards are not to be equaled or exceeded.
 - National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year, with maximum hourly average concentrations above the standards, is equal to or less than one.
 - Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based on a reference temperature of 25°C and a reference pressure of 760 millimeters of mercury. All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 millimeters of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
 - National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
 - National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of pollutant.
 - At locations where the state standards for ozone and/or suspended particulate matter are violated. National standards apply elsewhere.
 - Calculated as geometric mean.
 - Calculated as arithmetic mean.
 - This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range when relative humidity is less than 70 percent.
- ppm = Parts per million
km = Kilometer
CARB = California Air Resources Board
µg/m³ = Micrograms per cubic meter

project emissions, both separately and combined with emissions from other surrounding sources, and the maximum allowable emissions from the project.

Climate. The SVAB encompasses several counties extending north from Sacramento County to Shasta County and is bounded by the Sierra Nevada to the east and the Coastal Ranges to the west. Prevailing winds are usually oriented along the major axis of the Sacramento Valley, approximately following a southeast-northwest pattern. In the winter, northerly and southerly flow patterns are predominant during the day, while calm conditions predominate during the late evening and early morning. During spring and summer, the predominant flow pattern is the delta or sea breeze. Northerly winds and the sea breeze predominate in the fall. Full sea breeze conditions occur 29 percent of the year; northerly winds occur 20 percent of the year.

The climate in the SVAB is moderate, with mild winters and hot, dry summers. Monthly average maximum temperatures range from 53° to 54°F in January to 93° to 98°F in July. Mean annual precipitation from 1939 to 1986 in the SVAB was approximately 21 inches. Approximately 90 percent of the rainfall occurs between November and April, and is associated with Pacific storms.

Regional Air Quality. According to U.S. EPA guidelines, an area with air quality better than or equal to the NAAQS is designated as being in attainment; a nonattainment designation for a specific pollutant is given to a region if the primary NAAQS for that criteria pollutant is exceeded. Pollutants in an area may be designated as unclassified when there is a lack of data for the U.S. EPA to form a basis for attainment status. The CARB also designates areas of the state as either in attainment or nonattainment of the CAAQS. Sacramento County is: (1) in nonattainment of the federal and state standards for O₃ and CO, and the state standards for PM₁₀; (2) in attainment of the federal and state standards for NO₂ and the state standards for SO₂; and (3) unclassified for the federal PM₁₀ and SO₂ standards (Air Resources Board, 1991). However, the U.S. EPA has recently proposed that Sacramento County be classified as in nonattainment for the federal PM₁₀ standard. In addition, categories of nonattainment (marginal, moderate, serious, severe, and extreme for O₃; moderate and severe for CO) have been established for both federal and state standards. Sacramento County is classified as being in serious nonattainment of the NAAQS and in severe nonattainment of the CAAQS for O₃, and in moderate nonattainment of both the NAAQS and CAAQS for CO. The SMAQMD currently operates air quality monitoring stations throughout Sacramento County. Stations in the vicinity of McClellan AFB include Del Paso Manor, El Camino/Watt, and Branch Center (Table 3-2).

New sources in nonattainment areas are required to install the Best Available Control Technology and are required to offset new emissions. In other than marginal nonattainment areas, new emissions must be offset with a greater than one-for-one reduction from other sources above and beyond those which would otherwise be required.

McClellan AFB Air Emission Sources. The primary emission sources at McClellan AFB include motor vehicles, aerospace ground equipment, and aircraft flying operations. ROG are emitted primarily from surface coatings and fuel evaporation. In addition, aircraft ground operations and heating/power production add a small portion to the total inventory (U.S. Air Force, 1991a). McClellan AFB currently paints about 350 mobile containers (electronics shelters) of varying shapes and sizes annually in paint booths which are operated under permits issued by

Table 3-2. Existing Air Quality in the Area of McClellan AFB

Pollutant	Monitoring Station	Averaging Period	Limiting Standard ^(a)	Number of Times Federal Standard Exceeded				Number of Times California Standard Exceeded				Maximum Concentration		
				1988	1989	1990		1988	1989	1990		1988	1989	1990
Carbon monoxide (CO) (ppm)	Del Paso	8-hour	9	1	13	4		1	13	4		9.7	13.0	11.3
	El Camino			7	20	16		7	20	16		11.6	15.9	14.0
	Del Paso	1-hour	20	0	0	0		0	0	0		12.0	15.0	12.0
	El Camino			0	0	0		0	0	0		15.0	18.0	15.0
Nitrogen dioxide (NO ₂) (ppm)	Del Paso	Annual	0.053	0	0	0		NA	NA	NA		0.018 ^(b)	0.021 ^(b)	0.017
	Del Paso	1-hour	0.25	NA	NA	NA		0	0	0		0.10 ^(b)	0.13 ^(b)	0.09
Ozone (O ₃) (ppm)	Del Paso	1-hour	0.09	45	0	6		220	16	65		0.13	0.12	0.15
Sulfur dioxide (SO ₂) (ppm)	Del Paso	Annual	0.03	0	0	0		NA	NA	NA		0.001	0.002 ^(b)	0.001
	Del Paso	24-hour	0.05	0	0	0		0	0	0		0.013	0.012 ^(b)	0.014
	Del Paso	1-hour	0.25	NA	NA	NA		0	0	0		0.06	0.04 ^(b)	0.04
Particulate matter PM ₁₀ (µg/m ³)	Del Paso	Annual	30	NA	NA	NA		1	1	0		30.3 ^(b)	33.2 ^(b)	28.6
	Branch Ctr.	(geometric)		NA	NA	NA		ND	1	0		ND	36.5	29.9 ^(b)
	Del Paso	Annual	50	0	0	0		NA	NA	NA		36.3 ^(b)	40.3 ^(b)	37.6
	Branch Ctr.	(arithmetic)		ND	0	0		NA	NA	NA		ND	42.5	35.3 ^(b)
	Del Paso	24-hour	50	0	0	1		14	12	13		127	142	187
	Branch Ctr.			ND	0	0		ND	15	10		ND	120	113
Lead (µg/m ³)	El Camino	Cal.qtr.	1.5	0	0	0		NA	NA	NA		0.08	0.08	0.07 ^(b)
	El Camino	30-day	1.5	NA	NA	NA		0	0	0		0.14	0.10	0.07

Notes: (a) Limiting standard is the more stringent of the NAAQS and CAAQS, as shown in Table 3-1.

(b) Data presented are valid, but incomplete in that an insufficient number of valid data points were collected to meet U.S. EPA and/or CARB criteria for representative samples.

NA = Not applicable.

ND = No data.

ppm = Parts per million.

µg/m³ = Micrograms per cubic meter.

SMAQMD. Freon recovered while repairing air conditioning units is recycled to prevent release into the atmosphere, and handled in accordance with applicable federal, state, and local regulations. McClellan AFB currently has 23,000 pounds of ROG emission credits available.

3.2.2 Biological Resources

Biological resources include both native and introduced species of plants and animals in the project area. For the Proposed Action, the region of influence consists of the areas adjacent to the buildings, radar test range, and laser target designator range described in Section 2.1. These areas are already altered or disturbed.

Vegetation. Grassland is the natural dominant vegetative community at McClellan AFB. Examples of grassland species inhabiting McClellan AFB include soft chess, wild oats, brome grass, wild mustard, fiddleneck, and brodiaea. Riparian vegetation is found along stream courses with adequate water supplies; however, within the developed areas of McClellan AFB much of the vegetation has been modified substantially by installation construction and channelization of local stream courses. Limited riparian vegetation still remains along stream courses in the western area of the base. Most vegetation in the developed areas consists of ornamental grasses, shrubs, and trees. No wetland vegetation communities exist near the areas proposed for realignment activities (CH2M Hill, 1992; U.S. Air Force, 1987). Vegetation in the McClellan AFB ammunition storage area, where construction for the Proposed Action would take place, consists of weeds which are regularly mowed.

Wildlife Resources. Wildlife populations inhabiting lands within and adjacent to McClellan AFB include those associated with the vegetative communities described above. These populations include year-round residents as well as seasonal migrants. Mammalian species common to the area include the western black-tailed jackrabbit, house mouse, Botta's pocket gopher, and California vole. The western fence lizard, common garter snake, and gopher snake are a few of the more common reptilian species associated with the grassland areas in and around McClellan AFB.

Bird species on McClellan AFB include year-round residents, winter residents, and transient visitors. These include the starling, rock dove, yellow-billed magpie, western meadowlark, horned lark, crow, gulls, killdeer, great blue heron, California valley quail, ring-necked pheasant, mallard, teal, and coot. Raptors (turkey vulture, black-shouldered kite, red tailed hawk, and kestrel) on base are generally transient users due to the lack of suitable nesting sites. The burrowing owl, a state-designated species of special concern, is known to nest in both open and developed areas of the base; however, none were found during the archaeological surveys of proposed project areas.

Threatened and Endangered Species. No habitat for any threatened or endangered plant or animal species is within or adjacent to areas proposed for realigned activities. Although the entire base had not been surveyed for biological resources, all threatened and endangered species that may potentially occur on McClellan AFB are associated with aquatic habitats. These species are the federally threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), the state threatened (and federally proposed endangered) giant garter snake (*Thamnophis couchii gigas*), and the state endangered (and federal candidate) plant, Boggs Lake hedge-hyssop (*Gratiola heterosepala*). In addition, three fairy shrimp species

(*Branchinecta lynchi*, *Branchinecta conservatio*, and *Lindneriella occidentalis*), and the vernal pool tadpole shrimp (*Lepidurus packardii*), which may be present in vernal pools on McClellan AFB, are federally proposed endangered species (U.S. Fish and Wildlife Service, 1991; U.S. Air Force, 1992c).

Sensitive Habitats. Sensitive habitats include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, or crucial summer/winter habitat). No sensitive habitats exist within the proposed project areas.

3.2.3 Cultural Resources

Cultural resources are prehistoric and historic archaeological sites, structures, districts, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or any other reason. For this discussion, cultural resources have been divided into two categories: prehistoric and historic.

Numerous laws and regulations require that possible effects to cultural resources be considered during the planning and execution of federal projects. These laws and regulations stipulate a process of compliance, define the responsibilities of the federal agency proposing the action, and prescribe the relationship among other involved agencies (e.g., the SHPO and the Advisory Council on Historic Preservation). The only cultural resources subject to consideration or protection, during such projects, are those which have been determined to be significant under legislation. Whether prehistoric or historic, significant cultural resources are referred to as "historic properties".

For purposes of this report, the region of influence for cultural resources is synonymous with the Area of Potential Effect (APE), as defined by the National Historic Preservation Act and includes all areas that may be affected by program activities. More specifically, the APE for this Proposed Action is described as follows (see Figure 2-1):

- Approximately one acre of ground disturbance associated with the construction of the radar test range. Test range components include the construction of a radar antenna pad, a quarter-mile Munson track, an underground cable, and a transmitter tower. Construction would take place within a fenced inactive ammunition storage area; the ground surface of the ammunition storage area has either been paved or disturbed by previous activities.
- Use of fourteen buildings, three of which (Buildings 252, 628, and 716) require interior renovation and two of which (Buildings 742 and 743) require demolition.

Prehistoric Resources. The physiography and climate of the Central Valley of California has supported a cultural resources chronology since terminal Pleistocene times. The Valley experienced several population movements during this period, the last of which was the Nisenan, who occupied the Yuba and American rivers drainages. In the late 1820s, American and European fur trappers established peaceful camps in the Nisenan territory and gold was discovered in 1848 near the Nisenan village of Culloma (current spelling Coloma) (Smithsonian Institution, 1978; Jennings, 1978). After European contact, epidemics decimated the native population and the remaining Nisenan were forced from the area during the Gold Rush.

Data reviewed to evaluate archaeological resources within the McClellan AFB APE for all alternatives include environmental documents; documents acquired from the Office of History, SM-ALC; a literature search conducted by the North Central Information Center (North Central Information Center, 1989); and previous and recent cultural resources surveys. Data indicate that no prehistoric or historic archaeological sites exist within the APE for ground disturbance. SHPO consultation has been initiated.

Historic Resources. Of the 14 buildings that would be affected by the proposed realigned activities, eight (Buildings 237, 258, 628, 637, 655, 677, 716, and 1093) were constructed after 1950. Record searches indicate that none of the buildings are associated with the types of events or individuals of local, regional, or national significance that could make them potentially eligible to the National Register.

Four of the 14 buildings (640, 651, 742, and 743) were built in 1943 and, although they have not been formally evaluated for their eligibility to the National Register, could possess qualities that are significant because of their age and association with World War II. Until these buildings are reviewed, in consultation with the SHPO, they must be afforded the same regulatory consideration as already nominated or listed properties and, therefore, are considered potentially eligible to the National Register. Building 640 is an electronic overhaul and test depot facility and Building 651 is a warehouse supplies and equipment depot facility. Buildings 742 and 743 are ammunition storage bunkers located within the inactive ammunition storage area.

The remaining two buildings that would be affected by the Proposed Action (Buildings 251 and 252) are both contributing elements of the Sacramento Air Depot Historic District listed on the National Register (U.S. Department of the Interior, 1988); both were constructed in 1938 and both retain exterior character-defining qualities that are in original condition. Building 251 is a complex of engineering shops and repair docks and, at the time of construction, was one of the largest buildings of its kind at over 500,000 square feet. Building 252, the Air Corps Equipment building, is a board-form concrete maintenance facility whose exterior remains in original condition, except for the replacement, or filling in, of some of the windows (U.S. Department of the Interior, 1988). However, as a part of base efforts to decontaminate facilities that pose a threat to public health, Building 252 has undergone asbestos and mercury contamination abatement, and all of the non-load-bearing walls have been removed or stripped to the frame. Both Buildings 251 and 252 are significant, under National Register criteria, as elements of the historic district for having served as prototypes for similar facilities constructed after 1939 in the eastern United States. They are unique in California and on military installations in the nation (Dryer, 1988) as representing architecture associated with one of the nation's major air power and defense centers built in anticipation of World War II (U.S. Department of the Interior, 1988).

3.2.4 Hazardous Materials/Waste Management

Hazardous solid and liquid wastes are generated by McClellan AFB during routine industrial activities and aircraft maintenance operations. Generally, these wastes include fuels and oils; plating bath solutions; degreasing solvents; paint residues; PCB liquids, solids, transformers, and other electrical components; and miscellaneous laboratory chemicals.

An estimated 3.8 million pounds of hazardous waste were generated by McClellan AFB in 1990, from the following major waste streams: inorganic solid wastes; waste oil and mixed oil; unspecified organic liquid waste; organic solids with halogens; halogenated solvents; off-specification, aged, or surplus organic materials; liquids with chromium or pH less than 2; nickel; halogenated organic compounds greater than 1,000 parts per million; and cyanide.

McClellan AFB instituted a waste minimization program in 1984 to reduce the quantity and toxicity of hazardous wastes generated by the base. Hazardous waste generation by the base has been reduced by more than 62 percent by weight since 1985, exceeding the DOD hazardous waste reduction target of 50 percent for this time period. Currently, 41 hazardous waste minimization projects have been implemented or proposed by McClellan AFB.

Management and treatment of hazardous wastes are based on waste type, toxicity, and potential for recycling or resale. Treatment or disposal of wastes includes:

- Industrial wastes treated at the on-base industrial wastewater treatment plants
- Disposal at off-base disposal sites (often at waste-specific sites)
- Containerization and transfer to DRMO for recycling or disposal
- Temporary storage of contaminated fuels for reprocessing by outside contractors
- Collection of used oils in storage tanks and transportation to the oil/water separator in Building 714 where waste oil is collected for recycling.

Hazardous wastes that are generated on base are handled and stored in accordance with the Sacramento Air Logistics Center, McClellan AFB, Hazardous Waste Management Plan (U.S. Air Force, 1992b); McClellan AFB's RCRA Part B hazardous waste storage permit; and applicable federal, state, and local regulations. The McClellan AFB Conforming Storage Facility is the RCRA-permitted facility utilized for storage of hazardous waste. The facility has a capacity to store 422,400 gallons (or 8,448 55-gallon drums filled to 50 gallons) and is operating at 26 percent (approximately 110,000 gallons) of capacity.

The DRMO is responsible for decisions and actions regarding reuse, recycling, and disposal of hazardous waste. Subsequent to decisions by DRMO on which wastes will be disposed, the DRMO contracts with an outside hazardous waste hauler who transports the waste off site to an appropriate hazardous waste disposal facility approved by DRMO.

McClellan AFB currently has a plan to respond to hazardous materials/waste spills in accordance with the SM-ALC/McClellan AFB Special Plan 19-2, Spill Prevention, Control, and Countermeasures SPlan 19-2 (U.S. Air Force, 1991b). This plan includes provisions for the notification of emergency response personnel (e.g., Fire Department and Medical Units). In addition, base tenants are required to submit their own site-specific spill prevention plans through the Environmental Management Office for approval by the McClellan AFB Environmental Protection Committee.

Additional areas of hazardous waste management of concern for the realignment of Sacramento Army Depot activities include radioactive wastes and those associated with building renovation/demolition, and ground-disturbing activity associated with construction. Areas of hazardous waste management associated with these activities are asbestos management, lead-based paint management, PCB management, and the Installation Restoration Program (IRP). These and radioactive waste management are discussed in more detail below.

Asbestos Management. ACM is regulated by the U.S. EPA, Occupational Safety and Health Administration, and California EPA, and the SMAQMD is the local enforcement agency. Emissions of asbestos fibers to the ambient air are controlled under Section 112 of the Clean Air Act, which established the National Emission Standards for Hazardous Air Pollutants. The National Emission Standards for Hazardous Air Pollutants for asbestos (40 CFR Part 61 Subpart M) address the demolition and renovation of buildings with ACM. U.S. EPA, state of California, and Air Force policies recommend management of ACM in place, if its removal and disturbance could pose a health threat.

Regulated ACM refers to all friable as well as non-friable asbestos that could become friable during its removal. The Environmental Management Office and the Civil Engineering Squadron at McClellan AFB share responsibility for management of asbestos. Current demolition/renovation procedures at McClellan AFB involve conducting sampling prior to any construction-related activities. The samples are sent to a certified laboratory for analysis. A team of certified technicians on base handles small-scale asbestos removal projects; large scale projects are carried out by contractors. A base-wide asbestos management plan and asbestos operating plan are being prepared to comply with AFR 91-42, which requires the development of a base facility Asbestos Management Program. ACM is disposed in accordance with the National Emission Standards for Hazardous Air Pollutants for asbestos. The disposal procedure includes double bagging and transportation under applicable U.S. Department of Transportation regulations (49 CFR, Parts 171 and 172) to a permitted landfill.

Lead-based Paint Management. A waste containing levels of lead exceeding 5 milligrams/liter is defined as a RCRA hazardous waste by 40 CFR Part 261. The California Code of Regulations, Title 22 establishes a soluble threshold limit concentration (the level in an extract from the waste) of 5 milligrams/liter, and a total threshold limit concentration of 1,000 milligrams/kilogram. Hazardous wastes containing lead are disposed of in accordance with 40 CFR, Parts 260 et seq.; 29 CFR, Part 1910.120; and California Code of Regulations, Title 22.

Paint is not regulated until it becomes waste for disposal, such as during renovation of a building. At McClellan AFB, paint samples are taken from buildings scheduled for such activity and are analyzed by a certified laboratory prior to disposal. Lead-based paint may be removed either prior to, or as part of, renovation activities. In either case, waste containing lead-based paint defined as hazardous is removed and disposed in accordance with the applicable regulations cited above.

Polychlorinated Biphenyl Management. Commercial PCBs are used in electrical equipment, primarily capacitors and transformers, because they are electrically non-conductive and stable at high temperatures. However, because PCBs persist in the environment, accumulate in organisms, and concentrate in the food chain, the manufacture and use of the compounds

(except in closed systems) were banned under the Federal Toxic Substances Control Act. Of the locations proposed for realigned activities, equipment containing PCBs is known to be present in Buildings 251, 252, 637, 640, and 655. No information regarding PCBs is available for the remaining buildings proposed for realigned activities.

Current McClellan AFB practice is to inspect areas prior to demolition/renovation, and to remove any PCBs which may be in an area to be modified. PCBs are removed and disposed of in accordance with applicable regulations. The U.S. EPA regulates removal and disposal of equipment containing 50 parts per million or more of PCBs under the Federal Toxic Substances Control Act. Items containing 5 to 49 parts per million are regulated under California Code of Regulations, Title 22, Chapter 30. Additional state regulations are found in the California Health and Safety Code, Chapter 6.5.

Radioactive Waste Management. In addition to the 3.8 million pounds of hazardous waste, McClellan AFB generates approximately 22 55-gallon drums of radioactive hazardous waste annually, primarily from technical operations and an on-base nuclear reactor in Building 258. Guidelines followed by McClellan AFB for handling and disposing of radioactive wastes include AFR 161-16, Control of Radioactive Material (U.S. Air Force, 1988) and Technical Order 00-110N-2, Radioactive Waste Disposal (U.S. Air Force, 1991c), which incorporates nuclear Regulatory Commission (10 CFR) and Department of Transportation (49 CFR) regulations pertaining to radioactive wastes.

Radiation measuring equipment calibration activities require use of radioactive sources, but do not routinely generate radioactive waste. However, some waste may be occasionally generated such as when a radioactive source can no longer be used for calibration because of radioactive decay and must be disposed of according to the above regulations.

Installation Restoration Program. The DOD has initiated the IRP to investigate any environmental contamination present at its facilities. At McClellan AFB, 258 waste sites and potential release locations that warrant investigation have been identified.

On July 22, 1987, McClellan AFB was listed on the U.S. EPA's National Priorities List. National Priorities List sites are those containing hazardous materials/wastes which the U.S. EPA has designated as having the highest priority for cleanup. Following this listing and subsequent negotiations, the Air Force, the U.S. EPA, and the California Department of Health Services (now part of California EPA) signed an Interagency Agreement (May 2, 1990) that established the process for involving federal and state regulatory agencies and the public in the McClellan AFB response action process.

3.2.5 Health and Safety

The regulatory environment for health and safety issues consists of those elements and practices established to minimize or eliminate potential risks to the general public and base personnel as a result of operations at McClellan AFB. General regulations at McClellan AFB are based on safety guidelines established by the Air Force and the Occupational Safety and Health Administration. Health issues on base are the responsibility of the Bioenvironmental Engineer and the 652nd Medical Group. Safety on base is the responsibility of the Safety Office.

Potential health and safety issues relevant to the realignment of Sacramento Army Depot activities include hazards associated with exposure to ionizing and non-ionizing radiation. The existing McClellan AFB conditions in these areas are discussed below.

Non-Ionizing Radiation. At McClellan AFB, existing EMR sources are from radar repair and maintenance, the Federal Aviation Administration's air surveillance radar, and other units operated by the Air Force. Hazard exposure for radar use is controlled by establishing restricted areas in the vicinity of operating radar equipment and posting areas in accordance with AFOSH Standard 161-9 (Radio-Frequency Radiation Exposure), which governs EMR use by the Air Force. Additional occupational standards for radar use are established in accordance with ANSI guidelines (U.S Air Force, 1987). Currently, Building 1093, which would be used under the Proposed Action, is used to conduct radar maintenance and testing.

Although no laser testing is currently conducted at McClellan AFB, the Air Force has established safety guidelines for its use. Procedures for laser testing and use are conducted in accordance with AFOSH Standard 161-10 (Health Hazards Control for Laser Radiation), Military Standard 1425 (Safety Design Requirements for Military Laser and Associated Equipment), and ANSI guideline Z136.1-1986 (Standards for Safe Use of Lasers).

Ionizing Radiation. At the present time, McClellan AFB utilizes a small, pulsed operation nuclear reactor in Building 258 for aircraft nondestructive-inspection activities. The operation of this reactor in a short-duration pulsed mode ensures that the buildup of radioactive fission products is minimal, and the reactor is designed to minimize escape of these products. The reactor is licensed for operation by the Nuclear Regulatory Commission, and the license is administered through the Air Force Radioisotope Committee and Brooks AFB, Texas. Additional sources of ionizing radiation on base are the industrial x-ray facilities in Buildings 248 and 368, and sources used during radiation measuring equipment calibration operations in the precision measurement equipment laboratory located in Building 677.

Air Installation Compatible Use Zones Related Safety. The U.S. Air Force developed the Air Installation Compatible Use Zones (AICUZ) concept in recognition of the importance of compatible land use for areas adjacent to airfields. The AICUZ program establishes guidelines for compatible land uses within areas influenced by aircraft operations. Criteria used by the Air Force incorporates accident potential as well as noise exposures.

The AICUZ program includes Clear Zones and Accident Potential Zones. The Accident Potential Zones (i.e., Zones I and II) aid in determining compatible land uses. The Clear Zone is the closest to the ends of the runways and has the highest accident potential. It is Air Force policy to relocate current people-intensive facilities and facilities for other than flight operations outside the Clear Zone.

Both Buildings 640 and 651 which are proposed for use under the realignment were constructed prior to the development of the AICUZ concept. They were built at a distance greater than the former clearance criteria required from the projected center line of the runway. With the advent of the AICUZ program, the clearance criteria were expanded so that now all of Building 651 and part of Building 640 are located within the Clear Zone as it is currently defined in the AICUZ program.

Noise. Noise sources on McClellan AFB are typical of those found on AFBs and include aircraft operations, construction and landscape maintenance activities, vehicular traffic, and industrial operations. AFOSH 8-hour noise exposure limit for workers is 84 decibels A-weighted. At this exposure level, use of hearing protection is required. At the 80 decibels A-weighted 8-hour exposure level, workers are required to take part in a hearing conservation program including periodic hearing check-ups.

3.2.6 Infrastructure

Due to the close proximity of McClellan AFB and the Sacramento Army Depot, all infrastructure demands made by the two installations that are met by Sacramento County departments are considered to be supplied within the same infrastructure system; therefore, the realignment of Sacramento Army Depot activities would result in no net change in utility demands within the region. The discussion below focuses on the on- and off-base infrastructure affecting McClellan AFB.

Water. Potable water is delivered from three on-base wells (10, 18, and 29), each with a capacity of 1,000 to 1,200 gallons per minute, providing the base with a total capacity of approximately 3,400 gallons per minute (4.9 million gallons per day [MGD]). McClellan AFB also has a commercial connection with the Northridge Water District that can increase the base's capacity to over 10 MGD. This connection is utilized only when necessary during peak summer usage. In 1991, peak summer demand was approximately 2.8 MGD; peak winter demand in 1992 was approximately 1.5 MGD. Currently, McClellan AFB has no water supply problems.

Wastewater. McClellan AFB has a contract with the Sacramento Regional County Sanitation District (SRCSD) to discharge commingled (domestic and pretreated industrial) wastewater into the McClellan connector which then flows into the Sacramento Regional Wastewater Treatment Plant.

McClellan AFB's Industrial Wastewater Treatment Plant has a capacity of 1.2 MGD. McClellan AFB produces an average of approximately 0.5 MGD of industrial waste. Industrial wastewater is pretreated prior to release into the SRCSD's McClellan connector using a variety of treatment processes including oil separation, chemical treatments, and aeration. The base wastewater treatment facility is tentatively planned for closure in 1993, and industrial waste would be disposed through a new oil/water separator unit and then into the Sacramento sewer system for treatment. The Sacramento system is adequate to handle McClellan AFB wastewater discharge. Domestic wastewater is discharged directly into the SRCSD connector. On average, McClellan AFB produces approximately 0.6 MGD of domestic wastewater, yielding a combined industrial and domestic wastewater flow of approximately 1.1 MGD.

Solid Waste. In 1991, McClellan AFB produced approximately 9,300 tons of nonhazardous solid waste, including 3,900 cubic yards of demolition debris. All nonhazardous solid waste generated at McClellan AFB is disposed at the Sacramento County (Kiefer) Landfill. Kiefer Landfill is permitted through the year 2005, but has a design capacity that would extend the lifespan of the landfill to the year 2040. Permits that would extend the lifespan of the landfill to 2040 are pending approval from the California Integrated Waste Management Board.

Asbestos and lead-based paint wastes are disposed in accordance with applicable federal, state, and local regulations as discussed in Section 3.2.4.

In addition to solid waste disposal, a resource recycling/recovery program has been initiated at McClellan AFB. This program recycles high grade paper, cardboard, rubber, metal, and other materials.

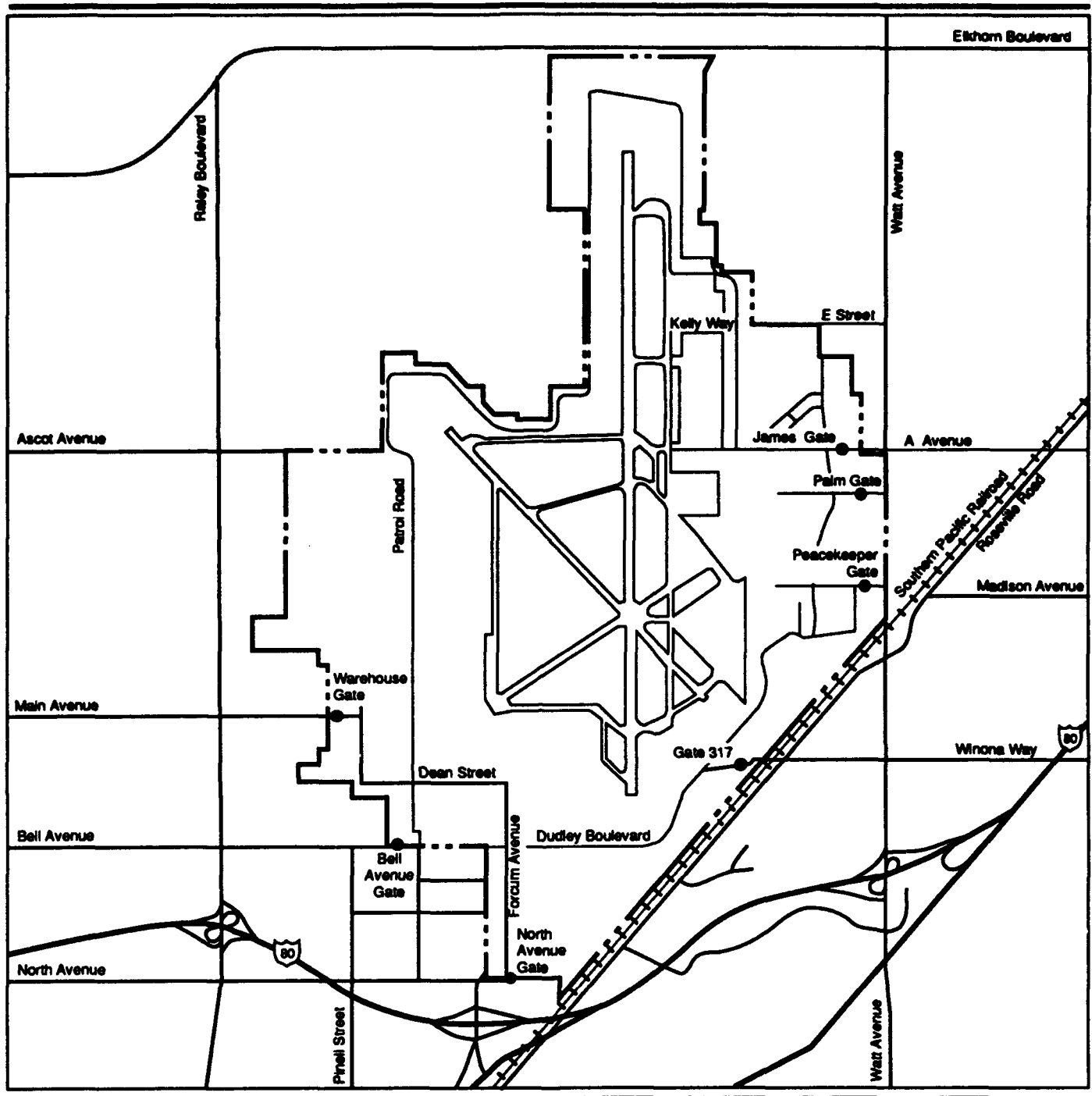
Electricity. Power to McClellan AFB is supplied by the Sacramento Municipal Utility District. The base has three switching stations, Haggin, Bell, and ADC, with a combined capacity of 50 megavolt-amperes. Peak summer demand is 44 to 45 megavolt-amperes. However, as part of planned system improvements, McClellan AFB has funded upgrades that will convert switching stations to substations, increasing the base's total capacity to 110 megavolt-amperes by June 1993.

Natural Gas. Natural gas is supplied to McClellan AFB by Pacific Gas and Electric. The amount of natural gas used by McClellan AFB varies between winter and summer. During the summer, 1991, average monthly demand was approximately 325,000 therms, while in the winter of 1992, average monthly demand was a little more than 1 million therms. Currently, there are no restrictions to the amount of natural gas Pacific Gas and Electric can supply McClellan AFB.

Transportation. McClellan AFB is served by a system of seven active gates. Palm and Bell Avenue gates maintain 24-hour operation, while the others are open only during peak traffic periods Monday through Friday. The gate system performs adequately, although some minor delays are experienced at Bell Avenue Gate during morning and evening peak-hour traffic. Current on base traffic is approximately 11,160 vehicles.

Peak traffic at all McClellan AFB gates occurs between 6:00 and 8:00 a.m., and between 3:30 and 5:00 p.m., with the heaviest volume associated with the morning hours. The percent of McClellan AFB traffic using each gate is 26 for Peacekeeper Gate, 13 for Palm Gate, 19 for James Gate, 12 for Gate 317, 5 for North Avenue Gate, 19 for Bell Avenue Gate, and 6 for Warehouse Gate. Six roads provide access to the base (Figure 3-1). Watt Avenue serves the Peacekeeper, Palm, and James gates; Roseville Road and Winona Way serve Gate 317; Main Avenue serves the Warehouse Gate; and North and Bell avenues serve the gates of the same names. During the morning traffic period (6:00 a.m. through 8:00 p.m.), approximate traffic counts for these roads are: Watt Avenue, 5,800; Bell Avenue, 2,500; Roseville Road, 1,800; Main Avenue, 750; and North Avenue, 2,400 (City of Sacramento, 1992; County of Sacramento, 1992). No traffic count was available for Winona Way. The public access roads currently provide adequate service for these traffic volumes (Military Traffic Management Command Transportation Engineering Agency, 1991).

Sacramento County, as part of its air quality management plan, has begun to implement transportation control measures. These measures include an increase in public transportation (buses and light rail), bicycle lanes on many streets, and encouragement of carpooling. McClellan AFB is evaluating other transportation control measures to achieve a goal of 40 percent of the base population using alternative transportation by the year 1996, and has implemented a ridesharing program to help attain this goal.



EXPLANATION

- Base Boundary
- Gate

McClellan AFB Access Roads and Gates



ALC2004-4

Figure 3-1

3.2.7 Land Use

The contiguous base property consists of 2,856 acres, including the following Air Force land use categories (Figure 3-2):

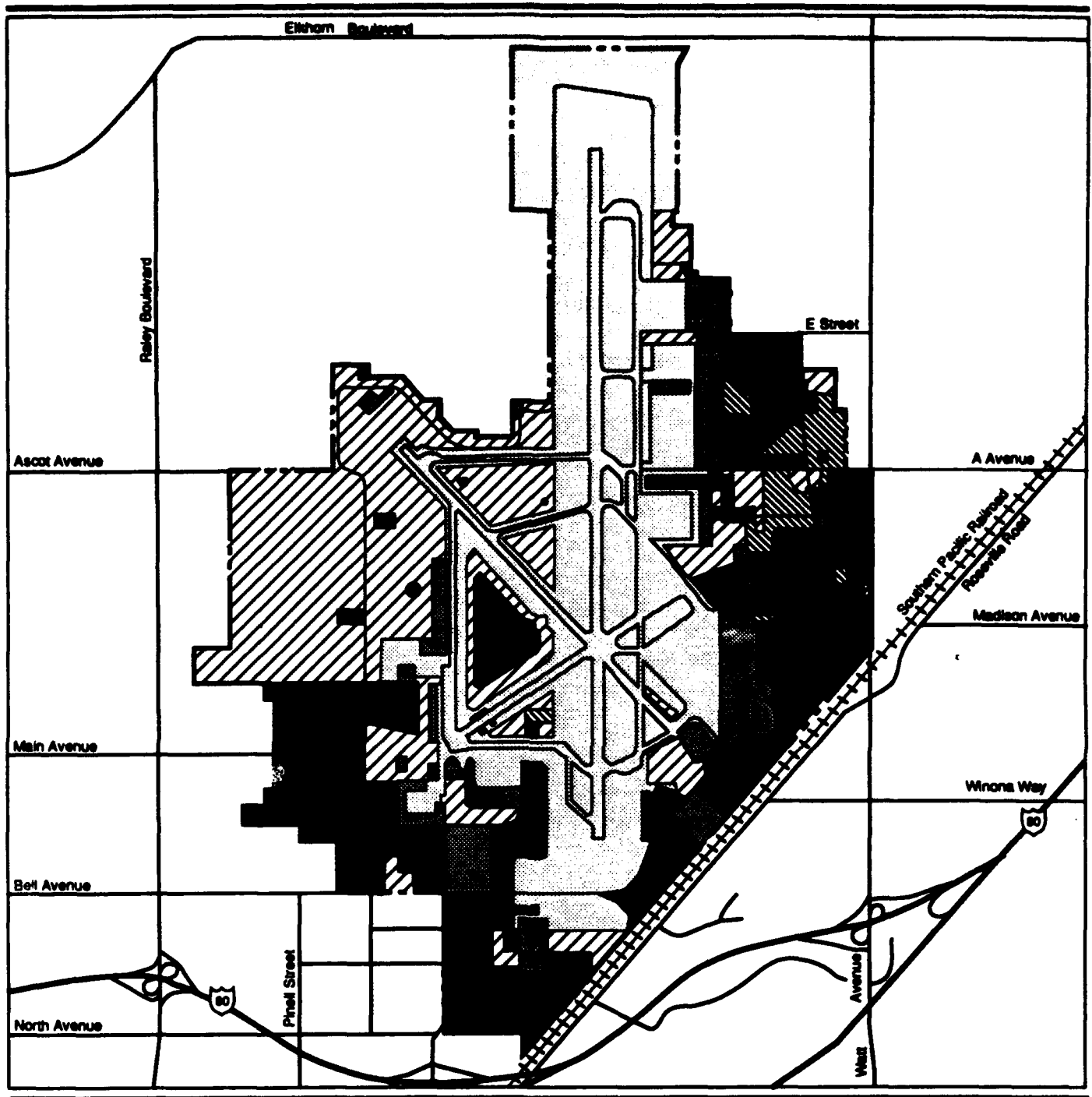
Airfield (paved and unpaved)	1,157 acres
Industrial	614 acres
Aircraft Operations and Maintenance	230 acres
Community, Commercial, and Services	70 acres
Housing (accompanied/unaccompanied)	59 acres
Administrative and Medical	51 acres
Outdoor Recreation	40 acres
Open Space	635 acres

The airfield, with a 10,600-foot runway, taxiways, and apron area, divides the base into east and west sections. The west side, containing about 57 percent of the total base acreage, is dominated by open space and industrial land uses. The east side contains the administrative, commercial, residential, and outdoor recreation land uses, and a majority of the aircraft operations and maintenance, taxiway, and aircraft parking land uses are concentrated immediately east and parallel to the runway (U.S. Air Force, 1987).

Most existing facilities proposed for use under the realignment are located in compatible land uses, and include aircraft operations and maintenance, industrial, and administrative uses. Facilities proposed for use which are located in an area of incompatible land use or are involved with new construction are discussed below.

Buildings 640 and 651 are located in the southwest quadrant of the base. Building 640 is in an area of the base designated in the Base Comprehensive Plan as District Number 24. Building 651 is in District Number 16. Both districts contain airfield (runway clear/approach zones), aircraft maintenance and operations, industrial, administrative, and open space land uses. Building 640 is currently located in an aircraft operations and maintenance land use, and Building 651 in an industrial land use. Building 640 is partially located within an airfield clear zone in which fixed or mobile objects are prohibited in order to protect moving aircraft. Building 651 is located almost entirely within an airfield clear zone and is scheduled for demolition. A replacement warehouse is expected to be constructed in fiscal year 1998 (U.S. Air Force, 1987).

The radar test range would be located in the northwest quadrant of the base in District Number 14, which is the area located between Taxiways K, L, and P. Existing land use designations in this area are industrial and open space, with areas designated as airfield (runway clear/approach zones) along the taxiways. Land uses next to or within airfields are subject to height and obstruction restrictions as defined in AFR 86-14. Most of the area that would be used for radar test range facilities and operations is within the fenced inactive ammunition storage area which is scheduled for removal (U.S. Air Force, 1987).



EXPLANATION

 Airfield	 Administrative/Medical	 Outdoor/Recreation
 Aircraft Operations and Maintenance	 Community, Commercial, and Services	 Open Space
 Industrial	 Housing	 Base Boundary

0 700 1400 2800 Feet



McClellan AFB Land Use Categories

Figure 3-2

3.2.8 Socioeconomics

Both McClellan AFB and Sacramento Army Depot are within the Sacramento Metropolitan Statistical Area (MSA), which includes Sacramento, Yolo, Placer, and El Dorado counties. In the decade between 1980 and 1990, population in the MSA increased by 36.2 percent, from approximately 1.1 million to almost 1.5 million. Sacramento County, containing 70 percent of the MSA population, grew from almost 800,000 people in 1980 to over 1 million in 1990; this corresponds to an average annual growth rate of 3.0 percent.

Total wage and salary employment in the Sacramento MSA increased from 427,000 in 1980 to 645,100 in 1991 which reflects an average annual growth rate of 3.8 percent. The major industrial sectors, by employment, in the MSA are government (civilian and military), services, and retail trade, accounting for 28.7, 22.3, and 18.4 percent, respectively, of total employment in 1990. The unemployment rate in the MSA was 4.7 percent in 1990 and 6.4 percent in 1991. Mirroring the nationwide recession, the unemployment rate for the Sacramento MSA increased to 7.8 percent in May 1992.

Over 90 percent of personnel at both McClellan AFB and Sacramento Army Depot live in Sacramento County. In 1990, the total number of housing units in Sacramento County was 417,574, with a median value of \$129,800 (current dollars). The vacancy rate was 5.4 percent and the median monthly contract rent was \$555. In the same year, the total number of housing units in the City of Sacramento was 153,362, with a median value of \$115,800 (current dollars). The vacancy rate in the city was 7.6 percent and the median monthly contract rent was \$429.

McClellan AFB provides on-base medical and dental services as well as fire and police protection. Off-base public services in the Sacramento area include more than 15 major hospitals; City of Sacramento, Rio Linda, and North Highlands fire departments; and the Sacramento (city) Police Department and the Sacramento County Sheriff's Department. Eight school districts within Sacramento County receive federal funding for dependents of federal employees from both McClellan AFB and Sacramento Army Depot. In addition to technical education provided on McClellan AFB, the California State University and the University of California both have campuses nearby, and there are several community colleges in the area.

4.0 ENVIRONMENTAL CONSEQUENCES

This section presents the results of the analysis of potential environmental effects of implementing the proposed realignment of the ten maintenance activities from the Sacramento Army Depot to McClellan AFB. Changes to the human and natural environment that may result from the Proposed Action and the No-Action Alternative were evaluated relative to the existing environment as described in Section 3.0. For each environmental resource, anticipated direct and indirect effects were assessed both quantitatively and qualitatively, considering both short- and long-term effects. The potential for significant environmental consequences was evaluated utilizing context and intensity considerations as defined in CEQ regulations for implementing the procedural provisions of NEPA (40 CFR, Part 1508.27). The environmental impacts for the Proposed Action and No-Action Alternative are discussed in this section. Because the Proposed Action is defined as realignment of all ten Sacramento Army Depot workloads, the environmental impacts from the Proposed Action represent the maximum potential impacts from realignment. If less than all ten workloads were to be realigned to McClellan AFB, environmental impacts would be less than those discussed for the Proposed Action.

Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The other known projects anticipated to occur on McClellan AFB that could contribute to cumulative impacts are the realignment of Detachment 42 from Norton AFB, California, and the realignment of the Air Force Reserve 940th Air Refueling Group (ARG) from Mather AFB, California. Detachment 42 would involve construction and operation of a 194,000-square-foot storage facility for high value electrical components for worldwide distribution, and would require approximately 200 additional personnel to support the activity. The realignment of the 940th ARG would consist of transferring 10 KC-135E aircraft and 250 full-time personnel to support the reserve units air refueling function. Potential cumulative actions are addressed in Section 4.9.

4.1 AIR QUALITY

4.1.1 Proposed Action

The only stationary air emissions associated with the proposed realigned activities would be from mobile electronics container (shelter) depainting/painting activities in Building 655, and painting of electro-optics/night vision equipment in Building 628. These activities are currently conducted under existing permits at Sacramento Army Depot, which is located in the same air quality basin as McClellan AFB; therefore, transfer of these activities to McClellan AFB would not represent an increase in regional emissions, and would not change the region's attainment status. McClellan AFB conducts similar mobile container depainting/painting activities. The amount of painting associated with the radar activity (approximately eight mobile electronics containers per year) is small compared to the amount of painting conducted at McClellan AFB (350 operations annually), and the activities would be performed in existing permitted paint

booths at McClellan AFB. The electro-optics/night vision equipment activity would require construction and operation of a new paint booth.

Regulated emissions associated with these painting activities are ROG. Sacramento Army Depot currently emits 13,000 pounds of ROG annually. This would be well within the 23,000 pounds of ROG emission credits currently available to McClellan AFB. Mobile container repainting activities would use an existing system that recycles the plastic beads which remove the paint, and collects the paint fragments in containers. No emissions are released. This system is permitted by the SMAQMD with no operational limits on the volume of repainting activities; therefore, additional activities would not affect the permit status.

Construction phase activities present potential, temporary air quality impacts from fugitive dust and construction vehicle exhaust. Grading activities would be the prevalent fugitive dust emission sources. Dust emissions would vary substantially from day to day depending on activity level and weather. However, the amount of grading would be small (approximately one acre), and mitigation by watering soils would be implemented to greatly reduce fugitive dust emissions. In addition, construction activity impacts are expected to be short-term and limited to areas immediately downwind of construction; therefore, no significant impacts would occur from construction.

Prior to transfer of any operations, McClellan AFB would obtain the necessary permits to construct and permits to operate. McClellan AFB environmental personnel would coordinate with the SMAQMD to ensure that the addition of realigned activities to McClellan AFB operations would not affect compliance with the Sacramento 1991 Air Quality Attainment Plan.

Under the Proposed Action, 967 personnel functions would be transferred to McClellan AFB. It is expected that most of these positions would be filled by personnel currently assigned to Sacramento Army Depot, approximately 10 miles from McClellan AFB. Therefore, there would be no significant increase in project-related transportation emissions in the region, and no appreciable change in air quality.

Air Conformity. Section 176(c) of the Clean Air Act, as amended by the 1990 Clean Air Act Amendments, prohibits a federal agency from supporting any activity that does not conform to an approved implementation plan designed to attain the NAAQS. Conformity to an implementation plan means that the activity will not: (1) cause or contribute to any new violations of NAAQS; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard or interim emission reduction milestone.

The U.S. EPA is expected to require a conformity analysis for all major federal actions. "Major" federal actions, for purposes of conformity, are actions that have the potential to cause direct or indirect emissions from both mobile and stationary sources of nonattainment pollutants at certain specified rates of emissions.

The proposed realignment of Sacramento Army Depot to McClellan AFB is not a major federal action for purposes of conformity. Sacramento County is classified by the U.S. EPA as serious nonattainment for O₃ and moderate nonattainment for CO. In serious nonattainment areas for O₃, the threshold rate of emission of O₃ precursors to determine whether the action is major

is 50 tons/year. For moderate nonattainment areas for CO, the threshold rate to determine whether an action is major is 100 tons/year of CO emissions.

The emissions of O₃ precursors at the Sacramento Army Depot are currently limited by permit to less than half of the 50 ton/year threshold. The Sacramento Army Depot sources proposed for relocation would not exceed the current permitted amount.

The Sacramento Army Depot boilers, which emit CO, are not moving to McClellan AFB. No other sources at Sacramento Army Depot proposed for relocation to McClellan AFB emit significant amounts of CO. None of the relocating sources emit enough CO to exceed the 100 tons/year threshold for purposes of triggering a conformity analysis.

4.1.2 No-Action Alternative

The No-Action Alternative would entail no change in current operations at McClellan AFB, but emissions in the SVAB would decrease with the transference of Sacramento Army Depot activities out of the region. However, because most personnel would not transfer, the quantity of emissions from automobiles in the region would remain unchanged.

4.2 BIOLOGICAL RESOURCES

4.2.1 Proposed Action

Implementation of the Proposed Action would involve use of existing facilities and construction of new facilities in previously disturbed areas.

Vegetation. Loss of vegetation associated with the proposed realignment would be minimal. Proposed construction would occur in paved areas and areas which consist of mowed, weedy vegetation. The vegetation lost would not represent any unique vegetation/wildlife habitat; therefore, no significant impacts to vegetation would occur.

Wildlife Resources. Construction for the radar test range could result in the loss of resident mice, ground squirrels, reptilian species, and displacement of a few individual members of the other mobile species such as the western black-tailed jackrabbit. However, construction would take place in areas of low biological value that are disturbed by current activities (e.g., mowing).

Activities and noise associated with the demolition and construction of facilities would have a short-term effect on larger or highly mobile species since those intolerant of such disturbances could avoid the vicinity of the project.

Some potential for eye damage to a small number of birds exists as a result of the testing of laser target designators. Birds cannot be excluded from the laser target designator range during testing. However, a bird would have to look directly into the laser beam to be affected, so the possibility of harm is almost negligible and any impacts to bird populations would be insignificant.

Threatened and Endangered Species. Federally and state-listed threatened, endangered, and proposed endangered species at McClellan AFB are associated with aquatic habitats. Because no activities would take place in or near aquatic habitats, there would be no impacts to threatened or endangered species.

Sensitive Habitats. No proposed activities would occur on or near any sensitive habitats, so there would be no impacts.

4.2.2 No-Action Alternative

The No-Action Alternative would entail no change in current operations at McClellan AFB, so no impacts to biological resources would occur.

4.3 CULTURAL RESOURCES

4.3.1 Proposed Action

Prehistoric Resources. Ground-disturbing activities required for the construction of the radar test range would take place within the inactive ammunition storage area on areas that have been disturbed from previous activities. In addition, all areas proposed for ground disturbance at McClellan AFB have been recently surveyed for, and found to be devoid of, prehistoric and historic archaeological resources (Diehl, 1992). Therefore, no adverse effects are expected to occur with implementation of the Proposed Action.

Numerous archaeological surveys of McClellan AFB have been conducted, none of which have identified any prehistoric or historic archaeological sites, Native American resources, or paleontological resources. The nearest site reported was over one mile from base land on Arcade Creek, and that site has never been verified. However, because the Central Valley has demonstrated a long cultural history, a slight potential to uncover cultural material during ground-disturbing activities does exist. In the event that any such resources are unexpectedly encountered during the course of this undertaking, construction should cease in the immediate area and a qualified archaeologist should be consulted. Subsequent actions would comply with 36 CFR, Part 800.11 and the Native American Graves Protection and Repatriation Act.

Historic Resources. Eight of the buildings required for realignment activities (Buildings 237, 258, 628, 637, 655, 677, 716, and 1093) were constructed after 1950 and are not considered eligible to the National Register based on their age and their lack of association with events or persons of local, regional, or national significance under any historic context. Therefore, no adverse effects would occur to these buildings as a result of activities associated with the Proposed Action.

Two of the four buildings constructed in 1943 (Buildings 640 and 651) could possess qualities that would make them eligible to the National Register because of their age and potential association with World War II activities on the base. However, because neither of these buildings would require any interior or exterior modifications as a result of program activities, no adverse effects would occur.

Two ammunition storage bunkers in the inactive ammunition storage area (Buildings 742 and 743) are proposed for demolition as a result of activities associated with construction of the radar test range. Both bunkers were constructed in 1943 and could possess qualities that would make them eligible to the National Register based on their age and association with World War II; however, neither building has, as yet, been evaluated. Until these buildings are reviewed, in consultation with the SHPO, they must be afforded the same regulatory consideration as already nominated or listed properties. As a result, demolition of Buildings 742 and 743 could represent an adverse effect.

Undertakings that have the potential to adversely affect historic properties require consultation with the SHPO and, if applicable, the Advisory Council on Historic Preservation. Therefore consultation with these agencies must occur prior to demolition of Buildings 742 and 743. In the event that the bunkers are determined to be eligible to the National Register, mitigation measures to reduce adverse impacts to a non-adverse level would be determined through the consultation process and could include, but would not be limited to, construction redesign, incorporation of the bunkers into the present design, or preservation through documentation by the Historic American Building Survey/Historic American Engineering Record. If, after consultation with the above referenced agencies, the bunkers are determined to be not eligible to the National Register, no further actions would be required and demolition could occur.

The remaining two buildings that would be affected by the Proposed Action (Buildings 251 and 252) are both contributing elements of the Sacramento Air Depot National Register Historic District; both were constructed in 1938 and both retain exterior character-defining qualities that are in original condition. Because Building 251 would not require any interior or exterior modification, however, no adverse effects to this building would occur.

Program activities currently require interior renovation of Building 252. As a part of McClellan AFB efforts to decontaminate facilities that pose a threat to public health, this building has undergone interior gutting and therefore no longer exhibits original interior characteristics; 100 percent of the non-load-bearing walls have been removed or stripped to the frame. Because of the extensive nature of the decontamination activities and because no exterior modifications are required under the Proposed Action, no adverse effects are expected to occur to Building 252. However, because this building is listed on the National Register, any renovation must be performed in consultation with the California SHPO and any adverse effects mitigated through the consultation process. The California SHPO has been consulted on this aspect of this undertaking and has requested a review of renovation plans before activities take place. The SHPO consultation letter is included in Appendix A.

4.3.2 No-Action Alternative

Because no ground disturbance, renovation, or demolition would occur under the No-Action Alternative, there would be no adverse effects to historic properties.

4.4 HAZARDOUS MATERIALS/WASTE MANAGEMENT

4.4.1 Proposed Action

The total quantity of hazardous wastes generated by Sacramento Army Depot activities was approximately 315,000 pounds in 1991. This amount would represent an eight-percent increase to the estimated 3.8 million pounds of hazardous wastes currently generated at McClellan AFB. As discussed in Section 2.1.2, the actual increase in hazardous wastes generation at McClellan AFB under the Proposed Action would be somewhat less. However, because the quantities of hazardous waste generated by activities other than the maintenance workloads cannot be separated from the total, this total quantity is used for analytical purposes in this EA.

The Sacramento Army Depot activities that would be realigned to McClellan AFB under the Proposed Action are similar to those currently conducted at the base, and involve similar types of hazardous materials and wastes. Generally, these wastes would be generated within existing hazardous waste-producing activities at McClellan AFB and would result in additional waste, but not new waste streams. McClellan AFB's RCRA-permitted hazardous waste storage facility is operating at 26 percent of capacity. An eight-percent increase in waste generation would be within the facility's capacity. The amounts of these materials would not exceed the capabilities of McClellan AFB's hazardous waste management program. Further, all waste-producing realigned activities would be subject to McClellan AFB's hazardous waste minimization program. All hazardous wastes would be handled by the DRMO in accordance with RCRA and applicable federal, state, and local regulations. Hazardous materials/waste spills would be managed in accordance with the SM-ALC/McClellan AFB SPlan 19-2. As tenants, each Army operation would be required to submit a spill prevention and response plan to the Environmental Management Office for approval by the McClellan AFB Environmental Protection Committee.

Paint stripping of the mobile containers would involve using plastic media blasting to strip the paint from the container. The plastic beads used to strip the paint would be recycled, and the paint fragments containerized. The containerized waste would then be disposed of in accordance with applicable federal, state, and local regulations.

Asbestos, Lead-based Paint, and Polychlorinated Biphenyl Management. To avoid potential exposure of construction personnel to hazardous materials, and to avoid potential release of hazardous materials, buildings would be surveyed prior to renovation/demolition activities for the presence of ACM, PCBs, and lead-based paint. If these materials are located where they would be disturbed by these activities, they would be removed and disposed by McClellan AFB personnel or a certified contractor in accordance with applicable federal, state, and local regulations.

Radioactive Waste Management. The Proposed Action would not result in routine generation of radioactive hazardous wastes. However, because proposed activities involve equipment that contains radioactive materials (e.g., optical components coated with slightly radioactive Thorium 232) or require use of radioactive materials (e.g., sources used for radiation measuring equipment), small quantities of radioactive waste could be generated during maintenance and repair of equipment, from damaged components, and radioactive sources no longer suitable for

calibration purposes because of radioactive decay. Any radioactive hazardous wastes generated, would be handled and disposed of in accordance with applicable regulations as described in Section 3.2.4.

Installation Restoration Program. No IRP sites are located in the area proposed for the radar test range, and no other new construction or other ground-disturbing activities would occur under the Proposed Action. Therefore, there would be no impacts on proposed or ongoing investigation and remediation activities.

4.4.2 No-Action Alternative

The No-Action Alternative would entail no change in current operations at McClellan AFB, and so no hazardous materials/waste management impacts would occur.

4.5 HEALTH AND SAFETY

4.5.1 Proposed Action

Potential health and safety impacts from the Proposed Action in the areas of ionizing and non-ionizing radiation are discussed below.

Non-ionizing Radiation. As part of the realignment activities, radar testing and maintenance would be conducted at McClellan AFB at Building 1093 and the radar test range. The effects of high-energy radio-frequency on humans if they are within the testing area is to heat them. Minor heating of human tissue is quickly remedied by the body's temperature-regulating mechanism. Exposure to high levels of radio-frequency emissions could affect the cardiovascular system, eyes, or cause tissue damage.

Testing would be carried out in the proposed (not as part of this program) 2,500-square-foot anechoic chamber attached to the southwest end of Building 1093. This chamber would be shielded to prevent stray EMR from entering and interfering with testing operations, or from leaving the chamber, thereby preventing any exterior exposure during testing.

The radar test range would be used for operational systems testing after antenna repair. This test area would have a 1,300-foot Radio-Frequency Hazard Safe Operating Zone, which is sufficient to conduct the proposed radar testing. In addition, this area would have signs posted with warning lights (lights operate when testing is being conducted) that inform McClellan AFB personnel not to enter the safety area during testing activities. Both ANSI and AFOSH (Standard 161-9) guidelines, which establish procedures for limiting exposure to radio-frequency emissions, would be followed during radar testing at McClellan AFB.

As part of the Electro-Optics/Night Vision repair activity, laser testing and maintenance activities would be conducted from Building 628 into a 1,640 foot-long open area. Although laser use has the potential to damage various structures in the eye as a result of instantaneous or extended direct contact with the laser, laser testing would be conducted in an area enclosed by a fence to keep personnel out during testing activities. In addition, warning signs would be posted along with security lights to warn McClellan AFB personnel when testing is in process. The laser beam itself would be tested from a calibration stand located on the second floor of

Building 628, which would direct the laser downward to a target located at ground level. This testing procedure of pointing the beam toward the ground and use of fixturing limits and apertures would prevent the beam from leaving the enclosed test area. All laser testing at McClellan AFB would be conducted in accordance with guidelines established by ANSI (Z136.1-1986), Military Standard 1425, and AFOSH 161-10. Implementation of the above safety procedures would prevent significant impacts to health and safety from laser use.

Ionizing Radiation. Calibration activities (TMDE and Radiation Measuring Equipment) require exposure of the equipment to be calibrated to a source of ionizing radiation whose resulting exposure rate is known. By manipulation of exposure time and distance from the source, the exposure rate and/or total exposure can be calculated and used as the basis for the calibration. These activities would be conducted in either Building 258, which currently has the necessary unit to release the known quantity of radiation or Building 677 where radiation measuring equipment calibration is currently conducted. All radiation measuring equipment testing would be performed under guidance of the Air Force Radioisotope Committee and under the regulations of the Nuclear Regulatory Commission; therefore, no significant health and safety impacts would occur.

Air Installation Compatible Use Zones Related Safety. Buildings 640 and 651 which are located in the Clear Zone as defined by the AICUZ program are proposed for use under the realignment. Because these facilities are located in the Clear Zone there is the potential for an aircraft mishap to affect them. It is Air Force policy to relocate people-intensive facilities outside the Clear Zone area for safety purposes.

McClellan AFB has submitted waivers to the Major Command to provide for continued use of Buildings 640 and 651. If the waivers are denied, other facility options would need to be developed and evaluated to conduct the activities proposed for these buildings. Use of Buildings 640 and 651 would be limited to the time frame required to acquire other facility options.

Noise. Personnel working in Buildings 640 and 651 may be exposed to high noise levels because these buildings are located adjacent to the base airfield. Building 640 is located within the 80 day-night average noise level (DNL) and Building 651 is located in the 85 DNL. Personnel exposed to high noise levels would wear hearing protection or take part in a hearing protection program as required by AFOSH regulations, as discussed in Section 3.2.5.

4.5.2 No-Action Alternative

The No-Action Alternative would entail no change in current operations at McClellan AFB, so there would be no health and safety concerns.

4.6 INFRASTRUCTURE

4.6.1 Proposed Action

Utilities. The realignment of the Sacramento Army Depot to McClellan AFB would involve an 8-percent increase (967 personnel functions) in personnel and additional operational needs at McClellan AFB. Thus, the demand for additional infrastructure for personnel and operational

activities (e.g., potable water, natural gas, electrical power, sewage treatment, and solid waste disposal) would also increase proportionately. However, the current McClellan AFB infrastructure served a base population of 23,000 in 1987; this population was 84 percent larger than the current base population of 12,500. The current demand for potable water is approximately 57 percent of capacity; industrial wastewater pre-treatment flows are at 42 percent of capacity. Electrical demands are currently 80 to 90 percent of capacity, but would be reduced to approximately 40 percent of capacity by 1993, if planned system improvements are made. There are no current restrictions on base natural gas supply. The increased demands of the Proposed Action with its 8-percent population increase, and with no unusual or excessive operational utility requirements, would be well within current excess capacities for these utilities. Quantities of solid waste generated by these activities at McClellan AFB would be basically the same as the solid waste currently generated by these activities at Sacramento Army Depot; therefore, there would be no increase in solid waste disposed at the Sacramento County landfill.

Minimal construction personnel would be required for building construction, renovation, and demolition. These activities would be phased to occur over a period of several years, therefore, increases in demands on McClellan AFB infrastructure from building renovation activities would be insignificant. The construction personnel would likely be drawn from the local, existing labor pool and so would not present any additional demands on regional infrastructure.

Transportation. Based on the current base vehicle occupancy ratio of 1.12 persons per vehicle (Military Traffic Management Command Transportation Engineering Agency, 1991), the Proposed Action would generate an approximate increase of 863 vehicles on base. This would be a 7-percent increase to existing on-base traffic.

For purposes of this analysis, it was assumed that this additional traffic would be spread throughout McClellan AFB's gate system in a pattern similar to existing traffic as described in Section 3.2.6. This would result in the following increases in peak morning traffic (6:00 a.m. to 8:00 a.m.) on the surrounding public access roads: 500 vehicles using the James, Palm, and Peacekeeper gates, causing a 9-percent increase on Watt Avenue; 164 vehicles using the Bell Avenue Gate, causing a 7-percent increase on that road; 104 vehicles using Gate 317, causing a 6-percent increase on Roseville Road (no traffic data are available for Winona Way); 52 vehicles using the Warehouse Gate, causing a 7-percent increase on Main Avenue; and 43 vehicles using North Avenue Gate, resulting in a 2-percent increase on that road.

Construction personnel and construction equipment would also contribute to on-base traffic. However, the traffic generated by the small number of construction personnel and by construction equipment required for facility construction, renovation, and demolition, phased over a period of several years, would not represent a significant increase to on-base traffic.

Because the access roads that serve the base are currently operating adequately, the additional traffic would not significantly increase traffic congestion. In addition, these roads handled a McClellan AFB population of 23,000 in 1987, without major traffic delays.

4.6.2 No-Action Alternative

Under the No-Action Alternative, there would be less demand on infrastructure in the Sacramento region from the Sacramento Army Depot maintenance activities, although most of the associated personnel would remain in the region. Infrastructure demands at McClellan AFB would remain unchanged.

4.7 LAND USE

4.7.1 Proposed Action

Except for the use of Buildings 640 and 651 and the proposed radar test range, the Proposed Action would involve: use of existing facilities, or those planned to be constructed prior to realignment as part of other programs; and activities that would be compatible with existing land uses where they would be located. This would not cause any changes in land uses or any land use conflicts.

Building 640 is currently located in an aircraft operations and maintenance land use, and Building 651 in an industrial land use. Activities proposed for realignment into these buildings are similar to those currently conducted in them and would be compatible with their current designated land uses. However, both buildings are located within a designated airfield clear zone. Twenty percent of Building 640 is located within the clear zone, and it is not proposed for removal in the Base Comprehensive Plan. Because the building is structurally sound, replacement costs would be prohibitive, and 80 percent of the building is not in the clear zone, the base has applied for a permanent waiver to allow use of the building to continue while addressing the land use incompatibility in order to minimize land use conflicts. However, if the waiver is denied, other facility options would need to be developed and evaluated to conduct the activities proposed for this building. Use of Building 640 would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover this action.

Building 651 is located almost entirely within the clear zone and is proposed for removal. A replacement warehouse may be built in fiscal year 1998. The base has applied for a temporary waiver to use this building until the replacement warehouse is constructed. However, if the waiver is denied, other facility options would need to be developed and evaluated to conduct the activities proposed for this building. Use of Building 651 would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover this action. If construction of a new warehouse is proposed by McClellan AFB in 1998, separate environmental documentation would also be prepared to cover this action.

The area proposed for the radar test range is currently designated as industrial (inactive ammunition storage area) and open space. Use of this area would require the demolition of two abandoned ammunition storage bunkers (Buildings 742 and 743) and the removal of portions of the fence currently surrounding the ammunition storage area. The abandoned ammunition storage area facilities are scheduled for demolition; therefore, their removal would not conflict with base land use plans. The construction of a radar antenna test pad, tower, and

Munson track, and conducting radar testing activities would be compatible with the industrial and open space land use designations of the area.

The area of the proposed radar test range is subject to the restrictions of AFR 86-14 which regulates the height of objects within air installation compatible use zones. Locating the 70-foot tower within 1,500 feet of the runway centerline would violate height restrictions established for airfield development. However, current plans are to locate the tower 1,900 feet from the runway centerline. In addition, the proposed location of the tower has been reviewed by Base Operations (DOM-1) who determined that it would not interfere with air traffic requirements and regulations. Therefore, no violations of airfield restrictions would occur.

4.7.2 No-Action Alternative

Under the No-Action Alternative, there would be no change or conflicts to current land use on McClellan AFB.

4.8 SOCIOECONOMICS

4.8.1 Proposed Action

The Proposed Action includes transfer of 967 personnel functions to McClellan AFB. It is expected that most of these positions would be filled by personnel who currently work at Sacramento Army Depot, approximately 10 miles from McClellan AFB, and who live in the Sacramento area. Therefore, no in- or out-migration is assumed under this alternative, and there would be no socioeconomic impacts.

The minimal construction personnel needs for facility construction, renovation, and demolition would likely be drawn from the local, existing labor pool, and would have insignificant socioeconomic impacts.

4.8.2 No-Action Alternative

Under the No-Action Alternative, Sacramento Army Depot would be closed (in accordance with DBCRA), and the activities would not be transferred to McClellan AFB but elsewhere, outside of the Sacramento area. It is likely that most personnel would not transfer and would remain in the area. The number of personnel associated with these activities represents less than 1 percent of the total employment and population in the MSA. Reductions in site-related earnings and income in the area would also be less than 1 percent. Unemployment in the MSA, currently at 7.8 percent, would increase by a maximum of 0.1 percent.

4.9 CUMULATIVE IMPACTS

4.9.1 Proposed Action

Potential cumulative impacts from the Proposed Action and the 940th ARG and Detachment 42 realignments to McClellan AFB are discussed below for the eight resource areas analyzed in this EA.

Air Quality. The Proposed Action, along with the 940th ARG and the Detachment 42 realignments, could create potential cumulative air quality impacts. However, because both the Sacramento Army Depot and 940th ARG activities are already conducted within the SVAB, no net increase in emissions would occur within the basin from these activities. In addition, the 940th ARG would change its fuel use from JP-4 to JP-8 as part of its realignment. Because switching to JP-8 fuel reduces emissions of ROG during refueling activities, realignment of the 940th ARG would result in reduced emissions from this activity. McClellan AFB would obtain the necessary permits and air emissions credits from the SMAQMD to ensure that stationary sources meet the Sacramento Air Quality Attainment Plan. For these reasons, no significant cumulative impacts to air quality would occur.

Biological Resources. Because Proposed Action activities would not result in loss of any unique vegetation or wildlife habitat, and potential impacts to birds from laser testing would be almost negligible, no significant cumulative impacts to biological resources would occur from the Proposed Action.

Cultural Resources. None of the future projects proposed for McClellan AFB would require the use of the buildings or areas described under the Proposed Action. In addition, no prehistoric or historic archaeological resources exist within the APE and any potential adverse effects to properties listed on or eligible to the National Register would be mitigated through consultation with the California SHPO. Therefore, no cumulative impacts to cultural resources would occur.

Hazardous Materials/Waste Management. Potential cumulative impacts could occur to the hazardous materials/waste management program from the increased activities of the Proposed Action, and the 940th ARG and Detachment 42 realignments. The cumulative increase in hazardous wastes generated on McClellan AFB would be approximately nine percent. The base RCRA-permitted hazardous waste storage facility is currently operating at 26 percent of capacity. Given the excess storage capacity for hazardous waste on McClellan AFB, and that all applicable regulations would be followed during storage, handling, and disposal of hazardous materials/waste, no significant cumulative impacts would occur.

Health and Safety. Use of established health and safety regulations would reduce health and safety impacts from all proposed programs so that no significant cumulative impacts would occur.

Infrastructure. Cumulative impacts to infrastructure could occur from the Proposed Action and the 940th ARG and Detachment 42 realignments. These three programs could involve the addition of 1,417 personnel to McClellan AFB. This would increase base population to 13,917. Historically, McClellan AFB has operated with a base population exceeding this. In 1991, with a base population of approximately 16,400, the base experienced no infrastructure constraints; therefore, no cumulative impacts are expected to occur.

Land Use. The Proposed Action would not change or conflict with off-base land uses, and existing on-base designated land uses would not change. Use of two existing buildings located within an airfield clear zone would continue under waivers, thereby minimizing potential incompatible land use conflicts. If the waivers are granted, continued use of these buildings would not result in any significant cumulative land use impacts. However, if waivers are denied, other facility options would be developed and evaluated to conduct the activities

proposed for these buildings. Use of these buildings would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover these actions.

Socioeconomics. Because the Proposed Action would not result in regional in- or out-migration, and the minimal construction personnel needs would be drawn from the local, existing labor pool, no significant cumulative socioeconomic impacts would occur from the Proposed Action.

4.9.2 No-Action Alternative

The No-Action Alternative would present no potential for significant cumulative impacts in the areas of biological resources, cultural resources, hazardous materials/waste management, and health and safety because there would be no change to existing conditions at McClellan AFB. Cumulative impacts from the No-Action Alternative to air quality, infrastructure, and socioeconomics would be essentially the same as those discussed for these resources under the No-Action Alternative in Sections 4.1.2, 4.6.2, and 4.8.2.

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

The land uses associated with the Proposed Action and the No-Action Alternative would be in compliance with federal, state, regional, and local land use plans, policies, and controls except for use of Buildings 640 and 651 which are located in an area designated as an airfield clear zone. McClellan AFB would obtain waivers to continue to use these buildings. However, if waivers are denied, other facility options would need to be developed and evaluated to conduct the activities proposed for these buildings. Use of Buildings 640 and 651 would be limited to the time frame required to acquire facility options. Separate environmental documentation would be prepared to cover these actions.

4.11 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

The implementation of the Proposed Action would not generate any significant adverse effects provided suitable mitigation measures listed in this document are incorporated into the program.

The No-Action Alternative would not generate any unavoidable adverse environmental effects.

4.12 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY

The Proposed Action and the No-Action Alternative would not adversely affect the long-term productivity of any resources found in the local environment. Because the activities proposed for realignment would take place in existing buildings, and in a limited area of level land with previously disturbed, mown weedy vegetation, no significant impacts are expected to occur to biological resources or the physical environment. Potential impacts to cultural resources (historic structure) can be mitigated as discussed above. Therefore, the Proposed Action and

No-Action Alternative do not eliminate any options for future use of the environment on McClellan AFB.

4.13 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Action and No-Action Alternative would not result in impacts to threatened and endangered species or to native or nonnative biological habitat. Realignment, however, does have the potential to affect historic structures on McClellan AFB. Potential impacts would be mitigated through measures developed in consultation with the California SHPO and, if applicable, the Advisory Council on Historic Preservation.

The amount of material required for any program-related activities and energy use would be small. However, the renovation activities and the continuation of operations associated with the realignment would result in irreversible and irretrievable commitment of small quantities of resources, such as metallic and nonmetallic material.

5.0 GLOSSARY

Air Quality Control Region:	An area designated by Section 107 of the Clean Air Act, which is based on jurisdictional boundaries, urban-industrial concentrations, and other factors including atmospheric areas, that is necessary to provide adequate implementation of air quality standards.
Ambient Air Quality:	Standards established on a state or federal level that define the limits for airborne concentrations of designated criteria pollutants to protect public health with an adequate margin of safety (primary standards) and to protect public welfare, including plant and animal life, visibility, and materials (secondary standards).
Anechoic:	Free from echoes, completely absorbing sound waves or radar signals.
Asbestos:	A group of minerals characterized by long, thin, flexible crystals, formerly used widely as a fireproofing and insulation material by the construction industry, often found in older buildings. Asbestos is a known carcinogenic substance.
Asbestos-Containing Material:	Material that contains more than 1 percent asbestos.
Attainment Area:	An air quality control region that has been designated by the U.S. EPA and/or the appropriate state air quality agency as having ambient air quality levels better than or equal to the standards set by the NAAQS.
Best Available Control Technology:	The most effective emission control device, emission limit, or technique which has been achieved in practice for the type of equipment comprising the stationary source.
Candidate Species:	Species for which listing as threatened or endangered is possible, but for which more biological data are needed before a final determination is made.
Capacity (Utilities):	The maximum load a system is capable of carrying under existing service conditions.
Cultural Resources:	Objects, structures, buildings, sites, districts, or other physical remains used by humans in the past. Such resources may be historic, architectural, or archival in nature.
Cumulative Impacts:	The combined impacts resulting from all activities occurring concurrently at a given location.

Endangered Species:	A species that is threatened with extinction throughout all or a significant portion of its range.
Environmental Assessment:	A concise public document in which a federal agency provides sufficient analysis and evidence for determining the need for an Environmental Impact Statement or Finding of No Significant Impact. EAs provide agencies with useful data regarding compliance with NEPA and are an aid in the preparation of an EIS.
Environmental Impact Statement:	A detailed analysis of environmental aspects of a proposed project that is anticipated to have a significant effect on the human and natural environment.
Environmental Protection Agency:	The independent federal agency, established in 1970, that regulates environmental matters and oversees the implementation of environmental laws.
Hazardous Material:	Generally, a substance or mixture of substances that has the capability of either causing or significantly contributing to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or posing a substantial or potential risk to human health or the environment. Use of these materials is regulated by the Department of Transportation, Occupational Safety and Health Administration, and U.S. EPA.
Hazardous Waste:	RCRA defines hazardous waste as any discarded material that may pose a substantial threat or potential danger to human health or the environment when improperly handled. Some of the characteristics of these wastes are toxicity, ignitability, corrosivity, and reactivity.
Hydrocarbons:	Any of numerous organic compounds, such as benzene and methane, that contain only carbon and hydrogen.
Impact:	An assessment of the meaning of changes in all attributes being studied for a given resource; an aggregation of all the adverse effects, usually measured by qualitative and nominally subjective techniques.
Infrastructure:	The utility and transportation networks needed for the functioning of an installation.
Mitigation:	A method or action to reduce or eliminate adverse environmental impacts.
National Ambient Air Quality Standards:	U.S. EPA promulgated allowable ambient air concentrations to protect public health and welfare by defining the limits of airborne concentrations of designated "criteria" pollutants. Standards cover ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulates, and lead.

National Register of Historic Places:	The nation's master inventory of known historic properties worthy of preservation. The National Register of Historic Places is administered by the National Park Service on behalf of the Secretary of the Interior. National Register listings include buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance. Properties listed are not limited to those of national significance; most are significant primarily at the state or local level.
National Register -Eligible Property:	A property that has been determined eligible for National Register listing by the Secretary of the Interior, or one that has not yet gone through the formal eligibility determination process but which meets the National Register criteria. For Section 106 purposes, an eligible property is treated as if it were already listed.
Nonattainment Area:	An air quality control region that has been designated by the U.S. EPA and/or the appropriate state air quality agency as having ambient air quality levels above the primary standards.
Ozone:	A major ingredient of smog. Ozone is produced from reactions of hydrocarbons and nitrogen oxides in the presence of sunlight and heat.
Resource Conservation and Recovery Act	Established in 1976 to protect human health and the environment from improper waste management practices.
Sensitive Species:	Species listed by state and/or federal agencies that is not listed as threatened or endangered but is of concern because of habitat or other reasons.
Solvent:	A substance that dissolves or can dissolve another substance.
Threatened Species:	Species likely to become endangered in the foreseeable future.

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6.0 CONSULTATION AND COORDINATION

The federal, state, and local agencies, and private agencies/organizations contacted during the course of preparing this EA are listed below.

FEDERAL AGENCIES

Environmental Protection Agency, Region IX, California

U.S. Air Force, Brooks AFB, Texas

U.S. Air Force, McClellan AFB, California

U.S. Air Force, Wright-Patterson AFB, Ohio

U.S. Army, Sacramento Army Depot, California

STATE AGENCIES

California Department of Health Services

California Department of Parks and Recreation, Office of Historic Preservation

LOCAL AGENCIES

Sacramento Metropolitan Air Quality Management District

County of Sacramento, Department of Public Works

City of Sacramento, Department of Public Works

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P.O. Box 942836
Sacramento, California 94236-0001

California Regional Water Quality Control Board
Central Valley Region
3443 Routier Road
Sacramento, California 95819-2694

California Waste Management Board
8800 Cal Center Drive
Sacramento, California 95826

Office of the Governor
Office of Planning Research
State Clearinghouse
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Sacramento, California 95838**

**North Highlands Library
3601 Plymouth Drive
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**Rio Linda Library
902 Oak Lane
Rio Linda, California 95673**

9.0 REFERENCES

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U.S. Fish and Wildlife Service, 1991. Species Listed of the Mannie Creek Investigation for Flood Protection to the Area within and West of McClellan AFB, Sacramento County, California, April.

APPENDIX A
CORRESPONDENCE

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942898
- SACRAMENTO 94296-0001
(916) 653-6824
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September 30, 1992

REPLY TO: USAF920820E

Lee Lewis, Major, USAF
Chief, Environmental Planning Team
Directorate of Environmental Management
SM-ALC/EMR
3200 Peacekeeper Way, Suite 11
MCLELLAN AIR FORCE BASE CA 95652-1035

Dear Major Lewis:

RE: REALIGNMENT OF SACRAMENTO ARMY DEPOT ACTIVITIES TO MCLELLAN AFB,
CONCERNING BUILDING 252

Thank you for forwarding the above referenced undertaking to my office for review and comment pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800.

The undertaking will involve interior modifications to Building 252, a contributor to the Sacramento Air Depot Historic District. Because plans and specifications have not yet been forwarded to this office, I am unable to comment concerning your determination of no adverse effect. Please forward them at your earliest convenience and I will continue by review of this undertaking.

If you have further comments or questions, please do not hesitate to contact Staff Historian Lucinda Woodward at (916) 653-9116.

Sincerely,

Steade R. Craig, AIA, Acting
State Historic Preservation Officer