Department of the Army
Headquarters, United States Army Forces Command

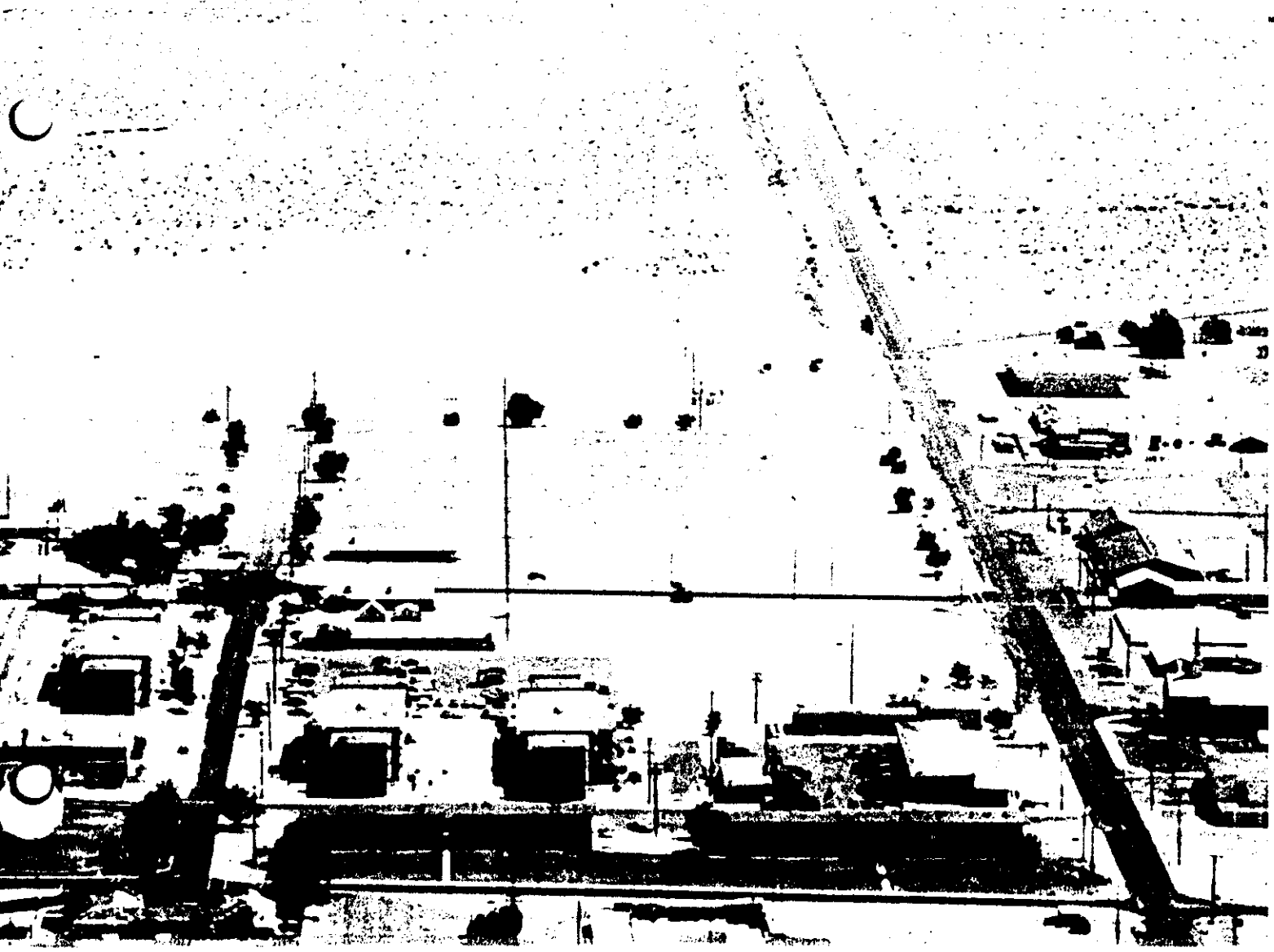
Final

Environmental Impact Statement

National Training Center
Fort Irwin Site

Fort Irwin, California

Comments and Responses



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1.0 COORDINATION IN THE PREPARATION OF THE ENVIRONMENTAL IMPACT STATEMENT

In the preparation of the environmental impact statement concerning the establishment of a National Training Center at Fort Irwin, California, the Army attempted to notify all known concerned individuals, organizations and governmental agencies that an EIS was being prepared to allow them input. Towards this effort, certain individuals, organizations and agencies were sent copies of the Draft EIS for review. The list of organizations and individuals furnished copies is found in Section 2.1. Also, Notice of Availability of the Draft EIS was published in the Federal Register.

In addition, public hearings were held as indicated in the schedule below to solicit testimony concerning the Draft Environmental Impact Statement. Copies of the transcripts of these public hearings are available from:

United States Army Corps of Engineers,
Sacramento District
650 Capitol Mall
Sacramento, California 95814

Written responses received by the Army are included in Section 3.1.1, while comments made at the public hearings which required an Army response are presented in Section 3.2. A listing of the individuals who made statements at the public hearings precedes the comments and responses in Section 3.2.

PUBLIC HEARING SCHEDULE

Location	Date	Subject
Yuma, Arizona	October 24, 1978	Yuma Proving Ground Alternative
Twenty-Nine Palms, California	October 25, 1978	Marine Corps Base Alternative
Barstow, California	October 26, 1978	Fort Irwin Alternative

2.0 COORDINATION IN THE REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

2.1 Draft EIS Mailing List

The following list shows federal, state, and local agencies and other parties to whom copies of the Draft Environmental Impact Statement have been provided.

FEDERAL

Office of the Deputy
Under Secretary of the Army
Washington, D.C. 20310

Office of the Assistant
Secretary of Defense (H&E)
Washington, D.C. 20301

Commanding Officer
DFAE
Yuma Proving Ground, Arizona 85364

Regional Administrator
Environmental Protection Agency
Region IX
100 California Street
San Francisco, California 94111

U.S. Department of Interior
Bureau of Land Management
3610 Central Avenue
Riverside, California 92506
Attention: Neil Pfulb
Planning Director

House Appropriations Committee
Chairman: George H. Mahon
Room H-218
Capitol Building
Washington, D.C. 20515

House Armed Services Committee
Chairman: Melvin Price
Room 2120
Rayburn House Office Building
Washington, D.C. 20515

U.S. Department of Interior
Bureau of Land Management
831 Barstow Road
Barstow, California 92311
Attention: Gail Givens

U.S. Department of Interior
National Park Service
Death Valley National Monument
Attention: Peter Sanchez
Resource Specialist

Naval Weapons Center
China Lake, California
Attention: Tilly C. Barling
Natural Resource
Specialist

United States Marine Corps
Marine Corps Logistic
Support Base, Pacific
Barstow, California 92311

U.S. Marine Corps Base
Twenty-Nine Palms, California 92278

U.S. Marine Corps Supply Center
East Highway 66
Barstow, California 92311
Attention: Public Works

Goldstone Deep Space
Communications Complex
P.O. Box 997
Barstow, California 92311
Attention: Charles Koscielski
Goldstone Operations
Manager

FEDERAL (continued)

Senate Appropriations Committee
Chairman: Warren G. Magnuson
Room 1235
Dirksen Senate Office Building
Washington, D.C. 20510

Office of Environmental Affairs
Office of the Assistant Secretary
for Administration and Management
Department of Health, Education and Welfare
Washington, D.C. 20202

U.S. Department of Transportation
Regional Representative of the Secretary
Region IX
2 Embarcadero Center, Suite 610
San Francisco, California 94111

Office of the Deputy Assistant
Secretary for Environmental Affairs
U.S. Department of Commerce
Washington, D.C. 20230

Water Resources Council
2120 'L' Street NW, Suite 800
Washington, D.C. 20037
Attention: Mr. John B. Roose
Assistant Director

Senate Armed Services Committee
Chairman: John C. Stennis
Room 212
Russell Senate Office Building
Washington, D.C. 20510

Office of Environmental Quality
U.S. Department of Housing and
Urban Development
Washington, D.C. 20410
Attention: Mr. Richard Brown,
Director

U.S. Department of Agriculture
Office of the Secretary
Washington, D.C. 20250
Attention: Coordinator,
Environmental
Quality Activities

Director
Office of Environmental
Project Review
Department of the Interior
Washington, D.C. 20240

STATE AND REGIONAL GOVERNMENT AGENCIES

Arizona State Clearinghouse
Executive Towers - 5th Floor
1700 West Washington
Phoenix, Arizona 85007

District Four Council of Governments
Region 4
377 South Main Street
Room 202 - Arizona Bank Building
Yuma, Arizona 85364
Attention: Mr. Frank G. Servin,
Executive Director

Parks and Recreation Department
Office of Historic Preservation
1220 'K' Street
Sacramento, California 95814

California State Clearinghouse
Office of Planning and Research
1400 Tenth Street
Sacramento, California 95814

Southern California Association
of Governments
600 South Commonwealth Avenue
Suite 1000
Los Angeles, California 90005
Attention: Courtney Buse

ER ORGANIZATIONS, FIRMS AND INDIVIDUALS

The Hon. Shirley W. Pettis
U.S. House of Representatives
600 East Main
Barstow, California 92311

The Hon. Walter W. Stiern
State Senator
High Desert Office
512-A Barstow Road
Barstow, California 92311

The Hon. George Goldsmith
Mayor
Barstow City Council
222 East Mountain View Avenue
Barstow, California 92311

The Hon. Alan Cranston
Room 229
Russell Senate Office Building
Washington, D.C. 20510

Desert Dispatch
130 Coolwater Lane
Barstow, California 92311
Attention: Charles K. Dooley, Editor

Ward Havron
Southest Gas Corporation
751 East Main Street
Barstow, California 92311
Telephone: 256-3571

The Hon. Barry Goldwater
Room 5001
The Federal Building
Phoenix, Arizona 85025

The Honorable Dennis DiConcini
101 First Avenue
The Federal Building, Suite 1634
Phoenix, Arizona 85025

Barstow Community College
2700 Barstow Road
Barstow, California 92311
Attention: Dr. William Graham,
President/Superintendent

The Honorable Bob Strump
U.S. House of Representatives
Washington, D.C. 20515

The Hon. Larry Chimbole
State Assemblyman Representative
P.O. Box 773
Hesperia, California 92346

The Hon. James L. Mayfield
San Bernardino County
Board of Supervisors
235 East Mountain View Avenue
Barstow, California 92311

Dr. Frank English
Superintendent
Barstow Unified School District
551 South 'H' Street
Barstow, California 92311

The Hon. S. I. Hayakawa
Room 6217 Dirksen
Senate Office Building
Washington, D.C. 20510

W. S. Franken
S. California Edison Company
30553 Rimrock
Barstow, California 92311
Telephone: 252-3577

Mr. Darrell Crabtree
Southern California Edison Company
830 East Williams Street
Barstow, California 92311
Telephone: 256-8215

Mr. Sidney Brickerhoff, Director
Arizona Historical Society
949 East Second Street
Tucson, Arizona 85719

Mojave Water Agency
16849 'D' Street
Victorville, California 92392
Attention: Robert Watson

Barstow Area Human
Services Council
P.O. Box 170
Barstow, California 92311

OTHER ORGANIZATIONS, FIRMS AND INDIVIDUALS (continued)

Santa Fe Railroad Company
121 East Sixth Street
Los Angeles, California 90014
Attention: Environmental Section

Sierra Club
Mojave Group
1129 Elizabeth Street
Barstow, California 92311

Community Service District
Barstow Heights
P.O. Box 981
Barstow, California 92311
Attention: Robert Van Vacaeter

Museum Association
Mojave River Valley
P.O. Box 1282
Barstow, California 92311
Attention: R. I. Carlson, President

High Desert Environmental Defense Fund
P.O. Box 193
Lucerne Valley, California 92356

Southern California Chapter
The Nature Conservancy
P.O. Box 71106
Los Angeles, California 90071

Pasadena Audubon Society
206-6 South Electric Avenue
Alhambra, California 91801

Natural History Museum
Los Angeles County
900 Exhibition Boulevard
Los Angeles, California 90007

San Bernardino County Museum
2024 Orange Tree Lane
Redlands, California 92373

The Environmental Defense Fund
1525 Eighteenth Street, N.W.
Washington, D.C. 20036

Dr. H. G. Wilshire
U.S. Geological Survey
345 Middlefield
Menlo Park, California

Continental Telephone Company
Attention: Environmental Section
27790 West Highway 66
Barstow, California 92311
Telephone: 256-8911

Sierra Club
530 Bush Street
San Francisco, California 94108

Yermo Service District
P.O. Box 196
Yermo, California 92398
Attention: Norman Smith

Public Affairs Office
(Special Services)
Public Affairs Office, MCSC
Barstow, California 92311

Desert Protective Council, Inc.
P.O. Box 4294
Palm Springs, California 92262

National Wildlife Federation
Western Regional Office
451 Parker Drive, Suite 2
Sacramento, California 95825

National Audubon Society
1511 'K' Street, N.W.
Washington, D.C. 20005

Southern California Academy
of Science
Conservation Committee
100 N. Dunfie
South El Monte, California

Society of California Archaeology
541 Prospect Street
Higrove, California 92507

National Parks and
Conservation Association
1701 Eighteenth Street, N.W.
Washington, D.C. 20009

Defenders of Wildlife
1233 Nineteenth Street, N.W.
Washington, D.C. 20036

LOCATION OF REFERENCE COPIES

Copies of the Draft Environmental Impact Statement have been sent to the following libraries for the convenience of the citizens in the local communities who wish to review it.

Barstow Branch Library
304 East Buena Vista
Barstow, California 92311

Library Median Center
440 W. Fifth Street
Yuma, Arizona 85364

Twenty-Nine Palms Branch Library
Twenty-Nine Palms, California 92277

Victorville Branch Library
15011 Circle Drive
Victorville, California 92392

3.0 SUMMARY OF COMMENTS RECEIVED RELATED TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

All correspondence received by the Army is reprinted in Section 3.1.1. The individuals, organizations and agencies represented in the correspondence are listed preceding the letters in Section 3.1.1. If a response was prepared to a specific comment, an annotation number appears in the left-hand margin. These annotations are keyed to the appropriate amount/response found in Section 3.1.1.

3.1 CORRESPONDENCE, COMMENTS, AND RESPONSES

3.1.1 Correspondence

Correspondence received from the following individuals, organizations and government agencies is reprinted in this section.

Federal Agencies:

U.S. Department of Agriculture
Soil Conservation Service

U.S. Department of the Air Force
Headquarters, Washington, D.C.

U.S. Department of the Interior
Office of the Secretary, Pacific Southwest Region

U.S. Department of Transportation
Federal Highway Administration, Region IX

U.S. Environmental Protection Agency
Region IX

National Aeronautics and
Space Administration

U.S. Department of the Navy
Headquarters, U.S. Marine Corps

State Agencies and Clearinghouses

Arizona:

- Arizona State Museum
- Arizona State University
  Center for Public Affairs
- Arizona Commission of
  Agriculture and Horticulture
- Division of Emergency Services
- Arizona Game and Fish Department
- Mineral Resources Department

California:

- Air Resources Board
- Department of Conservation
  Special Services for Resource Protection
- Department of Economic and Business Development
- Department of Fish and Game
- Department of Housing and Community Development
- Department of Transportation
  Division of Transportation Planning
- Governor's Office
  Office of Planning and Research
- Regional Water Quality Control Board -
  Lahontan Region
- Solid Waste Management Board
- The Resources Agency
  Office of the Secretary

Local Governments:

- Barstow Heights Community Services District
- County of San Bernardino
  Economic Development Department
- County of San Bernardino
  Environmental Improvement Agency

Other Parties:

- Barstow Chamber of Commerce
- Corder, Alex B., Twenty-Nine Palms, California
- Fordham, Louise, Twenty-Nine Palms, California
- Hi-Desert Tract Owners Association, Inc.,
  Twenty-Nine Palms, California
- Moore, Susan L., Twenty-Nine Palms, California
- Pinney, B. B., USN Retired, Joshua Tree, California
- San Bernardino County Museum

- Sierra Club Mojave Group
- Society for California Archaeology
- Strather, Bertha, Twenty-Nine Palms, California
- Thatcher, Bob, Twenty-Nine Palms, California
- Twenty-Nine Palms Board of Realtors
- Twenty-Nine Palms Community Council
- University of Nevada, Las Vegas, Nevada
- University of Redlands

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
2828 Chiles Road, Davis, CA 95616

November 14, 1978

Bruce A. Hildebrand
Deputy for Environmental Affairs
Office of the Assistant Secretary of the Army
(Civil Works)
Department of the Army
Washington, D. C. 20310

RECEIVED
22 NOV 1978
UNITED STATES ARMY

Dear Mr. Hildebrand:

We acknowledge receipt of the draft environmental statement for National Training Center, Fort Irwin Site, Fort Irwin, California in San Bernardino County, that was addressed to U.S. Department of Agriculture on September 21, 1978, for review and comment.

As you know, the desert is an extremely sensitive ecosystem. The soils and associated vegetation are subjected to perhaps the most harsh climatic conditions known to man. Consequently, any activity to disturb these resources has long lasting consequences. Your proposed mitigation measure of rotating training areas would tend to have more adverse impacts than concentrating training in any one or only a few areas.

We recommend that the following comments be considered:

A.1.1

1. Confine training to as few acres and areas as possible.

2. All areas utilized for training have an erosion control plan developed prior to intensive training.

3. Where possible, any existing vegetation should be protected from man and vehicles. The utilization of desert vegetation for camoflage purposes does not appear to warrant removal.

4. Certain areas designated for training areas be marked as such on maps. Areas where training is not absolutely necessary be restricted to access by vehicles and so indicated on maps. This is necessary to preserve the desert pavement and associated vegetation vital to a desert ecosystem.

We appreciate the opportunity to review and comment on this project.

Sincerely,

Wm. H. Payne
for FRANCIS C. H. LUM
State Conservationist

11/6/78

cc: R. M. Davis, Administrater, USDA, SCS, Washington, D. C. 20013
Director, Office of Federal Activities (Mail Code A-104),
Environmental Protection Agency, Room 537, West Tower,
401 M Street, S.W., Washington, D. C. 20460

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C.
20330

8 NOV 1978

REPLY TO ATTN OF: LEEV

SUBJECT: Draft Environmental Impact Statement (EIS)
National Training Center - Fort Irwin Site
(DA/MO-ODU Memo, 26 Sep 78)

TO: Deputy Chief of Staff for Operations and Plans (DAMO-ODU)
Department of the Army

1. We find the Draft EIS to be generally adequate but suggest that the Final EIS address Air Force concerns identified in the attachment.

2. HQ TAC/DEEV Autovon 432-4430/7844 and HQ TAC/DORW Autovon 432-7152/4661 should be contacted for additional input on the impact of the proposed Air Force electronic warfare range at Fort Irwin for inclusion in the Final EIS.

3. Thank you for the opportunity to comment on the Draft EIS.

FOR THE CHIEF OF STAFF

HIDEO YAMADA, Colonel, USAF
Chief, Environmental Planning Division
Directorate of Engineering & Services

1 Atch
HQ USAF Comments on
Draft EIS

Cy to: HQ TAC/DEEV/DORW
AFESC/DEV

Underwrite Your Country's Might - Buy U.S. Savings Bonds

AF COMMENTS ON DRAFT EIS

NATIONAL TRAINING CENTER - FORT IRWIN, CA

A.2.1 1. The analysis and conclusions in the text should more clearly indicate whether they apply to specific or all existing/proposed Air Force missions at Fort Irwin e.g. proposed electronic warfare range and Air Force close air support and defense suppression missions.

A.2.2 2. Text should more definitively address the question of whether aircraft electronic warfare will create communications interference. Present text is indecisive:

a. page 66, sec 3:6, first paragraph and Appendices, page B-17, sec B3.6, first paragraph:

"...is believed to have caused..."

b. Appendices, page A-47, sec 2.121B(2), second paragraph:

"...are susceptible to radio or electronic frequency interference..."

A.2.3 3. Page B-23, sec 3:10, fourth paragraph: Text should be revised to state that sonic booms are not likely to occur inasmuch as proposed aircraft missions e.g. EW, close air support and defense suppressions, do not normally result in supersonic flights.

September 15, 1978

MEMORANDUM FOR MR. ROGNER, OASD(MRA&L)

SUBJECT: National Training Center, Fort Irwin, California

The Air Force has reviewed the Army's Draft Environmental Impact Statement (DEIS) and the Congressional/Public notification announcing the siting of the National Training Center at Fort Irwin, California. We concur with the Army's announcement and the DEIS. During the public comment period on the DEIS, the Air Force will provide the Army necessary information concerning the establishment of the Electronic Warfare Range at Fort Irwin for inclusion in the Final EIS. We must insist, however, that the Electronic Warfare Range be adequately covered in this document.

The Air Force strongly supports establishment of the National Training Center and the Electronic Warfare Range. This facility would provide necessary combat training to include USAF/Army close air support and operations within an electronic warfare environment. Additionally, the Electronic Warfare Range would support the George Air Force Base F-4C aircraft training requirements. We will assist the Army as necessary to insure a timely release of the FEIS.

(Sgd)

JAMES F. BOATRIGHT
Deputy for Installations
Management
Deputy Assistant Secretary
(Installations)

cc: Mr. Gordon Hobbs, OASA(IL&FM)

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
PACIFIC SOUTHWEST REGION
BOX 36098 • 450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102
(415) 556-8200

ER/78/948

November 16, 1978

Colonel Donald M. O'Shei
District Engineer
U.S. Army Engineer District, Sacramento
650 Capital Mall
Sacramento, CA 95814

Dear Colonel O'Shei:

The Department of the Interior has reviewed the draft environmental statement for a National Training Center at Fort Irwin, San Bernardino County, California. We consider the environmental statement inadequate in addressing our concerns and offer the following comments.

General Comments

A.3.1 The summary statement of environmental impact (p. 2) states that "Tactical military maneuvers involving tracked vehicles such as tanks and heavy artillery equipment, air and ground live fire exercises, and bivouac sites are not compatible with the preservation of a desert landscape," but that the proposed action does not involve "the use of unaltered desert lands which could otherwise be considered for their wilderness or undisturbed ecological potential." The questions of degree of prior disturbance, degree of recovery from prior disturbances, tractability of the disturbed areas to rehabilitation, sensitivity of the area to renewed and extended disturbance, proximity to other areas of current desert use that might be adversely affected, and other future uses of Fort Irwin and contiguous areas are appropriate considerations. These have not been adequately dealt with in this environmental statement.

A.3.2 The analysis of direct impacts on soil is incomplete and misleading. Soil structural damage sustained by vehicular passage is strongly dependent on moisture content at the time of impact; hence, a small vehicle load at one time of the year may cause substantially more soil damage than a much larger load at another time of the year. In terms of erosional consequences of disturbance, there are thresholds of damage that, when exceeded, result in highly accelerated erosion rates. Our observations in desert terrain indicate that such thresholds are commonly exceeded by passage of a small number of vehicles, in many cases a single passage being sufficient. Thus, while increased energy transfer to the soil will increase soil damage, it may not, after very low tolerances are exceeded,

A.3.2 add greatly to potential sediment yield. In this respect, the total area disturbed is more important than the intensity of disturbance. The statement is correct, however, in recognizing that in terms of rehabilitation potential, the intensity of impact is very important.

A.3.3 If, as is stated, "the creation of dust, for instance, has far-reaching significance," the potential dust yield from the planned surface disturbances should be assessed quantitatively. If only 1 mm of soil is lost by wind deflation from half of the trackable terrain, an annual loss of 1.17 million metric tons could result. Less conservatively, described conditions of winds and terrain could, during maneuvers, result in the release of this quantity of dust within a period of a few days.

The environmental consequences of soil loss by wind erosion and transport from Fort Irwin to regions beyond are substantial and should also be evaluated quantitatively.

A.3.4 Desert pavement is just one of the common desert soil stabilizers. Algal and chemical crusts are equally or more important, and are extremely sensitive to even single vehicle passes. The role that organic crusts play beyond physically stabilizing the soil is just coming under scrutiny. The areal extent of such conditions should be known, and their potential disturbance and resulting impacts should be evaluated.

A.3.5 Plant damage, like damage to other soil stabilizers, is not simply proportional to the level of use because the sensitivity of different plants ranges over wide limits. This is shown by the huge drops in diversity measured in recreational vehicle areas. Our observations in military use areas, as well as recreational vehicle areas, have shown that some common shrubs such as Larrea can sustain multiple vehicle impacts before succumbing whereas others are eliminated by a single vehicle pass. Moreover, the time of impact relative to germination of annuals is critically important, and the maturity of individual plants at the time of impact is important to their survival. Thus, spreading the degree of impact may, because the tougher plants survive, give a superficial appearance of low damage levels, whereas actual plant damage may be severe.

A.3.6 The pessimistic assessment of recovery of vegetation in compacted soils is reasonable, except "several decades" is probably an underestimation. For example, a ghost town site in the Mojave Desert shows large decreases in diversity and density of plants in the impacted areas, and significantly high surface strengths of the soil after 50 years of nonuse. (See tables 1 and 2, enclosed; unpublished data of R. Webb and H. Wilshire.) The still-visible routes of the Pony Express and other historic trails across desert terrain show that for a variety of desert soil-terrain-vegetation associations, recovery times are likely to be measured in centuries rather than decades.

A.3.7 The mitigations cited to avoid irreversible and irretrievable losses of soil, vegetation, and habitat are not sufficient to achieve that end in light of the proposed use of the facility. No evidence has been adduced to show that it is possible or feasible to rehabilitate the land in the event that other uses are desired in the future, or in the event that spread of the damage through natural processes needs to be curbed. It is far from established

A.3.8 that it is possible or feasible to revegetate severely impacted desert terrain of the type present at Fort Irwin, and reestablishment of habitat (including pre-impact proportions and variety of plants) has not to our knowledge been achieved in comparable settings. It would appear prudent to demonstrate the feasibility of this procedure before the resources are further committed.

A.3.9 Rotation of training areas, far from mitigating the erosion problems, will probably exacerbate them because soil stabilizer tolerances are commonly less than one vehicle pass. In view of the load this 462,000 acres of maneuver area (p. 86) is expected to sustain--2,955,000 person-days per year of active participants in military exercises plus permanent staff (about another 1 million person-days per year exclusive of dependents)--the absolute impact to be incurred would appear to be massive however often the training areas were rotated. For example, note the description of "large-scale destruction of vegetation" caused by 555 people with 39 vehicles in 4 days cited on page B-12 of the appendices.

A.3.10 While the total mitigation to be achieved by "use [of] hard surface roads where possible" (p. 97) seems modest at best in terms of the intended use of the base, at least one area could be substantially improved: transporting materials and vehicles cross-country from the Mannix siding to the base could be accomplished on paved roads rather than over cross-country routes. The surface scars caused by driving vehicles cross-country for 27 miles are extensive and highly visible.

A.3.11 It is stated that because of technical evolution, "battle formations can be expanded and dispersed over greater areas" than before, and employment of the new weapons systems "under conditions of fullest capability require more space than the Army controls at most of its installations" (pp. 105-106). Satisfaction of these goals is not compatible with the mitigation measures proposed to reduce damage. While alternative sites may offer no advantage in environmental sensitivity over Fort Irwin, reducing the land area in active use and devising new train ing techniques that would reduce the potential impact should be considered as alternatives to the proposal.

A.3.12 Fort Irwin lies in a transition zone between two desert types--Great Basin and Mohave/Sonoran. By accident of topography and climate, relict plant communities are not uncommon and the number of endemic, very localized plants and animals is high in the region. The data used in the wildlife section of the statement appears to be almost exclusively based upon a limited study conducted by personnel from the Naval Weapons Center, China Lake, on a small portion of the western part of the Fort Irwin Reservation. This has resulted in descriptions which are not

A.3.12 detailed enough to adequately describe or relate wildlife distribution to specific sites. This makes it impossible to evaluate the amount of habitat destruction and/or loss of wildlife.

A.3.13 The discussion of the range of the Mohave ground squirrel, Spermophilus mohavensis, one of the officially listed "rare" species (Fish and Game Commission, State of California) is incorrect. According to the draft statement, the Mohave ground squirrel has not been observed on Fort Irwin (p. 28 of text and Table A-31, appendix A). However, during the spring and summer of 1977, a BLM employee, Mr. Ed Wessman, undertook a project funded by the California Department of Fish and Game on the distribution of the Mojave ground squirrel in the eastern portion of its four different sites within the boundary of the Fort. The results of this study were sent to Fort Irwin in a report entitled "The distribution and habitat preferences of the Mohave ground squirrel in the southeastern portion of its range," under a cover letter dated August 19, 1977 (see enclosed). The report was also sent to the California Department of Fish and Game in Sacramento. In addition to the Mohave ground squirrel, other small mammals were collected at the four study sites. These should be discussed in the final statement.

A.3.14 The burrowing owl, which is on the Blue List of diminishing species (see the December, 1977 issue of the publication American Birds), should be on the list of important species that will be affected by the action. The desert kit fox, which is fully protected by state law, is also a species that should be mentioned. Both these species are as important or more so than the desert horned lizzard and banded gecko.

A.3.15 The prairie falcon is a species which is extremely sensitive to disturbance during the breeding-nesting season. Nest abandonment occurs when the disturbance occurs more than occasionally. In order that impacts will be properly evaluated, locations where nesting occurs must be known. Adjacent desert areas have fairly high densities of nesting sites so it is reasonable to assume that the same is true of Fort Irwin.

A.3.16 The Bureau of Land Management will probably propose that the desert tortoise be listed as a federal threatened species (in response to a notice of "Status Review" in the August 23, 1978 Federal Register). Accordingly, the status of desert tortoise populations on Fort Irwin should be addressed.

A.3.17 The Army is not now in compliance, nor does it appear committed to comply, with federal laws and regulations on cultural resource management. The statement's cursory discussion of archeological and historic resources on Fort Irwin makes no reference to specific impacts that would result from Training Center activities, specific cultural sites that would be affected, or specific mitigation measures. There has been no attempt to identify, for the purposes of informed decisionmaking, the cultural resources present in the existing environment. Most important, there is no evidence that the Army intends to take necessary action to protect cultural resources known or discovered in the project area.

The Army is required to plan projects in compliance with both its own Army Regulation 200-1, Chapter 8, and the Advisory Council on Historic Preservation's 36 CFR 800, "Procedures for the protection of historic and cultural properties." The intent of 36 CFR 800 is to set out steps for all federal agencies to follow in identifying cultural resources within the area of impact for any fedrally sponsored undertaking. The first step is to check for properties listed on or determined eligible to the National Register of Historic Places.

The statement acknowledges no National Register properties on Fort Irwin. In fact, Bitter Springs, listed on page A-45 as a California State Point of Historical Interest, has been formally determined eligible for listing in the National Register by the Keeper of the National Register. The archeological report in Appendix A concludes that several of the eighteen other known sites on Fort Irwin also meet the criteria for National Register eligibility.

The second step in the identification process is to consult the State Historic Preservation Officer (SHPO) for further information on probable cultural resources in the project area. The SHPO also advises on the design and extent of field surveys. Despite the known presence of nineteen cultural sites, several of which may meet the National Register criteria, the Army appears to have neither consulted the SHPO nor conducted a field survey for cultural resource identifications.

A.3.17 Given the known archeological sensitivity of Fort Irwin and the extreme destructive potential of National Training Center activities, we believe that an intensive cultural resource survey at Fort Irwin is long overdue. We urge the Army to begin this process immediately. Postponing survey until 1981, as proposed, not only conflicts with NEPA's requirement for disclosure of environmental impacts prior to agency decision on a project, but also restricts the time available for the survey effort and implementation of a mitigation plan. We doubt that the Army's present schedule for development of the National Training Center would allow time for satisfactory protection of Fort Irwin's cultural resources.

All cultural resources known and discovered on Fort Irwin must be evaluated against the National Register criteria (36 CFR 800.10) in consultation with the SHPO; then, those sites meeting the criteria must be submitted to the Keeper of the National Register for formal determinations of eligibility (36 CFR 63). The Army appears either unaware of or unwilling to complete this process, even though the statement acknowledges that "many of these (known sites on Fort Irwin) are believed to satisfy the criteria for inclusion in the National Register of Historic Places. . ." (p. A-44).

Once a property is determined eligible to the National Register, it may not be altered or destroyed by a federal agency without compliance with Section 106 of the National Historic Preservation Act of 1966. Section 106 requires agencies planning a project which the SHPO believes would have an adverse effect on National Register properties to solicit the

Advisory Council on Historic Preservation's comments on the undertaking. The agency, the Advisory Council staff and the SHPO must then develop a plan to avoid, if possible, and if not, to mitigate these adverse impacts to the satisfaction of all parties. A memorandum of agreement stipulating the measures agreed to by the agency completes Advisory Council consultation. Failure to agree on a mitigation plan dictates that action be halted until the matter can be heard at a regular meeting of the Advisory Council.

The Army has already shown disregard for historic preservation efforts in its ongoing training activities at Fort Irwin. We are informed that during Brave Shield XVII exercises recently, tracked vehicles ran over portions of Bitter Springs, an archeological site eligible for the National Register. The resulting erosion exposed buried human remains, which were then washed out and lost much of their value for scientific study. Another case of impact that could have been avoided or minimized was the loss of tens of thousands of artifacts littered across the surface of Nelson Dry Lake, to collectors involved with Brave Shield operations. It is our understanding that both of these sites were pointed out to the Army by archeologists (who also recommended specific avoidance and mitigation measures) for the express purpose of preventing their inadvertent destruction.

A.3.17

Although the full extent of eligible National Register resources on Fort Irwin will not be known until survey and evaluation are complete, it is apparent that National Training Center operations would impact National Register-quality resources. Accordingly, we urge the Army to submit this proposal to the Advisory Council immediately in order to fulfill Section 106 compliance. The Army must also establish close coordination with the SHPO in order to initiate an effective survey and mitigation effort. This Department's Interagency Archeological Services (IAS) is available to assist the Army in contracting for archeological survey and salvage work. Salvage, when necessary, can be funded up to a level of 1% of project costs, under the Archeological and Historic Preservation Act of 1974 (P.L. 93-291).

The statement does not address Native American cultural and religious values which may be affected by National Training Center activities on Fort Irwin. There is no indication that any Native American groups have been contacted for their comments on the proposal.

Mineral resources are not discussed by the draft environmental statement. While the Granite and Siefort Mountains have little potential for mineral occurrence, data being gathered by the BLM California Desert Planning Staff indicates that the Avawatz Mountains possess one of the highest potentials for mineral occurrence in the California Desert Conservation Area (CDCA). This information is presently available for the Army to draw on when writing the final EIS. The single most important mineral issue that should be addressed concerns how access for prospecting (mineral inventory) will be allowed, and how exclusion of parts of the northeastern fringe of Fort Irwin could be arranged if mineral production areas are formed.

A.3.18

The statement indicates that a full range of social and recreation services are now or will be available at Fort Irwin, and that the Barstow Park and Recreation District is undertaking a significant improvement program. The statement implies that civilian and military recreation programs would operate independently. In view of the impact of additional personnel moving into the area as a result of its proposed action, and recent budgetary limitations on local government (Prop. 13), the Army should cooperate with the surrounding civilian community to ensure that recreation demands are met. As an example, there should be mutual exchanges of recreation services and facilities that would maximize use of the resources available, both military and civilian.

A.3.19

The draft statement discloses the impacts on Fort Irwin and the socioeconomic effects on the Barstow area. However, because adverse impacts on several components of the natural environment cannot be contained solely within the Fort Irwin boundary, more consideration should be given to those areas in the region, such as Death Valley National Monument, that would be indirectly but significantly affected over the long term.

Death Valley National Monument, set aside to preserve unique biological systems, scenic quality, and cultural resources, is an area of national importance. Therefore, recognition should be given to the following factors, and the impacts discussed accordingly.

Situated 1.5 miles north of Fort Irwin, Death Valley National Monument has been designated as a Class A (no significant deterioration of air quality) Air Conservation Area by the State of California. The National Park Service has also proposed that the monument receive Class I status under the Federal Clean Air Act Amendments of 1977. Air quality is an important value in natural areas of the National Park System, and the atmosphere in an area such as Death Valley is considered a resource to be managed, improved, and preserved.

A.3.20

Visibility is an extremely important factor in maintaining scenic vistas and esthetic quality for the visiting public. Over 600,000 persons visit Death Valley each year. In addition, of the monument's 2,067,832 acres, 1,908,000 acres have been proposed for wilderness designation. Not only air quality, but also the inherent values of solitude and silence are important values in wilderness. Given the sensitive nature of the national monument, we feel the Fort Irwin proposal would result in unacceptable indirect and cumulatively adverse effects.

Dense or dispersed plumes of fugitive dust are an existing natural desert phenomenon. The proposal adds another fugitive dust source up to 600 square miles in area. Silicious in composition, dust poses a health hazard to persons downwind. Substantial amounts of dust would occur over the southern portion of the monument, reducing air quality and visibility for sightseers and recreationists, as well as for civilian aircraft.

Windborne dust, combined with stationary vehicle and aircraft pollution sources, would degrade regional air quality and could have unknown environmental effects. Sensitive natural habitats (containing rare and endemic species) such as Saratoga Springs and the Valley Springs portion of the Amargosa River within the monument may be especially prone to damage. Air quality requirements and the effect of additional pollutants expected from this project should be discussed in the final statement.

A.3.20

No sufficient mitigation is proposed to insure the integrity of the air quality required by the China Lake Naval Weapons Center, or the Death Valley National Monument. Mitigations that would work, such as those employed in the Palm Springs area, are likely to be expensive, to put additional strain on the limited water supply, and to reduce substantially the range available for unrestricted maneuvering.

For years Death Valley has had problems with low-flying aircraft which disrupt its quiet atmosphere, an attractive feature of the monument for most visitors. During Operation Bold Eagle in 1976, for example, approximately 104,000 visitors and 415 employees and their families were subjected to aircraft noise. Interpretive programs and wildlife were also disturbed. The Training Center is expected to make intrusive noise from low-flying aircraft more frequent, despite noise abatement practices.

A.3.21

In addition to auditory disturbance, there has been conflict between military and civilian aircraft concerning airspace, communication, and radar services. Because of this, visitors to the monument using aircraft have been detained by either not being allowed entrance, by rerouting, or by being required to fly a sine wave. In order to determine impacts on the monument, documentation of proposed flight routes should be included in the report. If training flights are proposed over Death Valley, we would prefer that such flights be rerouted to avoid the national monument completely.

With regard to adjacent public lands administered by the Bureau of Land Management, Section 601(h) of the Federal Land Policy and Management Act of 1976 states:

> "The Secretary of Agriculture and the Secretary of Defense shall manage lands within their respective jurisdictions located in or adjacent to the California Desert Conservation Area, in accordance with the laws relating to such lands and wherever practicable, in a manner consonant with the purpose of this section. The Secretary, the Secretary of Agriculture, and the Secretary of Defense are authorized and directed to consult among themselves and take cooperative actions to carry out the provisions of this subsection, including a program of law enforcement in accordance with applicable authorities to protect the archeological and other values of the California Desert Conservation Area and adjacent lands."

A.3.22

A.3.22 Accordingly, the Army should contact the BLM Riverside District Manager to coordinate its plans for the National Training Center with the BLM's ongoing California Desert Planning Process.

A.3.23 Fort Irwin is no longer the remote outpost that it was in 1940, and can no longer be considered unusable and unwanted land. However, to cause massive damage to the soil and vegetation and to mine the ground water as will result from the proposed level of use will insure that the land's potential future uses will be even more circumscribed than the limits imposed by its natural condition.

The statement correctly notes an extremely serious problem that faces establishment of a National Training Center at any of the desert sites; however, no solution is offered, nor does any appear to be readily attainable.

Specific Comments

A.3.24 Page 9, Section 1.2.1. The base is 1.5 miles south of the southern border of Death Valley National Monument.

A.3.25 Pages 9, 43 and 79. References on these pages to lands administered by BLM are cited as either National or Natural Resource lands. The correct term is Public Lands.

A.3.26 Pages 27 and 97. Dalia arborescens is not on the federal endangered species list; it has been proposed for threatened listing.

A.3.27 Page 28. The genus of the Mohave ground squirrel is Spermophilus, not Citellus.

A.3.28 Page 30. We suggest that all the lizards be put in one list. The banded gecko and the Gilberts' skink are both lizards.

A.3.29 Page 32, Section 2.10. The statement that access to the base is controlled does not justify the lack of Army-authorized archeological survey.

A.3.30 Page 36. There is a reference here to load mining claims. We assume what is meant is lode.

A.3.31 Page 43, Section 2.12.2. Death Valley National Monument encompasses 2,067,832 acres. It is administered by the National Park Service and lies to the north of Fort Irwin. This unit of the National Park System had 646,287 visitors in 1977; 1,908,000 acres of the monument have been proposed as wilderness to the Congress by the Administration.

A.3.32 Page 44. Outdoor recreation and tourism are significant factors in the regional economy. These are neither recognized nor discussed in the draft environmental impact statement.

A.3.33 Page 58, Section 3.3.1. This section merely reiterates general statements that wheeled and tracked vehicles compact soils and cause increased erosion by wind and water. The environmental consequences of soil loss by wind erosion and transport from Fort Irwin to regions beyond is substantial and should be evaluated quantitatively.

A.3.34 Page 61. Another common effect of disturbance is introduction of undesirable exotics such as salsola.

A.3.35 Page 64, Paragraph 2. With proposed mining of groundwater, the longevity of springs and their ability to serve as refuges for wildlife are questioned.

A.3.36 Page 64, Paragraph 3. Bighorn sheep are not likely to share their range with the Army. There is good evidence to show that bighorn quickly abandon habitat when vehicle disturbance occurs.

A.3.37 Page 65. The draft EIS discusses a plan of mitigation which will be developed as a result of findings of a contracted archeological field reconnaissance. However, there is no mention of a plan for long-term management of cultural resources. This issue should be addressed in the final EIS.

A.3.38 Page 66, Section 3.5. Scars on the Fort Irwin landscape would presumably be visible to the general public from adjacent public lands.

A.3.39 Page 66, Section 3.6. Electronic jamming within a 19- to 20-mile distance has the potential to affect communications over 244,000 acres of Death Valley National Monument. An even greater area of federal and private lands, which includes the community of Baker, could suffer communications blackout.

A.3.40 Page 68, Section 3.9.1. Projected groundwater withdrawal will exceed present estimated annual recharge by 227%. To what extent could compaction of soils over a vast area diminish groundwater recharge?

A.3.41 Page 78. Is the "basin in Helendale" the Mojave River basin? If so, tapping Barstow's principal water supply, the Mojave River channel, upstream from Barstow would not appear to be a long-term solution to Barstow's water problem.

A.3.42 Page 79, Section 4.1.1, Paragraph C. Refer to page 43 comment regarding Administration-endorsed wilderness within Death Valley National Monument located 1.5 miles north of Fort Irwin. The monument has been designated a California Class A Air Conservation Area.

A.3.43 Page 79, Section 4.1.1 B. It is not correct to state that "the Bureau is not including any part of Fort Irwin in its resource inventory work." Section 204 of the Federal Land Policy and Management Act of 1976

establishes new withdrawal review responsibilities for BLM which will
A.3.43 result in BLM showing increased interest in certain withdrawals in the near future.

Page 80, Section 4.2.1. The first sentence is incorrect. Parts 110 and 171 of the Clean Air Act as amended in 1977 indicate that attainment
A.3.44 must be achieved within three years after enactment of State Implementation Plans. Therefore, it is doubtful that any increase in air pollution in non-attainment categories would be acceptable. In fact, overall improvement of conditions may be required.

A.3.45 Page 87. What is meant by "lack of challenging terrain?" What is meant by "lack of year-round trafficable maneuver area?"

Pages 92, 94. The reports on the Yuma Proving Ground and the Twenty-nine Palms Base state under Waste Disposal:

> "The proposed operations would generate large amounts of dry waste, some of which would become windblown litter. Discards of individuals in the field could be expected to contribute to the
A.3.46 existing litter."

The above is identified as a minor environmental effect and the report seems to imply that no plan of action is required to minimize such impacts. It leaves the impression that since the military and economic gains off-set such minor impacts that no mitigation is required and we should accept the fact that there will be more litter. The report should address methods of control and what the agency proposes to do to minimize the potential problem. If windblown litter is not controlled on site, it will also create a problem for adjoining land owners.

A.3.47 Pages 93, 95. How is "true desert" defined?

Page 97. Soil characteristics: This section does not include increased
A.3.48 disturbance of soil stabilizers other than desert pavement. Also, fluvial as well as aeolian erosion will be accelerated by the disturbances.

Page 97, Section 6.1. Is restricting "vehicles to established roads" the intended use of the National Training Center? Considering the magnitude
A.3.49 of the proposed activities and the stated severity and longevity of environmental impact upon soils, rotation of training areas and restriction of vehicles to established roads are unrealistic mitigating measures. We can suggest no effective mitigating measures which might be taken.

Page 97, Section 6.2. No assessment has been made of the near-in
A.3.50 effects on uses and occupants of Barstow, Death Valley National Monument and the Naval Weapons Center. Mitigating measures will contribute little to improving primary causes of total suspended particulates (TSP).

A.3.51 Page 97, Section 6.3. A replanting program on land which is to be repeatedly driven upon is unrealistic.

Page 98, Section 6.8. The severity of water overdraft is repeatedly stated, yet the proposal contains none of the mitigating measures listed.
A.3.52 Initial installation of water conservation and recycling equipment, though costly, will preserve long-term options for future use of this land after it has served its purpose as a military training center.

Pages A-28-29, Table A-11. There are several species listed in this table which do not occur on the reservation. Examples are Perognathus xanthanotus and Crotalus ruber. Both species are unknown in this part of the desert. If, indeed, the species actually occur here, the populations should be considered of great scientific importance and should be protected, as they are likely to be island or relict populations.

Were specimens of Perognathus xanthanotus and Crotalus ruber collected and are they now available for verification? We know that it is extreme-
A.3.53 ly difficult to verify some of these species unless (particularly in the case of small mammals) they are prepared as museum specimens and can be handled or in the case of the snake, the size of scales measured. Unless actual specimens were taken, these two species should be deleted from the list.

We also question the records for the San Diego pocket mouse, P. fallax and desert pocket mouse, P. perricillatus, which are not known to occur in the Ft. Irwin area. This would be a significant range extension. Specimens should be examined by mammalogists at the Los Angeles County Museum or a similar institution for verification.

The little pocket mouse should be P. longimembris and not fallax.

Species lists, particularly reptiles, appear to be randomly organized and are not in proper taxonomic order.

A.3.54 Page A-29. The burro rather than the bighorn is protected under P.L. 92-195, the Wild, Free-roaming Horse and Burro Act of 1971.

A.3.55 Page A-31, Paragraph 1. In the last sentence, there appears to be some missing information.

Page A-43, Paragraph 2. A category for Death Valley National Monument
A.3.56 should be included in the table of "Land Use Categories by Major Land Use Activities." The area is very sensitive in that wildlife is protected, as well as wilderness qualities.

Page A-136. What is the source for the statement that ". . . Indians from
A.3.57 Utah had been raiding Southern California?" There are no bibliographical references in this "Archeological-historical" report.

A.3.58 Page B-5. A-D are incomplete. Assessment is needed of all other soil stabilizers also: vegetation, chemical, and algal crusts.

A.3.59 Page B-6. Zones of dilation on either side of the zone of compaction are shallow not deep.

Pneumatic tires, not tracks, generate the shallow lateral shear stress perpendicular to the direction of travel. It is a consequence of deformation of the tire because of the weight it carries. However, the turning mechanism of tracked vehicles exerts very large shear stresses that wheeled vehicles don't exert (see Harrison, R., 1976, Environmental effects of off-road vehicles: Engineering Technical Information System: U.S Department of Agriculture, pp. 4-8).

A.3.60 Page B-6. The soil changes increase the diurnal temperature range in the soil.

A.3.61 Page B-7. The rapid return of lightly impacted area (1 to 2 passes of tracked vehicles) to a "steady state" by development of a new armor is not consistent with our observatons. Where the passage, probably slowly and in a straight line, of a tracked vehicle compresses coarse desert pavement on a flat surface, and where the substrate beneath the pavement is very strong, the pavement may not be disrupted and the surface has not become vulnerable to erosion. Generally, however, tracked and wheeled vehicle use seriously disrupts the pavement and exposes finer-grained materials to erosion. While these may develop coarse sand and granule lags relatively quickly, this represents a level of stability with respect to aeolian and fluvial erosion far less than that of the original surface. Such surfaces, which have achieved a metastable equilibrium with respect to the prevailing winds, may be highly vulnerable to the rarer extreme winds. Therefore, the creation of large areas of such metastable surfaces is highly undesirable.

A.3.62 Page B-7. The effects of vehicular and human-trampling stripping of vegetation on creation of wind fetches should be addressed in the final statement.

A.3.63 Page B-7, Section 3.3.2. The dust generated by activities such as tank manuevers would seem to be completely incompatible with any State Implementation Plan to maintain or improve air quality.

A.3.64 Page B-8, 4th paragraph. It is regrettable that no measurements have been made. However, this passage should also include the airborne particulate yield of the 1974 Barstow-Las Vegas motorcycle race that started immediately south of Fort Irwin. Another is the multi-million ton soil losses incurred by the December 20, 1977, windstorm in the San Joaquin Valley, the magnitude of which was affected by land-use practices.

A.3.65 Page B-10. There is a need to assess the introduction of exotic vegetation into disturbed areas.

A.3.66 Page B-11, 4th paragraph. What quantitative evidence exists which indicates that 1 to 2 passes of tracked vehicles have had little long-term effect on vegetation? The basis for this statement should be given. The second sentence of this paragraph is not supported by our observations in areas impacted by recreational vehicles.

A.3.67 Page B-11, 5th paragraph. Greater damage suffered by shrubs in the spring indicates another type of mitigation that should be considered: seasonal closure.

A.3.68 Page B-11, 6th paragraph. Recovery time varies greatly with type of plant.

A.3.69 Page B-16. Section B3.4 is a verbatim repetition of section 3.4 on page 65 of the statement. This is not an isolated occurrence. Appendices should be used only to supplement information in the text.

A.3.70 Page B-42. The effect of withdrawal of water from the Helendale "basin" (Mohave River basin?) on the normal supply to Barstow through the Mojave River drainage should be evaluated.

In summary, the Department of the Interior has a number of problems with the environmental impacts of this proposed project, particularly in the areas of damage to cultural and archeological resources, sensitive plant and animal species and desert lands, air quality, water resources, and the Death Valley National Monument. We are also concerned that mitigation measures are not adequately identified in the environmental statement, and/or are not sufficient to minimize the potential harm likely to occur.

If you have any questions concerning our comments, please contact me directly.

Sincerely yours,

Patricia S. Port

Patricia Sanderson Port
Regional Environmental Officer

Enclosures

cc: State Historical Preservation Officer
Director, OEPR (w/copy incoming)
Director, Heritage Conservation and Recreation Service
Director, Fish and Wildlife Service
Director, National Park Service

Director, Geological Survey
Director, Bureau of Land Management
Assistant Secretary, Indian Affairs
Reg. Dir., HCRS
Reg. Dir., FWS
Reg. Dir., NPS
Asst. Dir., GS
Area Dir., BIA

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION NINE
Two Embarcadero Center, Suite 530
San Francisco, California 94111

ARIZONA
CALIFORNIA
NEVADA
HAWAII
GUAM
AMERICAN SAMOA

October 19, 1978

IN REPLY REFER TO

HED-09

U.S. Army Engineer District Sacramento
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

We have reviewed the Draft Environmental Impact Statement for the establishment of a National Training Center at Fort Irwin, San Bernardino County, California, and provide the following comment:

A.4.1 The affected Barstow-Fort Irwin Access Road is not on the Federal-aid highway system. However, we suggest that some consideration be given in the Environmental Statement to the structural strength and safety of the access road as a result of the increased traffic.

We appreciate this opportunity to review the subject Draft EIS and would like to receive a copy of the Final Statement when it becomes available.

Sincerely yours,

R. G. S. Young, Director
Office of Environment and Design

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Project #D-USA-K11011-CA

Received
NOV 13 1978

Bruce A. Hildebrand
Deputy for Environmental Affairs
U.S. Army District Sacramento
650 Capitol Mall
Sacramento CA 95814

Dear Mr. Hildebrand:

The Environmental Protection Agency has received and reviewed the draft environmental statement for the NATIONAL TRAINING CENTER: FORT IRWIN SITE.

EPA's comments on the draft environmental statement have been classified as Category LO-2. Definitions of the categories are provided on the enclosure. The classification and the date of EPA's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions under Section 309 of the Clean Air Act. Our procedure is to categorize our comments on both the environmental consequences of the proposed action and the adequacy of the environmental statement.

EPA appreciates the opportunity to comment on this draft environmental statement and requests three copies of the final environmental statement when available.

If you have any questions regarding our comments, please contact Betty Jankus, EIS Coordinator, at (415)556-6695.

Sincerely,

Paul De Falco, Jr.
Regional Administrator

Enclosure

WATER COMMENTS

The Draft EIS does not adequately evaluate water quality impacts of the proposed action. Not enough information is provided for the reviewer to evaluate water quality impacts. As a minimum the FEIS should discuss the following.

A.5.1

1. (DEIS Page 81, Section 4.2.2)

   The Draft EIS states that, "the Fort Irwin Master Plan will include wastewater control measures to ensure that groundwater is not affected by operation at the National Training Center, and that the base is in conformance with Federal Water Pollution Control Act (FWPCA) regulations." The Final EIS should discuss in detail the Fort Irwin Master Plan wastewater control measures, as they apply to this project. This discussion should assure conformance with the Clean Water Act regulations of 1977 rather than FWPCA (1972).

AIR COMMENTS

A.5.2

1. The Draft EIS does not adequately evaluate air quality impacts of the proposed project. The Final EIS should quantify project emissions and relate these emissions to air quality concentrations. Sources of these emissions include: mobile sources, fuel factories, pumping sites, boilers and incinerators, jet aircraft, heating and air conditioning and fugitive dust.

EIS CATEGORY CODES

Environmental Impact of the Action

LO--Lack of Objections

EPA has no objection to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER--Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to reassess these aspects.

EU--Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

Adequacy of the Impact Statement

Category 1--Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2--Insufficient Information

EPA believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3--Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement.

If a draft impact statement is assigned a Category 3, no rating will be made of the project or action, since a basis does not generally exist on which to make such a determination.

NASA
National Aeronautics and Space Administration
Washington, D.C. 20546

Reply to Attn of LB-4

November 8, 1978

US Army Engineer District Sacramento
650 Capitol Mall
Sacramento, CA 95814

Dear Sir:

In his letter to the Goldstone Deep Space Communications Complex dated 21 September 1978, the Deputy for Environmental Affairs, Office of the Assistant Secretary of the Army (Civil Works), requested comments on the Draft Environmental Impact Statement on the proposed establishment of a National Training Center, Fort Irwin, California. That request was forwarded to the National Aeronautics and Space Administration for review, and the NASA comments are as follows:

A.6.1 1. Although the subject of potential electromagnetic interference is addressed throughout the text, and is identified as an "Adverse Environmental Impact That Cannot Be Avoided," the discussion of this impact and the proposed means for its mitigation might be expanded to indicate the measures that will be taken. The potential effects of electromagnetic interference upon the operations of NASA's Goldstone Tracking Facility have been the subject of extensive discussions between NASA, the Department of Defense (Director of Defense Test and Evaluation), and the military services. Out of these discussions has come a draft Memorandum of Understanding (MOU) between the DOD and NASA aimed at maintaining compatible operations in the Mojave Desert area, including the Fort Irwin Site. The environmental impact statement should recognize the extensive coordination that has been undertaken by describing the problems in more detail and elaborating on the means of their mitigation in terms of the draft MOU.

Mr. James E. Ayres
Associate Archaeologist
Arizona State Museum
The University of Arizona
Tucson, AZ 85721

From: Arizona State Clearinghouse
1700 West Washington Street, Room 505
Phoenix, Arizona 85007

State Application Identifier (SAI)
SEPT 29, 1978 State AZ No. 78-80-0052

Transportation	Health
Mineral Resources	Water
Az. Mining Ass'n	Land
Arid Lands Studies	Parks
Emergency Services	AORCC
Game & Fish	
Ag. & Hort.	Region IV
Environmental Studies	
Archaeological Research	
Center for Public Affairs	
Renewable Natural Resources	
Az. Bu. of Geology & Mineral Tech.	
OEPAD: S. Hancock	
Civil Rights	

This project is referred to you for review and comment. Please evaluate as to:

(1) the program's effect upon the plans and programs of your agency
(2) the importance of its contribution to State and/or areawide goals and objectives
(3) its accord with any applicable law, order or regulation with which you are familiar
(4) additional considerations

Please return THIS FORM AND ONE XEROX COPY to the clearinghouse no later than 17 working days from the date noted above. Please contact the clearinghouse if you need further information or additional time for review.

☐ No comment on this project
☐ Proposal is supported as written
☐ Comments as indicated below

Comments: (Use additional sheets if necessary)

B.1.1 Comments on this project will be withheld until a copy of the EIS has been received and reviewed. Upon completion of review, comments will be sent separately along with a statement regarding archaeological clearance.

Reviewer's Signature [signature]
Date October 23,1978
Title Associate Archaeologist
Telephone 626-1701

122

Dr. James Becker
Center for Public Affairs
Arizona State University
Tempe, Arizona 85281

State Application Identifier (SAI)
SEPT 29, 1978 State AZ No. 78-80-0052

Transportation	Health
Mineral Resources	Water
Az. Mining Ass'n	Land
Arid Lands Studies	Parks
Emergency Services	AORCC
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Ag. & Hort.	Region IV
Environmental Studies	
Archaeological Research	
Center for Public Affairs	
Renewable Natural Resources	
Az. Bu. of Geology & Mineral Tech.	
OEPAD: S. Hancock	
Civil Rights	

...: Arizona State Clearinghouse
1700 West Washington Street, Room 505
Phoenix, Arizona 85007

...s project is referred to you for review and comment. Please evaluate as to:

(1) the program's effect upon the plans and programs of your agency
(2) the importance of its contribution to State and/or areawide goals and objectives
(3) its accord with any applicable law, order or regulation with which you are familiar
(4) additional considerations

...se return THIS FORM AND ONE XEROX COPY to the clearinghouse no later than 17 working days from the date noted above. ...se contact the clearinghouse if you need further information or additional time for review.

☐ No comment on this project
☐ Proposal is supported as written
☒ Comments as indicated below

...mments: (Use additional sheets if necessary)

Too many important matters are covered by speculative statements about how they will or might or should of likely will occur. This makes judgmentofof impacts as speculative as are the presentations of conditions. Fot exaaple, p. 80, Goldstone, "will aim to minimize conflicts."

B.2.1 Opportunities for mitigation are not explored. This installation seems to provide a laboratory where air, water, land recovery systems could be examined.

B.2.2 While use of simulators in the training activities of the Center is probable, there seems potential in their use for environmental impact mitigation or as an alternative that would not involve environmental impacts.

...viewer's Signature R. J. Becker
Prof. Center for Public Affairs
...
Date 10-12-78
965-3926
Telephone

The MOU could be attached. In this regard, the MOU states that coordination is to be established through a DOD-NASA Mojave Coordination Group, rather than with the DOD Frequency Coordinator as stated in the draft environmental impact statement (p 80, Para. 4.1.1.E). A.6.1

2. The requirement for 1063 civilian employees, approximately 10 percent of the Barstow labor pool, will affect other activities in the area, depending upon the skill mix of National Training Center employees vis-a-vis those of other activities. These skill mixes and the likely impacts on other area employers should be discussed. A.6.2

3. To the extent that National Training Center (NTC) employees require assistance in acquiring off-site housing, the Army's housing assistance program will alleviate the problem. However, new residents taking jobs other than with NTC (e.g., secondary employees, replacement employees for residents who take employment with NTC) might need, but would not qualify for, such assistance. The statement should consider this potential problem. A.6.3

4. The document estimates that traffic on the Fort Irwin/Barstow access road will increase by a factor of four. There is a question whether the road can accommodate such an increase on a sustained basis without both undue traffic delays and major deterioration of the roadway. We recommend additional discussion of this issue be included. A.6.4

5. Correct values for the size and employment of Goldstone are 67.3 square miles and 485 employees, respectively (page 35). A.6.5

Sincerely,

Nathaniel B. Cohen

Nathaniel B. Cohen, Director
Management Support Office

cc:
HQDA DAMO-TRS
Attn: Major Robert L. Herndon
Washington, DC 20310

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380

IN REPLY REFER TO
OTTU1-wjc
5200
19 OCT 1978

From: Commandant of the Marine Corps
To: District Director, U. S. Army Engineer District Sacramento, 650 Capital Mall, Sacramento, California 95814

Subj: Draft Environmental Impact Statement (DFIS), National Training Center, Fort Irwin Site

Ref: (a) Deputy for Environmental Affairs, DA ltr of 21 Sep 1978
(b) DA Wash DC 042121Z Oct 78

1. In accordance with reference (a), the Draft Environmental Impact Statement on the proposed establishment of a National Training Center has been reviewed.

2. The Marine Corps has no objection to the DEIS as it relates to Twentynine Palms, California, and Yuma, Arizona. However, the proposed action does impact directly on the community in the Barstow area, which is the location of the Marine Corps' Logistics Base. A demand for some 950 off-base housing units would be created as well as increased demand on the civilian work force and depletion of available water resources. A.7.1

3. If the National Training Center is approved, it may be viewed as a facility capable of accommodating all services. To the detriment of Marine Corps interests, analysts may view the existence of the Marine Corps Air-Ground Combat Center at Twentynine Palms and a National Training Center as a duplication of effort/function. Accordingly, it is recommended that the word "National" be removed from the Fort Irwin activity. A.7.2

4. Reference (b) announced public hearings on the environmental impact of the proposed training center. It is requested that the results of these hearings be forwarded to the Commandant of the Marine Corps (Code OTTU).

E. J. Megarr

E. J. MEGARR
Major General, U. S. Marine Corps
Deputy Chief of Staff
for
Operations and Training

Arizona Commission of
Agriculture and Horticulture
1688 WEST ADAMS • PHOENIX, ARIZONA 85007 • (602) 271-4373

October 19, 1978

Arizona State Clearing House
1700 West Washington St., Room 505
Phoenix, Arizona 85007

Gentlemen:

Re: AZ No. 78-80-0052

B.3.1 The use of the Yuma Proving Grounds for battleground maneuvers would have a very large impact on protected native plants growing on the grounds. Other vegetation also would suffer if the magnitude of activity would occur. This fragile vegetative environment would take from 15 to 20 years to recover from the proposed activity. Areas of higher rainfall where regeneration of vegetation can occur should be recommended.

The Commission is not in favor of using the Yuma Proving Grounds for this activity.

Sincerely,

R. A. Countryman
Assistant Director

RAC:LS

Col. George B. Jordan, Dir.
Div. of Emergency Services
5636 East McDowell Road
Phoenix, Arizona 85008

State Application Identifier (SAI)
SEPT 29, 1978 State AZ No. 78-80-0052

Transportation
Mineral Resources
Az. Mining Ass'n
Arid Lands Studies
Emergency Services
Game & Fish
Ag. & Hort.
Environmental Studies
Archaeological Research
Center for Public Affairs
Renewable Natural Resources
Az. Bu. of Geology & Mineral Tech.
OEPAD: S. Hancock
Civil Rights
Health
Water
Land
Parks
AORCC
Region IV

rom: Arizona State Clearinghouse
1700 West Washington Street, Room 505
Phoenix, Arizona 85007

his project is referred to you for review and comment. Please evaluate as to:

(1) the program's effect upon the plans and programs of your agency
(2) the importance of its contribution to State and/or areawide goals and objectives
(3) its accord with any applicable law, order or regulation with which you are familiar
(4) additional considerations

ease return THIS FORM AND ONE XEROX COPY to the clearinghouse no later than 17 working days from the date noted above.
ease contact the clearinghouse if you need further information or additional time for review.

☐ No comment on this project
☐ Proposal is supported as written
☒ Comments as indicated below

Comments: (Use additional sheets if necessary)

B.4.1 Fort Irwin, as a National Training Center, would not effect the plans of this agency.

With regard to the possible selection of the Yuma Proving Grounds as the Training Center site, the Federal Defense Civil Preparedness Agency has identified the City of Yuma and its environs as an area for which the risk of nuclear attack is considered high. It is one of some 400 areas in the United States identified as such. The Yuma Proving Grounds are not in the designated risk area but do sit on its edge.

State planners from this Division are in the process of completing a contingency operations plan for relocating the population, 66,000 residents, of the Yuma risk area to lower risk portions of Yuma County under a Nuclear Civil Protection contract with the Defense Civil Preparedness Agency. There is no immediate impact on this plan at present. Any immediate large increases of population in the future in the City of Yuma would require the gathering of additional data to ascertain the impact on areas of Yuma County receiving residents from the risk area. Plans would have to be reviewed and revised to a greater degree than normal.

Reviewer's Signature P E Fitzgerald
Plans and Assistance Supervisor

Date October 10, 1978
Telephone 273-9880

Governor
BRUCE E. BABBITT

Commissioners
FRANK FERGUSON, JR., Yuma, Chairman
ALLYN G. EVANS, Flagstaff
C. GENE TOLLE, Phoenix
WILLIAM H. BEERS, Prescott
CHARLES F. ROBERTS, O.D., Bisbee

Director
ROBERT A. JANTZEN

Asst. Director, Operations
PHIL M. COSPER

Asst. Director, Services
ROGER J. GRUENEWALD

ARIZONA GAME & FISH DEPARTMENT

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

October 16, 1978

Mrs. Jo Youngblood
Arizona State Clearinghouse
1700 West Washington - Room 505
Phoenix, Arizona 85007

Re: AZ 78-80-0052 -- National Training Center, Fort Erwin Site - DES

Dear Mrs. Youngblood:

Our Department has reviewed the above-referenced document, and since the preferred site for the National Training Center is in California, comments provided are restricted to the Yuma Proving Ground alternative site in Arizona.

The portion of the Statement that pertains to the environmental impacts on wildlife at Y.P.G., with implementation of the National Training Center, barely scratches the surface. Mention was lightly made of the diversity of habitats that exist there and the varied wildlife that are dependent upon them. Impacts would severely deplete or alter the vegetative resource of the bajadas, flats and foothills. These losses would significantly affect ungulates (mule deer and bighorn sheep) as well as the smaller mammals, birds and reptiles. A major
B.5.1 impact that was not addressed involves the disruption of movements for mule deer and bighorn sheep. These movements are dynamic and are not significantly restricted by present Y.P.G. activities.

The desert bighorn sheep is listed by our Department as a species whose status in Arizona may be in jeopardy in the foreseeable future. The implementation of the Y.P.G. alternative would definitely put additional stress on certain bighorn herds residing on the Proving Grounds, and could jeopardize their continued existence.

In summary, a more complete and all-inclusive discussion of the impacts on the wildlife resource is necessary to fully satisfy the requirements of N.E.P.A.; provided that this alternative is viable.

Sincerely,

Robert A. Jantzen, Director

By: Robert Weaver, Wildlife Specialist
Planning and Evaluation Branch

RW:dd

Mr. John Jett, Director
Mineral Resources Departmen
Fairgrounds, Mineral Building
1826 West McDowell Road
Phoenix, Arizona 85007

State Application Identifier (SAI)
SEPT 29, 1978 State AZ No. 78-80-0052

From: Arizona State Clearinghouse
1700 West Washington Street, Room 505
Phoenix, Arizona 85007

Transportation	Health
Mineral Resources	Water
Az. Mining Ass'n	Land
Arid Lands Studies	Parks
Emergency Services	AORCC
Game & Fish	
Ag. & Hort.	Region IV
Environmental Studies	
Archaeological Research	
Center for Public Affairs	
Renewable Natural Resources	
Az. Bu. of Geology & Mineral Tech.	
OEPAD: S. Hancock	
Civil Rights	

This project is referred to you for review and comment. Please evaluate as to:

(1) the program's effect upon the plans and programs of your agency
(2) the importance of its contribution to State and/or areawide goals and objectives
(3) its accord with any applicable law, order or regulation with which you are familiar
(4) additional considerations

RECEIVED
OCT 2 1978
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

Please return THIS FORM AND ONE XEROX COPY to the clearinghouse no later than 17 working days from the date noted above. Please contact the clearinghouse if you need further information or additional time for review.

☐ No comment on this project
☐ Proposal is supported as written
☒ Comments as indicated below

Comments: (Use additional sheets if necessary)

NOTHING IS MENTIONED ABOUT POTENTIAL MINERALS
B.6.1 IN THE AREA AND IMPACT IF NOT AVAILABLE
TO THE PUBLIC

Reviewer's Signature J. Jett Date 10-4-78

Title

Telephone

125

State of California

Memorandum

To : Huey D. Johnson
Secretary for Resources
Resources Agency
1416 Ninth Street
Sacramento, CA 95814

Attention: L. Frank Goodson

Date : November 7, 1978

Subject: National Training Center at Fort Irwin, San Bernardino County, SCH. No. 78100998

From : Air Resources Board

We have reviewed the draft environmental impact statement (DEIS) and appendices for the National Training Center Fort Irwin Site, Fort Irwin, California. In our review of these documents, we have found a number of inadequacies in addressing the air quality impacts and mitigation of those impacts. The following details our concerns.

It is stated on page 10 of the DEIS:

> "In addition, annual Joint Combined Readiness Exercises with the Navy, Air Force and Marine Corps could be expected at the base, with ground troops numbering as many as 25,000 personnel present for a period of one month."

The air quality analysis, in both the DEIS and appendices, only vaguely discusses the related air quality impacts and mitigation measures and concludes:

B.7.1

> "Despite the increase in vehicular travel and stationary sources, however, the continued use of Fort Irwin for military exercises is not expected to have serious effects on ambient levels of oxidant, carbon monoxide, oxides of nitrogen, or oxides of sulfur."

There is no technical evaluation to support this conclusion. Thus, an air quality analysis for this project needs to include the following:

1. Complete mobile and stationary emissions calculations including jet aircraft, diesel and gasoline fueled military vehicles, equipment maintenance shops, fuel storage facilities, pumping sites, new boilers and incinerators, and any other related emission sources.

2. Cumulative impacts directly or indirectly related to not only the Army facilities, but also those of the Navy, Air Force, and Marine Corps functions, which could be expected to include as many as 25,000 persons.

To assist in developing the air quality analysis, we have enclosed "Recommended Environmental Impact Report Air Quality Analysis Guidelines."

The DEIS also indicates that increased particulate concentrations will result from desert operations. It does not, however, indicate the area of potential impacts, except to indicate that there may be ". . potential nation and worldwide impacts" (page 97). A review of Table A-1 in the appendices shows data from the Navy's China Lake facility. If the data are representative, it is indicative of a nearly continuous south-westerly or south-southwesterly direction for prevailing winds in this portion of the desert. The average peak gust velocity is 67.6 mph, with the hourly average windspeed for the year of 7.7 mph. Thus, there is a high potential for particulate to be carried by prevailing winds and a potential for windstorms which could carry a substantial particulate load. The peak gusts are found occurring from many directions, although generally west, south, or southwesterly gusts occur. It appears, then, that suspended particulates will be carried into Death Valley National Monument throughout the year, affecting visibility adversely and exacerbating total suspended particulate (TSP) concentrations currently exceeding state and national standards. The exacerbation of TSP concentrations in Death Valley National Monument should also be considered an impact of the proposed use of the Fort Irwin site, unless the Army can provide information which indicates such an impact will not occur.

B.7.1

Death Valley is one of the areas in California which has been reviewed by the National Park Service under Section 164(d) of the Clean Air Act. The review was required by Congress for all national monuments and primitive areas to determine which of the areas were appropriate for reclassification to Class I under the Prevention of Significant Deterioration (PSD) sections of the Clean Air Act. The Park Service's recommendation, with the concurrence of the state, was that Death Valley is appropriate for reclassification and that air quality related values are significant and important attributes for the area.

There are wide spread concerns regarding off-road vehicle (ORV) use impacts on the desert and its airshed. The massive and continuous scale of the proposed action may result in air quality impacts which exceed all but the largest stationary source impacts, transcending the impacts

of current ORV use. These uses in other desert areas have raised the question of potential increases in Valley fever in populations exposed to particulate from certain components of the desert surface. The potential health impacts of the proposed action should be considered in this light.

B.7.1

If you have additional questions, please contact Richard DeCuir or Steve Oliva of my staff at (916)445-0960 or (916)322-2700, respectively.

William C. Lockett, Chief
Planning Division

Enclosure

cc: B. A. Hildebrand, Dept. of the Army

RECOMMENDED ENVIRONMENTAL IMPACT REPORT AIR QUALITY ANALYSIS

I. Environmental Setting

A. Air pollution potential (individually discuss meteorology, climate, and topography of the project area and their relationships which create conditions allowing the formation of air pollution).

B. Environmental effects of air pollutants on receptors.

C. Regulations effecting air quality (federal, state, regional, county, and city).

D. Existing air quality.

1. Local and regional conditions and trends.
2. Present and future sources of emissions and emissions inventory (tons/day).
   a. Stationary sources.
   b. Mobile sources.
3. Ambient air quality data (relate to standards).

II. Impact of each alternative including the proposed project.

A. Areawide impact (tons per day).

1. Stationary source calculations (CO, NOx, HC, TSP, SO_2).
2. Mobile source calculations (CO, NOx, HC, TSP).
3. Summarize data in tabular form and compare it to emissions inventory (see I.,d.,2.).

B. Localized impacts (calculate potentially large CO concentrations in areas of concern and assess their impact on sensitive receptors).

C. Mitigation measures.

1. All feasible measures.
   a. Measures to reduce stationary source emissions.
   b. Measures to reduce mobile source emissions.
   c. Measures to minimize local effects of air pollution.
2. Measures selected for incorporation into the project.
   a. Measures to reduce stationary source emissions.
   b. Measures to reduce mobile source emissions.
   c. Measures to minimize localized effects of air pollution.
   d. Assessment of effectiveness to reduce project emissions (tons/day).

State of California

THE RESOURCES AGENCY OF CALIFORNIA

Memorandum

To : L. Frank Goodson
Projects Coordinator
The Resources Agency

Date : November 9, 1978

Subject: Soil Resource Protection Program Comments on the DRAFT EIS/Nat'l Training Center

Telephone: ATSS ( ) 2-1232
( )

From : Department of Conservation — Special Services for Resource Protection

(SCH 78100998)
Our comments on this EIS are as follows:

B.8.1 Page 23-24 - The description of surficial geology and soils are insufficient to assess the soils, their characteristics, and their probable locations at Fort Irwin. Any assessments of environmental impacts are based on an inadequate statement of the environmental setting.

B.8.2 Page 56 - It is stated that, the creation of dust, for instance, has far-reaching significance. For an area this size, with an expected 75 percent increase (Page 2) in activity, it would seem proper to quantify the increase in fugitive dust particulates. This can be estimated as proposed in EPA Report 450/2-77-029, "Guidelines for Development of Control Strategies in Areas with Fugitive Dust Problems".

B.8.3 Page 58 - It is not stated that direct impacts to soil are related to moisture content and particle size distribution. Compaction can be minimized by reducing use during wet weather and avoiding well graded soils (those with a wide range of particle sizes).

B.8.4 Page 58 - It should be stated that chemical crusts as well as gravels and desert pavements are subject to disturbance and lead to wind and water erosion in desert areas.

B.8.5 Page 97 - It is difficult to assess if further impacts to desert pavement could be avoided due to the lack of soil information in the environmental setting section. Normally, desert pavements are restricted to older, more dissected alluvial fan surfaces and do not cover the majority of desert surfaces.

B.8.6 Page 97 - It is unclear if the proposed action will create a greater areal disturbance or if the figure of a 75 percent increase in use is solely related to intensity. This would have a bearing on the extent of greater air quality degradation, further disturbance to soils, and destruction of plant communities.

In summary then, it would seem this environmental statement is extremely deficient in soils information to properly assess impacts or propsoe effective mitigations or alternatives. A general soil map of the area along with the general soil characteristics of the mapped desert soil associations would help ameliorate this situation.

APPROVED:
Land Resource Protection Unit
DATE: 11/13/78

Ed Craddock
Land and Water Use Analyst
Soil Resource Protection Program

State of California

Department of Economic and Business Development

Memorandum

To : Leo Rachal
OPR

Date: November 9, 1978

Telephone: ATSS ( ) 2-1398
( )

From : Don Provost
OLED

Subject: Fort Irwin Military Base Reopening Project

The data on economic analysis did not consider financial assistance which could possibly be available to this city. Title IX, EDA Act of 1965 could be a source of financial assistance. This office believes that financial assistance could be used to off-set the potential increase of military personnel coming to an area where the cost of living is significantly greater than the available income to purchase goods and services.

B.9.1 In the past military bases have provided a positive influence on the economic development process for an area. So influential has been this process that when the base was closed or its activity scaled down, irreparable harm would be done. Many reasons could be attributed to this fact, but one significant aspect, stands out - entities have not had the opportunity to develop economic development programs in preparation for the impact that will take place with the operation of a large federal establishment.

This report should address the issue of providing financial assistance to this community through a comprehensive development planning process.

State of California — The Resources Agency

Memorandum

To : Huey D. Johnson
Secretary for Resources
1416 Ninth Street
Sacramento, CA 95814

Attn: L. Frank Goodson
Project Coordinator

Date: November 2, 1978

From : Department of Fish and Game

Subject: SCH 7810099[illegible] National Training Center - Fort Irwin

We have reviewed the draft EIS describing the proposed reactivation of Fort Irwin for development into a national training center. We find that the document adequately addresses the potential impact upon natural resources that may occur during the intensification of military activities. We could concur with the proposed project only if there is assurance there will be provisions for the protection of desert flora and fauna. To meet this objective, we recommend expanding the scope of the existing "Cooperative
B.10.1 Plan for the Conservation and Development of Wildlife on the Fort Irwin Military Reservation" to include guidelines and regulations that provide for the protection and management of this resource in a manner consistent with the military mission of the National Training Center.

We have particular concern for protected, endangered, rare and unique flora and fauna that exist within the military reservation. We have a special interest in the protection of the rare Mojave ground squirrel as there is recent documentation of this species inhabiting Fort Irwin.

We recommend that a revised Conservation Plan be completed prior to the reactivation of Fort Irwin so measures for the protection of flora and fauna can be implemented without delay when the National Training Center is officially opened.

We look forward to coordinating with personnel of the Department of the Army and the U. S. Fish and Wildlife Service in preparing a revised Conservation Plan. We are particularly hopeful that the Department of the Army assigns a permanent civilian wildlife biologist position to provide year-to-year continuity in the administration of the Conservation Plan and coordinating with cooperating agencies.

If you have any questions regarding these comments, please contact Mr. Robert Montgomery, Regional Manager, Region 5, 350 Golden Shore, Long Beach, California, 90802, telephone number (213) 590-5177.

Thank you for the opportunity to review and comment on this document.

E C Fullerton
Director

State of California — Business and Transportation Agency

Memorandum

To : Mr. L. Frank Goodson
Project Coordinator
Resource Agency
Resource Bldg. 13th floor

Date: November 7, 1978

for I. Donald Terner, Director
From : Department of Housing and Community Development

Subject: D.E.I.S. - National Training Center Fort Irwin, SCH #78100998

The Department of Housing and Community Development has reviewed the above referenced document in accordance with the provisions of OMB Circular A-95.

The primary thrust of our review of this environmental document is to determine the sufficiency of the environmental assessment of the impacts the proposed project would have upon the ability of the City of Barstow (primary general residential area near Fort Irwin) to provide housing opportunities for all economic segments of the community (as required under State Law 65302 (c) of the Government Code), and to assess the
B.11.1 consistency with the State Housing Plan, specifically Policy 10 which states: "It shall be the policy of the state that lower-income households should not have to pay more than a reasonable percentage of their income for housing."

In order for the Fort Irwin Training Center to be compatible with the State Housing Plan the EIS must show that all additional households generated by direct base employment and secondary service employment will have access to standard housing at an affordable price. In the event that such housing is not available or cannot or will not be made available by the private sector the EIS must indicate how this negative impact can be mitigated.

The EIS provides the following information:

Population		
off-post	3,400	
on-post	3,250	
Employment		
on-post personnel		1,660
off-post military personnel		778
off-post civilian personnel (primary)		254
off-post civilian personnel (secondary-estimate)		715

Total Income	Income ($1000s)	Per Capita
Fort Irwin on-post	$18,427.0	$11,100
Fort Irwin off-post	11,824.5	11,460
other	7,450.0	

Off-Post Estimate of Housing Demand by Income Group

	$6,000 - $8,000	$8,000 - $12,000	$12,000 - $18,000
Officers			20
Enlisted	100	400	48
Civilian	10	50	96
Other	10	80	50
Total	120	530	214

	$18,000 +	Total
Officers	33	53
Enlisted		548
Civilian	45	201
Other	22	162
Total	100	964

B.11.1 Off-Post Estimate of Housing Demand By Housing Type

Mobilehome	120
Apartment Units	400
Single Family (moderate income)	344
Single Family (moderate to high income)	100
Total	964

The EIS indicates that 715 secondary jobs will be created as the result of the 2772 primary jobs created at Fort Irwin. This number seems to be quite low and is not fully documented in the EIS. General research corporation of Santa Barbara supplied the following general formula for estimating increases in secondary employment.

$$\text{Secondary Employment (S.E.)} = \frac{\text{Average Income of Primary Employment (P.I.)}}{\text{Average Income in Community (C.I.)}} \times \text{Increase in Primary Employment (P.E.)}$$

If this formula is applied and adjusted for on-post residences (refer to EIS pg. 74, Retail Factor) the number of secondary jobs can be estimated at 1943.

$$\text{S.E.} = \frac{\text{Off-post P.I. ($11,460)}}{\text{C.I. ($9,880)-E.I.S. appendix)}} \times \text{on-post P.E. ($1,032)} + .4 \times \frac{\text{On-post P.I. ($11,100)}}{\text{C.I. (9,880)}} \times \text{Off-post P.E. ($1,660)}$$

S.E. = 1,943

If one third of the off-post households had a secondary wage-earner employed in one of the secondary positions, and one third of the additional secondary employment households had two wage earners, the total increase in secondary employment households can be estimated at 1,172.

Using statewide averages 469 households will be lower income and 223 will be moderate income. By adding these figures to those for off-post primary employees the increase in low and moderate income housing need can be estimated at 897 lower income and 444 moderate income.

The construction of new housing in Barstow has increased markedly in the last year. During 1977 only 21 single family homes were constructed. In the first nine months of 1978, 55 new single family and one duplex were constructed. These recent starts give a reasonable estimate of new home costs. Construction costs vary between $30 and $33 per square foot and smaller single family lots sell for between 6 and 10 thousand dollars. New tract homes in the 1,200 sq. foot range are selling at $53,000. Using an affordability factor of 2.5 times annual income for the maximum sales price, a household must earn $21,200 or have substantial savings to afford a new unit in Barstow. This excludes all low and moderate income households except those with substantial savings.

B.11.1 Existing single family homes (1,200 sq. ft. estimate) sell for between $36,000 and $55,000 with most at around $42,000. Although few homes are available those that are should be affordable to households in the upper moderate range.

The fair market rents established by the Department of Housing and Urban Development for the Section 8 assisted housing program (existing) are as follows:

Bedrooms:	0	1	2	3	4
	$170	$200	$235	$300	$350

Not only are these figures substantially below the military housing allowance for enlisted personnel, but represent affordable housing only to the lower moderate (2 bedroom units) and upper moderate (3 bedroom units).

New multiple family housing has not been constructed in Barstow in recent years. New units could be constructed at about 10 times annual gross. Since this does not represent a positive cash flow it is unlikely that units will be constructed without substantial subsidy or increase in existing rent levels.

It is reasonable to assume that as the result of primary and secondary employment generated by the proposed National Training Center the lower income housing need in Barstow will be increased by approximately 900 lower income and 150 moderate income households. These figures represent non-market households or families without affordable housing. The San Bernardino Housing Authority indicated that the City now has 200 conventional public housing units, and is authorized for 49 more and has 22 section 8 assisted units. This is enough to meet only a fraction of the existing need. An additional need in excess of 1,000 households can not be met through existing subsidy programs.

The Fort Irwin Training Center represents a significant housing impact on the City of Barstow. This impact is not adequately addressed in the EIS and appropriate mitigating measures have not been suggested. In view of these factors, the Department has determined that the proposed Training Center represents a conflict with Section 65302 (c) of the Government Code and is not compatible with policy 10 of the State Housing Plan.

The Department suggests that the U.S. Army and City of Barstow consider the following measures that could significantly reduce the negative housing impact of the Fort Irwin Training Center.

1. The City of Barstow should consider implementing an inclusionary housing program designed to provide below-market owner housing in all subdivisions.
2. The City using military seed money should consider assisting in the construction of cooperative multiple-family housing.

B.11.1

3. The Army should consider providing housing allowances at the FMR levels established by HUD.
4. The Army should consider providing on-post housing on a first priority basis to lower ranking enlisted personnel.
5. The Army should consider the construction of a greater number of on-post housing units or the construction of mobilehome parks.
6. The Army should consider constructing off-post housing and mobilehome parks in the City of Barstow to be used by lower ranking enlisted personnel.

If you have any questions or comments regarding this review, please contact John Atha at 916/445-4725

cc: Leo Rachal, OPR

State of California — Business and Transportation Agency

Memorandum

To : Mr. Leo Rashal
Office of Planning and Research

Date : November 6, 1978

File No.: SCH 78100998

Subject: Reactivation of Ft. Irwin National Training Center Site

From : DEPARTMENT OF TRANSPORTATION
Division of Transportation Planning

PHILIP G. SIMPSON, AIP, Chief
Systems Planning Branch

We have reviewed the Draft Environmental Impact Statement for the above project and offer the following comments:

The DEIS recognizes that a considerable number of Fort Irwin's personnel will locate in the Barstow area and that the majority of supplies and personnel will have to be transported to the installation via Irwin Road, the only paved road to the site. It acknowledges that a major impact would occur on Irwin Road between Barstow and the site. It does not address the impacts of the increased traffic, much of which we assume could be heavy supply vehicles and convoys, on either the local circulation system or the State highways providing access to the Barstow area.

B.12.1 Interstate 15 and State Highway 58 are the major transportation facilities providing access to the Barstow area. Improvements which could significantly increase the capacity of the facilities in the Ft. Irwin area are not anticipated in the foreseeable future.

We recommend that consideration be given to the impacts of increased congestion and maintenance costs. Any highway improvements necessary to mitigate these impacts, such as widening of Irwin Road and Route 58 or the modification of major intersections, should be included as part of the establishment of this training center.

The DEIS addresses ridesharing as a mitigation measure. The military should consider subsidization or provision of bus and vanpools, preferred parking for ridesharers, and, if necessary, parking management, in order to ensure ridesharing success. Additionally, if housing is to be provided off base, we would encourage that it be integrated with existing and anticipated transportation facilities and conform to local community plans.

B.12.2

We also advise you to contact the California Highway Patrol regarding their concerns over traffic management and safety on the State highways involved.

AL:meb

cc: Steve Williamson, OPR
Ken Fellows, DWR

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814
(916) 322-2318

EDMUND G. BROWN JR.
GOVERNOR

November 17, 1978

Colonel Donald H. O'Shei
District Engineer
U.S. Army Corps of Engineers
Sacramento District
650 Capitol Mall
Sacramento, CA 95814

Dear Colonel O'Shei:

RE: PROPOSED NATIONAL TRAINING CENTER AT FORT IRWIN

As a co-lead agency with the Resources Agency in state review of the Fort Irwin EIS, the Office of Planning and Research would like to communicate our desire to meet with you and members of your Fort Irwin project staff.

B.13.1 Our primary interest in this project is in ensuring that the growth resulting from expansion of Fort Irwin will occur in an orderly manner. To accomplish this, we believe it is important for us to work together to coordinate the necessary direct technical assistance functions of federal, state, and local government.

In the interest of establishing a mutual understanding of the Fort Irwin project we invite you to join with us in a coordination meeting in the near future. Leo Rachal of my staff will be contacting you to make arrangements for such a meeting.

We look forward to discussing the Fort Irwin project with you.

Sincerely,

Deni Greene

Deni Greene
Acting Director

cc: Richard Damm, OPR
Richard Silberman, Governor's Office
Frank Goodson, Resources Agency
Colonel Arthur Frey, State NG
Suzanne Reed, Energy Commission
Steve Williamson, State Clearinghouse

State of California — The Resources Agency

Memorandum

To : Mr. L. Frank Goodson
Projects Coordinator
Resources Agency
Resources Building, 13th Floor

Date : October 24, 1978

Subject: DEIS - NATIONAL TRAINING CENTER - FORT IRWIN SITE; SCH #78100998

From : California Regional Water Quality Control Board
Lahontan Region
P.O. Box 14287
1014 Blue Lake Avenue
South Lake Tahoe, California 95702

We have reviewed the above-referenced document and find that the discussions concerning sewage disposal at Fort Irwin are incomplete. Sewage treatment and disposal is discussed on pages 22 and 66 of this document. Neither of these discussions mentions the waste discharge requirements adopted for the facility and that Fort Irwin is currently under a time schedule to upgrade the wastewater treatment facilities. Specifically, Board Order No. 6-78-44 requires that construction of upgraded facilities must be completed by January 1, 1980. Regional Board staff is currently working with representatives of
B.14.1 the U.S. Army towards achieving compliance with this Board Order.

On page 66 it is stated that on occassion Fort Irwin will be used by more than 10,000 persons. The design capacity of the Fort Irwin facility is one million gallons per day and an excess of 10,000 persons potentially could result in a hydraulic overload for the plant. If portable sanitary facilities are used, such an overload is unlikely; however, plant upset is possible with the disposal of large numbers of portable facilities to the wastewater treatment plant. Operations must be closely controlled to prevent such an occurrence.

Very truly yours,

ROY C. HAMPSON
EXECUTIVE OFFICER

cc: United States Army Corps of Engineers
Kathy Haitz/SWRCB

State of California

Memorandum

THE RESOURCES AGENCY

To : 1. Mr. L. Frank Goodson
Projects Coordinator

2. Mr. Steve Williamson
Governor's Office of Planning
and Research

Date : OCT 27 1978

From : STATE SOLID WASTE MANAGEMENT BOARD

Subject: SCH #780100998 - Draft EIS for the National Training Center Fort Irwin Site

We have reviewed the subject report and find that it does not comply with the California Environmental Quality Act in the manner it addresses the handling and disposal of solid waste.

B.15.1 The report identifies as an objective in Section 3.9.3 that wastes be disposed of in an environmentally safe manner. This is an excellent first step; however the report should go on to identify specific measures which will be taken to achieve the objective. The subsequent impacts from those measures should also be discussed. For example if a new or expanded landfill is proposed it should be identified along with any impacts it may have on ground water, public health, safety or the environment.

Thank you for the opportunity to review this report. If you have any questions regarding our comments, please contact Mr. Kim Wilhelm of my staff at (916) 322-7364.

Albert A. Marino
Executive Officer

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
95814

(916) 445-5656

Department of Conservation
Department of Fish and Game
Department of Forestry
Department of Navigation and Ocean Development
Department of Parks and Recreation
Department of Water Resources

EDMUND G. BROWN JR.
GOVERNOR OF
CALIFORNIA

Air Resources Board
California Coastal Commission
California Conservation Corps
Colorado River Board
Energy Resources Conservation and Development Commission
Regional Water Quality Control Boards
San Francisco Bay Conservation and Development Commission
Solid Waste Management Board
State Coastal Conservancy
State Lands Commission
State Reclamation Board
State Water Resources Control Board

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

November 13, 1978

Colonel Donald M. O'Shei
District Engineer
U.S. Army Corps of Engineers
Sacramento District (SKED-M)
650 Capitol Mall
Sacramento, CA 95814

Dear Colonel O'Shei:

RE: STATE COMMENTS REGARDING DEIS FOR PROPOSED NATIONAL TRAINING CENTER AT FORT IRWIN -- (SCH #78100998)

The State of California has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed reactivation of Ft. Irwin as a National Training Center. This review was a coordinated effort on the part of the Resources Agency and the State Clearinghouse of the Governor's Office of Planning and Research (OPR) to ensure that the information presented in the DEIS is accurate and of sufficient detail in addressing project impacts. Our primary interest with the project involves the adequacy of the environmental document and the overall statewide impact which will result from this military installation expansion.

During our review period we received comments from the Air Resources Board, the Deparment of Transportation, the Department of Housing and Community Development, the Department of Local Economic Development, the Department of Fish and Game, the Regional Water Quality Control Board, the Solid Waste Management Board, and the Department of Conservation. These specific agency comments are attached for your review and consideration. They should be addressed in the Final EIS through revisions of the DEIS, as additions of new information, or further mitigation measures as appropriate. The State also has a few additional concerns regarding the content and applicability of the Ft. Irwin project which need clarification:

B.16.1 1. Various references to environmental and site-specific information in the DEIS are discussed as being dependent upon the new Master Plan for Ft. Irwin. It is our understanding that the DEIS (prepared by EDAW, Inc.) and the new Master Plan (being prepared by Leo Daly and Associates) are under different federal contracts. Even so, it is difficult to understand why both contract products are being prepared independently of one another in view of the apparent relationships.

B.16.1 Our analysis indicates that these contractors have not coordinated their work on the preparation of these project task documents. In view of this, we reserve the right to comment in full on the new Ft. Irwin Master Plan when it is completed.

B.16.2 2. The State would like to draw your attention to Presidential Executive Order 12088 (Federal Compliance with Pollution Control Standards) as controlled by the Environmental Protection Agency. Although the DEIS was prepared before this Executive Order was published (October 13, 1978), the Final EIS should include discussions of project applicability to the required abatement of environmental pollution problems associated with this federal project.

B.16.3 3. Although the California National Guard is currently licensed to use Ft. Irwin for periodic training purposes, we are concerned that the State National Guard Commander is unaware at this time of the future status and priority of unit operations. It seems appropriate that a full disclosure of information regarding National Guard personnel, facilities, and logistical support should be entered into the Ft. Irwin environmental document to assure that proper state training can and will be planned for before the Ft. Irwin project is approved or certified.

During this interim response period to the DEIS the State would appreciate a meeting with the Army Corps of Engineers project staff for Ft. Irwin before the Final EIS is prepared. We believe that such coordination at this time is vital to our mutual project understanding and cooperation. Please contact Leo Rachal of the Community Assistance Division of OPR at (916) 322-6312 or Steve Williamson of the State Clearinghouse at (916) 445-0613 regarding the proposed coordination meeting of this comment letter.

Thank you for the opportunity to review the Ft. Irwin DEIS. We look forward to hearing from you in the near future.

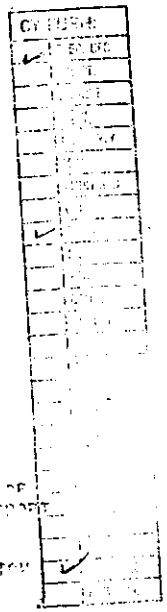
Sincerely,

L. Frank Goodson
Assistant Secretary for Resources

FG:LPR:ky

cc: Richard Damm, OPR
Leo Rachal, OPR
Steve Williamson, State Clearinghouse
Ken Williams, Resources Agency
William Lockett, ARB
Philip Simpson, Caltrans
Donald Terner, HCD
Robert Switzer, LED
E.C. Fullerton, DFG
Roy Hapson, SRWQCD
Albert Marino, SWMB
Robert Goodwin, Conservation
Col. Archer Frey, State NG
Mark Pisano, SCAG
Paul De Falco, EPA

Bill Dacony



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[illegible] 11/13/7[illegible]
[illegible]
[illegible] BARSTOW CA [illegible]
[illegible] UNITED STATES ARMY ENGINEER DISTRICT SACRAMENTO, [illegible]
[illegible]
[illegible] CAPITOL MALL
SACRAMENTO CA 95814

C.1.1 THE BOARD OF DIRECTORS OF BARSTOW HEIGHTS COMMUNITY SERVICES DISTRICT HAS READ THE IMPACT REPORT AND BELIEVE THE PROPERTIES OF FORT IRWIN WOULD BE BENEFICIAL TO THE AREA AND WE HEARTILY SUPPORT SAME.

BOARD OF DIRECTORS
BARSTOW HEIGHTS COMMUNITY SERVICES DISTRICT PO BOX [illegible] BARSTOW CA [illegible]

[illegible]

USA CE SACTO

COMMISSIONERS
H. James Gilliam
Jamie Lee Parker
Manny Hinojos
Jay D. Holmes
Loren Sanchez
Lucien D. Gendron
Lucille Schuler
John Creature
Larry Moniak
Mary Borba Parente
Art Townsend
William G. Smith
Frances Grice
Richard Solorzano
E. P. "Shorty" Guerra

COUNTY OF SAN BERNARDINO

FRANK COONY ..... Director
ART ROMANDY ..... Industrial Development Coordinator

County Civic Building - West
175 West Fifth Street
San Bernardino, CA 92415
(714) 383-2913

ECONOMIC DEVELOPMENT DEPARTMENT

October 26, 1978

US Army Engineer District Sacramento
650 Capitol Mall
Sacramento, CA 95814

Dear Sir:

Reference is made to the draft Environmental Impact Statement (DEIS) signed by Major General John C. Faith and transmitted by Bruce H. Hildebrand's letter dated September 21, 1978, on the proposed establishment of a National Training Center on the Ft. Irwin facilities.

The (DEIS) has been reviewed by members of our Board of Supervisors, this department and other local agencies. The concensus of opinion is favorable for establishing the National Training Center.

C.2.1 We are pleased that the vast land area of Fort Irwin affords realistic full weaponry warfare training. The necessity for this training in behalf of our nation's defense far outweighs the negative environmental aspects cited in the draft impact statement.

Establishment of a National Training Center will also create jobs in an area experiencing 7.5% unemployment.

Please advise if we may be of further assistance.

Sincerely,

ECONOMIC DEVELOPMENT DEPARTMENT

Frank Coony

Frank Coony, Director

AFC:CWM:swk

ENVIRONMENTAL IMPROVEMENT AGENCY
County of San Bernardino
Kenneth C. Topping
Planning Director
PLANNING DEPARTMENT
1111 East Mill Street, Bldg. 1 · San Bernardino, CA 92415 · (714) 383-1417

November 9, 1978

District Engineer
U. S. Army Corps of Engineers
Sacramento District
650 Capitol Mall
Sacramento, CA 95814

RE: DRAFT EIS - NATIONAL TRAINING CENTER FORT IRWIN SITE
(DEPARTMENT OF THE ARMY)

PROJECT SUMMARY

Location: Northeast of Barstow - San Bernardino County, California.

Purpose: Provide simulated combat situations for Army training.

Description: Reopen, rehabilitate existing, and construct new post facilities. Control would shift from the California National Guard to the U. S. Army. Training units of 3,500 each would rotate through the post annually for two-week sessions, almost totally confined to the base proper. A permanent combat force, trained in the military tactics of potential enemies, would be stationed at Fort Irwin. Field training exercises on the post will increase by 75% over 1976 levels.

Population and Economic Data:

New populations living in Barstow	3,246
New populations living on base	3,378
Total population increase	18% of 1975 population
Total increase in school pupils	1,332 (16% increase)
Off post (Barstow) housing demand increase	964 units (6.8% increase)
On and off base employment increase	33.8%
Local sales increase by 1984	8.5% over 1976

Letter to District Engineer, U. S. Army Corps of Engineers, Sacramento District
RE: DRAFT EIS - NATIONAL TRAINING CENTER FORT IRWIN SITE
(DEPARTMENT OF THE ARMY)
November 9, 1978

COMMENTS ON EIS AND PROJECT

Expansion of Fort Irwin for a National Training Center will significantly affect a variety of resources and planning options within the County's jurisdiction; therefore, we request a meeting with Army representatives in order to discuss and possibly mitigate elements of the following impacts:

Water

C.3.1 At the present consumption rate and supply conditions, Barstow may be out of water in ten (10) years. The off-post population of 1,064 families generated by the expansion would increase Barstow area's present rate of groundwater overdraft by 13.5%. This increased demand is based upon an estimated per capita consumption rate of fifty (50) gallons per day. The common engineering design figure is 150 gallons per capita per day, while the City of Barstow estimates consumption at 300 gallons per capita per day. Even the Army's low consumption rate factor would require strict conservation constraints, which could mean drastic landscape changes in the Barstow area. Estimating consumption at the more common and realistic factor of 150 gallons per capita per day would mean a greatly increased overdraft and a highly accelerated withdrawal of usable groundwater which should be assessed accordingly. The mitigation measure proposed by the City of Barstow to extract water from the Mojave River at Helendale may only be effective over the short term. Water supplies for upstream unincorporated communities could be reduced. We wish to discuss water system financing, implications to upstream residents outside of Barstow's jurisdiction, the eventual need for and financing of imported water from the state aqueduct, effects on Mojave Water Agency's planning options, and water-use conservation measures.

County Costs

C.3.2 The EIS assumed that the increased costs to the six County Special Districts operating in the area would be offset by the increase in assessed valuation from construction of homes and other facilities within the taxing area. However, this assumption was made prior to the enactment of tax initiative Proposition 13. A reassessment in the EIS will be necessary. We will discuss costs at the meeting.

We request a clarification of the statement on Page 50:

> "The County of San Bernardino is so extensive and diverse that its finances are not directly relevant to the study without considerable manipulations."

C.3.3 especially as it relates to or conflicts with the statement on Page 76:

> "The 3,246 persons may be fairly well distributed throughout the market area in cities and unincorporated areas, with the resultant impacts depending on the actual distribution of the population with respect to a jurisdiction's fiscal and operational capacity."

Transportation

The 25.9 mile Barstow-Fort Irwin access road (County Road #440800) could require extraordinary expenditures since it will be used by 1,000 off-post employees per day and heavy equipment. There are no rail
C.3.4 facilities at Fort Irwin. It may be necessary for the County Transportation Department to negotiate financing for any needed improvements and expanded maintenance. Which, if any, of the Barstow area rail sidings will be used to transfer equipment to trucks? Does the existence of only the single access road to the base present any logistical or safety problems that the County should be aware of?

According to Page 81 of the EIS, the possible alteration of the Barstow-Daggett Airport's designation and the surrounding land-use constraints
C.3.5 could require actions by the County Airport Land-Use Commission and the Department of Airports. Representatives of the County Public Works Agency may attend the meeting.

Air Quality

The section of the EIS on gaseous emissions from mobile sources associated with expanded use of the base should be quantified. Downwind concentrations of photochemical oxidants could be measurable during periods of poor air dispersion. Formulas for defining such effects
C.3.6 can be obtained from the Eastern Zone of the South Coast Air Quality Management District (714) 824-2660. The Fort Irwin area is in the San Bernardino County Desert Air Pollution Control District (under jurisdiction of the San Bernardino County Board of Supervisors). It is <u>not</u> in the South Coast Air Quality Management District as stated on Page 18. The Board of Supervisors contracts with the South Coast Air Quality Management District for certain services, but administrative authority remains with the County.

Letter to District Engineer, U. S. Army Corps of Engineers, Sacramento District
RE: DRAFT EIS - NATIONAL TRAINING CENTER FORT IRWIN SITE
(DEPARTMENT OF THE ARMY)

Extensive soil damage will induce long-term sources of fugitive dust emissions, affecting air quality, primarily particulate levels already exceeding state and federal ambient standards in the project area. Since the area is non-attainment for oxidant, particulates and possibly
C.3.6 nitrogen oxides, certain mitigation measures should be discussed at the meeting. Contrary to the statement in the EIS, it is too early to assume that the Air Quality Management Plan in the South Coast Air Basin will benefit air quality in the Barstow region.

Carpooling and busing to and from the base could be very effective, especially with Army assistance.

Soils and Vegetation

Even moderate disturbance of soils near bedrock (60% of the base's total soils) could cause sufficient wind and water erosion to significantly reduce the region's vegetative productivity. Even light use of the relatively deep alluvial soils (40% of the total) will
C.3.7 result in significant vegetation losses and in alteration of plant types. Introduction of exotic vegetation in this remote area may require weed abatement by the County Department of Agriculture. The Department has contracts with other Federal agencies to kill noxious weeds on Federal and public lands in the County.

Rehabilitation of 1,000 square miles of desert environment will be impossible in the human time frame if subjected to the magnitude and intensity of the impacts suggested in the EIS.

Socio-Economic Factors

Population and housing assessments on Pages 13 and 75 do not reflect the infrastructural competition from construction and operation of the <u>approved</u> Solar Power Pilot Plant and the <u>pending</u> Coal Gas Research and Development Power Plant, both at Daggett only 8 miles east of Barstow. Construction of a combined cycle power plant at Johnson
C.3.8 Valley (southeast of Fort Irwin) would also add to the potential burden on local communities over the short term. The timing of construction of the various projects could be extremely important. Construction of the proposed "Lucerne Valley plant" (Johnson Valley) will <u>only</u> be underway if the Johnson Valley site is selected by the California Energy Commission as the best of four sites presently under review; therefore, the statement on Page 44 suggesting the plant <u>will</u> be built is misleading. A decision will be made by mid 1979.

C.3.8 On the other hand, it should also be noted that the Fort Irwin project will help to absorb the void in local economies created by the ending of various power plant construction and by the possible termination of the Solar Plant's operation in the late 1980's.

Waste Disposal

C.3.9 Where, on or off the site, is currently produced sludge disposed of? Can all of the anticipated domestic effluent created on base be handled by base facilities? Will other types of liquid and solid wastes be disposed of on or off the base (Pg. 69)? Will the requirements of the Lahontan Regional Water Quality Control Board be met, or will the base primarily be subject to federal waste disposal rules? If the expanded use will require dumping of wastes in County sites off the base, representatives of the County Refuse Division should attend the meeting.

Adjacent Land Uses

C.3.10 Will the intensified electronic frequency interference significantly affect the operation of the nearby Goldstone Tracking Station?

The following statements are misleading and should be discussed:

Page 79:

C.3.11 "There appear to be no major conflicts between the use of Fort Irwin lands for a National Training Center and any Federal, State, or local land-use plans."

Page 80:

C.3.12 "The planning efforts of San Bernardino County do not include the review of any matters concerning the lands of military reservations. Those lands surrounding Fort Irwin have been categorized as lands serving as a buffer between the Fort and other land uses."

C.3.13 Does the California State Lands Commission believe that this EIS adequately assesses the project's environmental effects on the 21,201 acres of school lands on the base?

Letter to District Engineer, U. S. Army Corps of Engineers, Sacramento District
RE: DRAFT EIS - NATIONAL TRAINING CENTER FORT IRWIN SITE (DEPARTMENT OF THE ARMY)
November 9, 1978

Archaeological Resources

C.3.14 We concur with the need for an archaeological survey prior to expansion of base use and suggest that our office and the San Bernardino County Museum Association (714-825-4825) be consulted for site records and mitigation suggestions.

Project Alternatives

C.3.15 We would like to know the net effect on the Army's Fort Irwin operation resulting from the selection of alternative options reducing the number of people required to live off base and reducing the amount of land disturbance.

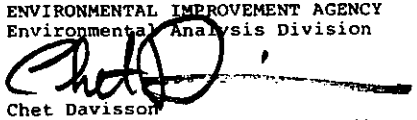
In response to the objective on Page 9:

> "To develop and maintain adequately equipped ranges of sufficient size to realistically approximate present-day combat situations on a full-scale level."

C.3.16 Has the Army determined the amount of land that would be required to accomodate the next possible degree of advanced weaponry? Future technology could require testing space beyond the capabilities of both the Army and the California desert to provide. Possibly the Army should focus on weapon testing methods that do not require such massive natural resource consumption.

Please reply as soon as possible with suggestions for meeting dates and places. Thank you.

ENVIRONMENTAL IMPROVEMENT AGENCY
Environmental Analysis Division



Chet Davisson
Environmental Review Board Officer

CD:CHB:mlm

cc: See attached distribution list.

Letter to District Engineer, U. S. Army Corps of Engineers, Sacramento District
RE: DRAFT EIS - NATIONAL TRAINING CENTER FORT IRWIN SITE (DEPARTMENT OF THE ARMY)
November 9, 1978

cc: Southern California Association of Governments (SCAG)
600 South Commonwealth, Suite 1000
Los Angeles, CA 90005

South Coast Air Quality Management District
ATTN: JEB STUART
9420 Telstar Avenue
El Monte, CA 91731

W. P. Honeycutt, Brigadier General, GS
Assistant Deputy Chief of Staff
Department of the Army
Headquarters, U. S. Army Forces Command
Fort McPherson, Georgia 30330

State Lands Division
1807 13th Street
Sacramento, CA 95814
ATTN: DAVE BLACK

China Lake Naval Weapons Center
ATTN: TOM DODSON CODE 26305
China Lake, CA 93555

Mojave Water Agency
16849 "D" Street
Victorville, CA 92392

San Bernardino County:

Supervisor James Mayfield

Bob Ingram, Operations
Transportation Department

Dewey Richardson
Department of Airports

Walt Ladwig, Deputy Director
Planning Department

James DeAguilera
Airport Land Use Commission

Bau Escobar, Director
Refuse Disposal Division

Barstow Chamber of Commerce

270 EAST VIRGINIA WAY / P. O. BOX 698 / BARSTOW, CALIFORNIA 92311 / PHONE (714) 256-8617

RESOLUTION 4-78

A RESOLUTION OF THE BARSTOW CHAMBER OF COMMERCE EXPRESSING SUPPORT FOR THE U. S. ARMY'S PROPOSED NATIONAL TRAINING CENTER AT FORT IRWIN.

WHEREAS, the Board of Directors of the Barstow Chamber of Commerce has reviewed the Draft Environmental Impact Statement regarding the siting of the United States Army National Training Center at Fort Irwin; and

D.1.1 WHEREAS, the historical use of Fort Irwin has had a significant, but favorable impact on the Barstow area in terms of population and economic benefit; and

WHEREAS, the major impacts to the Barstow area from the development of a National Training Center at Fort Irwin would be in terms of increased employment, population, construction of new homes and the resulting economic benefit therefrom;

NOW THEREFORE, it is resolved that the Barstow Chamber of Commerce wholeheartedly supports the establishment of this facility at Fort Irwin and requests that this resolution be made a part of the public hearing to be held on October 26, 1978 in the City of Barstow.

APPROVED THIS 19TH DAY OF OCTOBER 1978.

[signature]
President

ATTEST:

[signature]
Secretary

11-2-1978
P.O. Box 137
Ref: Army's Proposed National Training Center

Dist. Engineer
U.S. Army Corps of Engineers
Sacramento, Calif.

Dear Sir:

Please let the record and report show Newspaper Item from The Desert Trail dated 11-2-78 is not true reporting and is slanted.

There is no place for this kind of newspaper item.

Please let the Record show the Honorable Judge Howard M. Van Elgort, Alex B. Corder and Naomi Corder spoke who all live in the Joshua Tree Area.

In reply to Susan Luckie Moore's statement "were the water comes from".

D.2.1 My reply is "when the Surprise Springs wells and the Twentynine Palms wells go dry the only replacement water will have to come from the Mojave Water Agency turn out at Victorville."

In order for Twentynine Palms to get this (M.W.A.) water they will have to pay up the back taxes to join the (M.W.A.)

The Morongo Basin Yucca Valley, Joshua Tree, Twentynine Palms is not and island in the Desert. The B.L.M. Land Study Plan for the Desert, Military Base, local people who do not want to work together, SANBAG, SCAG, County Govt. is slowing pulling us into the sand. There is no fire in the sky.

Sincerely
Alex B. Corder
Morongo Basin Trans. Committee

cc: H. D. Glasgow Brig. General
The Desert Trail
Joshua Tree Planning Committee

Morongo Basin Transportation Committee
P.O. Box 137
Joshua Tree, CA 92252

Arzy Hearing Twentynine Palms, CA
Oct. 25, 1978

My name is Alex Corder, Chairman of the Morongo Basin Transportation Committee.

We have had no time to study this proposal.

It would take from 60 to 90 days to properly make any statement.

We request a full report be sent to our committee.

Our committee has a study plan under way for rural roads.

Alex B. Corder
Chairman

Army Hearing
Twentynine Palms Ca., October 25, 1978

My name is ALEX CORDER, P.O. Box 106 Joshua Tree Ca, 92252. I live in Section 22, Township 2N, Range 7E located 10 acres from the Marine Base line.
The trauma of these quick notice meetings has become the way of life for all of us. The Community I live in has had no time to meet. Many owners who have homes and cabins only come out on week-ends and holidays.
The General Plan for land use in and around Twentynine Palms has been completed. Will the Army change this?
The Joshua Tree Study Plan and Township 2N, Range 7E zone of influence has been underway for a year. Under Stage 13, we have the money to complete this Study Plan in a limited time.
D.2.2 Will the proposal by the Army affect Township 2N, Range 7E? This area consists of 2½ Acres and 5 Acre plots. Many people here are on fixed incomes and live here for their health. Any heavy gun fire and air traffic will cause much anxiety.
The people in Twentynine Palms and Joshua Tree have a fine relationship with the Marine Base. Will it be jeopardized?

Alex B. Corder

LOUISE FORDHAM
OBR 691
29 PALMS, CAL.
92277

Oct. 25, 1978

D.3.1 I'm very much opposed to bringing the army to Twentynine Palms. Traveling on our 2-lane road is frusting enough without anymore traffic. I wouldn't like the additional noise, either.

HI-DESERT TRACT OWNERS ASSN., Inc.

P. O. BOX 132 TWENTYNINE PALMS, CALIFORNIA 92277

October 18, 1978

TO WHOM IT MAY CONCERN

Information has been received from several sources indicating that the U. S. Army is entertaining plans to establish a large training base in 29 Palms instead of at Ft. Irwin.

Speaking for this organization, we would like to state that we are unequivocably opposed to such a plan.

Many of our members and other residents of this community have selected this locale to live because it is a small community, has a rural lifestyle, good climate and clean air. It is readily apparent that the introduction of a training base in this area of the magnitude proposed would be traumatic to our residents and would soon negate many of the benefits and advantages enjoyed here.

D.4.1 This community is not equipped to handle the concomitant problems associated with a large influx of people. Public services and facilities are now marginally staffed at the present population level. Additionally it is envisioned that the increased population here would adversely affect air quality and the biotic aspects of the area.

A pressing present problem in this area is the lack of main and secondary circulatory arteries for vehicular traffic. Increasingly heavy volumes of military traffic, in addition to more civilian traffic, has resulted in severe road damage in this area. Our roads were constructed to handle the light traffic incident upon them when they were constructed and cannot stand up to modern heavy volumes and loads.

There are many other arguments that could be presented in this regard. Our organization feels that establishing a base of such size here would be severely destructive to our desert lifestyle and to local ecology.

Yours Truly,

Steve Salina

Steve Salina
President

Mrs. Susan L. Moore
P. O. Box 252
Twentynine Palms, Ca. 92277
November 10, 1978

District Engineer
U.S. Army Corps of Engineers
Sacramento District
650 Capitol Mall
Sacramento, Calif. 95814

Dear Sir:

I am very strongly opposed to the location of the Army Training Center at the Marine Corps Base at Twentynine Palms. It would bring continual noise from cannonading and aircraft to our beautiful quiet health resort area. The bomb targets for planes would be too close to our residential areas, as recently demonstrated by the terrifying bombing of Wonder Valley, east of Twentynine Palms.

It would be much better to locate these types of activities at Fort Irwin, farther from any civilian population, and where the aircraft are located conveniently nearby.

From the following information, it would be a concern that the location of such large-scale maneuvers, the year around, at the Twentynine Palms Marine Corps Base might severely tax local water resources, possibly limiting growth in Twentynine Palms, or even reducing present available water supplies:

D.5.1 (1) It says on page 31 of the report "Ground-Water Resources of the Yucca Valley-Joshua Tree Area, San Bernardino County, California," prepared in 1972 by the U.S. Geological Survey, Water Resources Division, in cooperation with the Mojave Water Agency, that "In the Surprise Spring subbasin some ground water moves north toward Emerson Lake, some moves southeast toward Copper Mountain...." This would appear to indicate water movement between subbasins. The Copper Mountain area is where Twentynine Palms gets most of its water. Therefore, if the Surprise Spring subbasin, which is where the Marine Corps Base gets its water, were overdrawn, it might have serious consequences for Twentynine Palms' water supply.

(2) In the Environmental Impact Report for the Twentynine Palms Community Plan, made up by the San Bernardino County Environmental Improvement Agency's Environmental Analysis section it says, "The available data indicates that local recharge can indefinitely support a population of 36,000 if wastewater is returned to the groundwater basin and quality does not degrade to unacceptable levels. Local recharge alone can support a population of 12,000 if wastewater is sewered out of the area or evaporated. Thus, the projected growth to 12,000 by 1990 which the service policies of the plan provide for, can be accomodated within the present local groundwater basin. Growth beyond the projected population or changes to the local conditions will require analysis of the need for supplemental resources."
Also, "The Plan recognizes the existing agricultural uses in the community and has provided for them on the map. Recognizing the limited availability of groundwater, their use needs to be limited to serving localized demand for agricultural products." All of this indicates that water is a precious resource, with limits, in the Twentynine Palms area.

Sincerely yours,
Susan L. Moore
Susan L. Moore (Mrs.)

PO Box 793
Joshua Tree, Calif. 92252
Oct 30, 1978

District Engineer,SPKED-M,
650 Capitol Mall
Sacramento, Calif. 95814

Dear Sir:

I am writing in regards to the proposed site for the US Army training area. I was unable to attend the meeting here at 29 Palms as I am restricted from groups that intend to smoke. I realize that there are certain areas that are desirous for the purpose of adequate training facilities and I know that the US Marine Base due to ample money investments offers just that and so would be one that the US Army would want very much.

However due to the fact that large investments of tax dollars have been invested and due to the fact that the US Marines also need adequate desert war fare training facilities I feel the US Army should choose another area. My own personal observations are that the US Marines are doing an excellent job of utilizing the present Base at 29.

D.6.1 The firing of weapons at times even from the Marines is at times rather disturbing but this is not continuous through out the year. Under your plans 365 days a year would create a big problem and I dont feel the retirees nor the residents of this area would or should be subjugated to such a program. The US Army already has Camp Irwin in stand-by status and under the care of the California National Guard and so I would highly recomend that as the #1 choice and would entail less opposition from all concerned.

In regards to limitations of water the same holds true for 29 as it does for Barstow and so in that regards I dont feel that such should be a deciding factor. Likewise with the present civilian pressures on Camp Pendleton for getting more land there for civilian housing I feel certain that the US Marines intend to expand the Base here at 29.

In closing may I state that I have forwarded news data to Congressman Asmin and Senator Proxmire regarding the Army's plans and I know that as both are interested in Taxes and expenditures of Military funds they will be most interested in your plans too.

Respectfully submitted,
CWO-3 B.B. Pinney, USN Retired.

SAN BERNARDINO COUNTY MUSEUM
2024 Orange Tree Lane · Redlands, CA 92373 · (714) 792-1334 & 825-4825

County of San Bernardino
GERALD A. SMITH
Director, County Museums

October 27, 1978

Donald M. O'Shei
District Engineer
U.S. Army Engineering District
650 Capitol Mall
Sacramento, Ca 95814

Dear Colonel O Shei,

D.7.1 The draft E.I.R. for the National Training Center, Fort Irwin Site does not contain an adequate discussion of impacts to and mitigation of impacts upon significant paleontologic values. Paleontologic values are protected under the Antiquities Act and by the National Environmental Policy Act, as well as by the California Environmental Quality Act.

Significant paleontologic values are defined as fossils or assemblages of fossils which are unique, unusual, rare, uncommon, diagnostically important or stratigraphically important. They include the fossil remains of large to very small marine and terrestrial vertebrates, the remains of plants and animals previously not represented in certain portions of the stratigraphy, and assemblages of fossils that might aid stratigraphic correlations, particularly those relating marine to terrestrial events.

Mitigation of impacts to paleontologically significant regions is possible as follows:

1. Field surveys of fossiliferous sediments should locate and salvage fossil remains. This should take place prior to initial formal, casual, or recreational activities by personnel. Since natural weathering exposes fossils on a regular basis, field surveys should be repeated every three years.

2. Erection of structures, building access roads, excavation for subsurface gas and electric lines, borrow pits and entrenchments may unearth significant subsurface paleontologic values. It will be necessary to have a trained paleontologic observer present to salvage remains as they are unearthed. Such on-site salvage has taken place previously on highway, pipeline, and railroad grade excavations without halting machinery or losing construction time.

The report lists a few "fossil areas" but fails to note sediments with potential significant paleontologic values within:

D.7.1
T.12N R.2E
T.12N R.3E
T.12N R.4E
T.12N R.5E
T.13N R.3E
T.13N R.4E
T.14N R.2E
T.14N R.3E
T.15N R.1E
T.15N R.2E
T.15N R.3E
T.16N R.1E
T.16N R.2E
T.16N R.4E
T.16N R.5E
T.17N R.1E
T.17N R.2E
T.17N R.3E
T.17N R.4E
T.17N R.5E
T.18N R.1E
T.18N R.2E
T.18N R.3E and
T.18N R.4E, San Bernardino Base and Meridian.

A complete list of sediments with a potential for significant paleontologic values within the Fort Irwin Site may be obtained from the San Bernardino County Museum. Such a list could also be obtained for the Twenty-Nine Palms site and the Yuma site.

The San Bernardino County Museum also has staff members qualified to execute paleontologic surveys and paleontologic salvage.

I hope that this information has been of some assistance to you.

Sincerely,

Robert E. Reynolds
Curator, Earth Science

RER/jr

Board of Supervisors
ROBERT O. TOWNSEND
JAMES L. MAYFIELD
Fourth District
Fifth District
JOE KAMANSKY
DENNIS HANSBERGER
BOB HAMMOCK

Founded 1892

SIERRA CLUB

San Gorgonio Chapter
Mojave Group

P. O. Box 1023
Riverside, Calif. 92502

PO Box 106
Barstow, CA 92311

US Army Engineer District
Sacramento

29 October 1978

Dear Sir;

Thank you for letting us review the dEIS on the Army's National Training Center, Fort Irwin Site peoposal.

Of major concern is the inadequacy of the dEIS in several areas. Basic problems are water, air quality, traffic congestion, and the huge social disruption the Fort Irwin site would have. The dEIS is completely inadequate on water. It is unbelievable that the Army wouldn't demand Mojave Water Agency (MWA) water and demand water from
D.8.1 the California Aqueduct. It is utterly incredible that there are adequate water reservoirs at the present site. Already MWA is overdrafting water for the Barstow and lower Mojave River Valley area—and we face a water shortage. The only place I can see where Fort Irwin would get water is from the California Aqueduct. Are the people of California, or the State of California, going to letFort Irwin get state water? The project proposal should not be approved until an adequate water sburce which does <u>not</u> infringe on lower Mojave River Valley communities is found and approved.

Air quality is becoming a serious problem in the Barstow area. Already, we are experiencing smoggy and hazy days. The traffic jams and traffic congestion that
D.8.2 re-opening Fort Irwin would cause, would greatly increase air pollution. Many people come to the Mojave Desert for their health. Military and aerospace industries have completely smogged up the Antelope Valley. We do not need more smog in the Barstow area.

The people of the Twentynine Palms area overwhelmingly reject having the National Training Center in their community. There are many people in the Barstow area who do not want the pollution (both environmental and social) that comes from this huge Army project. The local Barstow "leadership" is utterly incapable
D.8.3 of dealing with the economic and social problems that the National Training Center will bring. If these problems are to be dealt with at all, it will have to be done by agencies of the State of California. The dEIS is is woefully inadequate in addressing the social and political problems of which agencies will deal with the the tremendous problems this federal project will bring with it.

The dEIS is inadequate in answering the basic question—why not leave the National Training Center site just where it is? Why not keep it in Texas? It sounds to me as if Texas residents are complaining about the Army so much, the Army is willing to leave. Why doesn't the dEIS address local complaints in Texas before suggesting alternate sites? The Army's answer that it needs a bigger area is inadequate. After the Army has shot up and destroyed the Fort Irwin site and found that too small, where does it go next? The dEIS doesn't say. When tanks can shoot 50 or 70 miles, where will the Army test those weapons? The dEIS doesn't say.
D.8.4 It appears that the dEIS is just a glossy advertisement.

The dEIS does not address itself to the appropriate technology of the proposed training. In this day of obsolete technology, it is suggested that such military technologies as aircraft carriers, manned bombers, and amphibious landings are obsolete. The public needs to know if the Army's proposed tank training procedures are obsolete or not. If we're going to obliterate and destroy a large portion of the Mojave Desert, let's be sure that it's for a good purpose.

The dEIS does not address the leftover ordinance problem. This is a major
D.8.5 safety hazard. Every year we read of people being killed by old shells strewn out all over the desert.

How much are the taxpayers going to have to pay for the National Training Center? The dEIS is silent on this most important issue. How much more will local taxes go up because of the many economic and social problems caused by the Army? Who will
D.8.6 pay for the water? Who will pay for smoggy air? Who will pay for new roads? Who will pay for new sewers? Who will pay for the additional law enforcement personnel? Who will pay for the additional welfare costs? More people means more problems and the dEIS is silent on this.

Until the dEIS can answer the above questions, we should not plan to jump into re-opening Fort Irwin. The Army needs to learn how to prepare Environmental Statements that are adequate. The Army Corps of Engineers is a classic example of inadequate EISs, and tremendously expensive blunders. Let's not blunder into Fort Irwin. If it has to be the site of the National Training Center, let's plan for it right, instead of leaving a lot of questions unanswered.

Right now, Barstow is a nice place to live. Will the quality of life remain the same with Fort Irwin reopened? How are local residents going to cope with less water, more polluted air, traffic congestion, additional taxes, additional welfare costs—all added onto an already inefficient layer of inadequate local "leadership."

sincerely,
Peter Burk

145 cc: SCAG

Peter Burk
PO Box 106, Barstow, CA 92311

SOCIETY for CALIFORNIA ARCHAEOLOGY

15004 Jordan Place
Victorville, CA 92392
14 October 1978

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Commander
Headquarters United States Army Forces Command
(DCSOPS)
Fort McPherson, GA 30330

Subject: Fort Irwin Draft Environmental Impact Statement

On behalf of the Society for California Archaeology I would like to thank you for the opportunity to comment on the above DEIS. Although the Society for California Archaeology generally does not offer comments on DEIS' we feel that in this case it is obligatory.

The DEIS appears to only render lip service to cultural resources. Even the title of the technical appendix "Archaeological-Historical Examination of the Fort Irwin Military Reservation" is misleading since it is implied that the property contained within the boundaries of the base were examined for cultural properties. This is not the case. Only a cursory attempt at literature survey level was made, then it concentrated on the Mojave Desert as a whole and not specifically Fort Irwin.

The absence of field inventory for this statement is a very serious flaw in the document. In order to be able to assess the significance of Fort Irwin from a Cultural Historical perspective it is of the utmost importance than reliable field inventories be conducted. This is imperative for decision making processes such as the one you are attempting to make. The level of inventory would depend upon the type of action which is being proposed. In the case of Fort Irwin, where every cultural site could be destroyed as the result of defensive maneuvers the sampling level should be fairly high, between 10 and 25 percent of the total 1000 square mile area. Since I am intimately acquainted with several archaeological sites on the reservation I can attest to their scientific and natural resource significance.

D.9.1 Also, I am familiar with problems which have occurred on the reservation as the result of Brave Shield 17, where archaeological sites were identified for the purpose of avoidance, yet were actually destroyed or seriously impacted because they were ident-fied to comply with your own Army Code 200-1, Chapter 8.

Your statement only generally addressed plans to mitigate impacts to cultural resources. No statement concerning a plan to manage the cultural resources occurs anywhere within the DEIS. This is extremely unfortunate since the entire body of scientific and heritage data is therefore written of as being slavageable. We feel that there is a definite need to preserve some of the sites for posterity and to scientifically excavate only those which cannot be preserved. Nominating sites to the National Register gives them special status but does not guarantee their preservation. This is not a mitigation measure with any physical teeth.

The statement only considers that "Minor adverse impacts could be expected in...archaeology." This is simply an erroneous assumption. How did the team of specialists arrive at this conclusion? It appears to be a judgemental decision based upon supposition and not scientific logic. Impacts which render a cultural resource non-existent or seriously jeopardize the existence of a cultural resource are not minor but significant, major impacts and should be addressed as such in this DEIS. Guidelines are found in NEPA, EO 11593, and even in your own Army Regulations. These were not addressed within this DEIS.

Were Native Americans solicitated to participate within the review process? Apparently not since there is no mention of Native American input within the DEIS. Fort Irwin contains sites with Native American burials and cremations (Bitter Spring) and may be significant to living Native Americans in Eastern California or Western Nevada. The California Native American Heritage Commission should be able to assist you in locating Native Americans who may have sentiment or ties to this area. They should certainly be considered within the Fort Irwin document.

D.9.1 What is the level of committment to mitigate impacts to cultural sites? Will the sites be monitored? Who would enforce compliance? As you are probably aware, the destruction of archaeological sites even by a federal agency is prohibited by the 1906 American Antiquities Act, an offence which is punishable by legal means.

It appears as though the total, direct and indirect impacts have been inadequately addressed. What will be the anticipated impacts to sites adjacent to Fort Irwin, for example, those sites on Navy property, and those on adjoining land managed by the Bureau of Land Management? This has not been discussed within the DEIS.

In sum, the DEIS is totally inadequate in its treatement of cultural resources and Native American values. Before a final EIS is written I would encourage you to conduct a field inventory so you know what you have within the reservation boundaries. By knowning what you have you will then be in a position to know what you must protect or what must be professionally mitigated.

Thank you for the opportunity to comment on the above document. Please send a copy of the FEIS to the Society for California Archaeology, 15004 Jordan Place, Victorville, CA 92392. If the Society can be of any assistance please do not hesitate to call upon us.

Sincerely,

Russell L. Kaldenberg

Russell L. Kaldenberg, Southern Vice President

cc: Executive Committee, SCA
Native American Heritage Commission

To = Oct 25 = 1978

U.S. Army:

D.10.1 I'm concerned to know just what impact the Army would have on a small town like ours here in 29 Palms with all the gunnery practices they would have and useage of our water and many other necessities for their needs = I would rather see them locate at Fort Irwin or elsewhere, isn't it enough to have The Marine Base here? It seems quite unfair to being in more Military which is bound to be more noisy than ever = when there is more areas away from Communities like ours.

Yours Truly
Sincerely
Bertha Strother
7805 = Hwy 62 -
29 Palms, Calif
92277

Question

D.11.1 If DOD opens Ft Irwin up as a desert combat training center, is it possible that the local Marine Base may be closed as a result of duplicative facilities?

Bob Thacher

Question

D.11.2 Presuming that 29 Palms is designated as the DOD combat training center, do you envision that larger (louder) ordnance would be used than is presently being used?

Bob Thacher

CALIFORNIA LAND TITLE COMPANY
CLT

QUESTION

D.11.3 If 29 Palms is designated as the desert training center, is it possible that DOD weight could be put behind getting the highway widened to 29 Palms?

Bob Thacher

QUESTION

D.11.4 Presuming 29 Palms is designated as the desert training center, would the incoming troops continue to arrive as they have in the past? That is, by air on the expeditionery airfield?

If so, is it not safe to presume that they would not be allowed in-town liberty, as is the present case with the Marine Corps units that come here to train?

Bob Thacher

REALTOR

Twentynine Palms Board of Realtors

Twentynine Palms, California 92277

P.O. Box 566

DEPT. OF THE ARMY
NATIONAL TRAINING HEARING
TWENTYNINE, CALIFORNIA

The 29 Palms Board of Realtors objects to the siting of a National Training Center by the U.S. Army in the 29 Palms area for the following reasons:

1). The negative impact on our marginal highway system with the military convoys bringing in and returning troops. State Route 62 is a two lane highway between Joshua Tree and 29 Palms and gets extremely heavy usuage now with inter valley travel plus people coming and going from the heavy metropolitan areas to and from the Colorado River recreation areas.

D.12.1

2). The additional noise polution from the live firing exercises on permanent basis.

3). If a Cadre/Support Staff (permanent) will be required, this could have an adverse impact on our already crowded schools.

4). Additional policing would be required straining an already burdened Sheriff's Department.

Sincerely,

George Kinslow,
President 29 Palms Board of Realtors

Twentynine Palms Community Council

P O Box 1318 Twentynine Palms, Ca. 92277

25 October 1978

The United States Army

Genlemen

We are dealing here with some very basic fundamentals. The rights of the citizens of the Morongo basin communities.

It has beenestablished that none of the elected representatives, County, State or Federal of this area have been in communication with the Army on this matter and this meeting.

It has also been established that very little if any voluntary communication has occured with the citizens of the communities concerned. Nor have adequate news releases been forwarded to the news media in the area.

We are all here this evening because we are very concerned with the lack of interest shown by the Army
D.13.1 in obtaining legitimate and objective input from the basin communities.

It is obvious that many hours, days, weeks, and months have gone in to the draft of the Enviromental Impact report. This report only arrived here in 29 Plams a short time ago. It would seem a little suspect that we have been allowed such a short amount of time to study, review, and discuss the content of this report among ourselves.

The initial reaction to the news that the Army was going to hld this meeting for public input was not a good one. The reaction by myself and many other people in the community was one of bewilderment, beligerence and downright hostility towards the whole concept.

These reactions I beleive have been generated by the feeling of most gathered here and out in the valley that the Army was not really interested in communication regarding the matter. I really find this hard to accept. After calming down, and after discussion with many people representing a broad cross section of our community I have come to a position.

My position is, I want to know from you people just what it is you might want from us. Just how many people will be stationed here permanently. How will it affect our schools and public services. Just really what is on your minds.

Only then, may I as chairman of the Community Council and as an interested citizen go to the people in the valley communities and get their feelings and
D.13.1 opinions.

Only then can this matter be discussed and dealt with in a legitimate and objective manner.

Only then can we have a dialogue that will be meaningfull. I do not feel that anyone here tonight representing the community can give the Army any information and express any commitment based on fact.

I thank you for the opportunity to express my views and I do hope that there will be further opportunities for discussion soon.

Franklin C. Fraser
Chairman,
Twentynine Palms Community Council
P. O. Box 1318
Twentynine Palms, Ca. 92277

UNIVERSITY OF NEVADA, LAS VEGAS
4505 Maryland Parkway Las Vegas, Nevada 89154
Department of Anthropology
Ethnic Studies
(702) 739-3590

November 6, 1978

U. S. Army Engineer District, Sacramento
650 Capitol Mall
Sacramento, CA 95814

Dear Sirs;

I have reviewed the portions of the Draft Environmental Impact Statement on the proposed National Training Center, Fort Irwin site, which deal with archaeological and historical resources.

The information contained in the DEIS is an inadequate assessment of the quantity and values of the cultural resources which will be destroyed by the proposed action. It is clear that the area has not been fully inventoried to determine the resources that are present, and the report does not even contain quantitative projections of the numbers and kinds of sites that may be present. Although archaeological and historic sites at Fort Irwin are likely to be of considerable scientific
D.14.1 importance, those values are only weakly developed in the section by Gerald A. Smith. His section is primarily devoted to a capsule history and prehistory of the area. In short, the report does not adequately assess the quantity and values of the prehistoric and historic remains on Fort Irwin, and so does not provide for the "appropriate and careful consideration" required by 38 FR 20550 (1 Aug 1973) of the effects of the proposed action on cultural resources.

The DEIS states that if the Training Center is established, the Army will initiate a contract program to mitigate the impact on archaeological resources. Although the DEIS refers to this as a "preservation program", nowhere is there an indication that any portion of the program will be devoted to avoidance or protection of archaeological and historic remains on the Fort. Instead, the mitigation measures intended by the Army appear to be salvage archaeology of the crudest sort: documentation and removal of artifacts. Such an ineffectual salvage program will result in a great loss of the scientific values of the archaeological resources, and cannot be fairly construed as satisfactory mitigation.

In summary, then, I regard the DEIS on the proposed National Training Center at Fort Irwin as deficient in its treatment of archaeological and historical resources. The assessment of the quantity and values provided in the DEIS does not result in adequate
D.14.1 consideration of the loss to the public and to the scientific community threatened by the proposed project. The mitigation program proposed by the DEIS does not even promise a good faith attempt on the part of the Army to protect resources from destruction when possible, and to provide for full-scale scientific investigation and data recovery programs for areas and sites that will be destroyed.

Sincerely,

Margaret M. Lyneis

Margaret M. Lyneis
Associate Professor

UNIVERSITY of REDLANDS

College of Arts and Sciences · Johnston College · Alfred North Whitehead College

Office of Business and Finance

October 10, 1978

LTC Matt Jones, Jr.
Headquarters
Department of the Army
Attn: DAMO-ODU
Washington, D. C. 20310

Dear Matt:

The DEIS on Fort Irwin indicated 1¼ inches average annual rainfall. I was skeptical of this as 1¼ inches is pretty darn dry.

I don't know where the guy that gave that input to the DEIS
D.15.1 got his data, but the enclosed profile by the City of Barstow shows 3.67 inches which is over twice as much. Considering the substantially greater average elevation of Fort Irwin (say 4,000 ft. as compared to Barstow's 2,400 ft.), I would be inclined to think Fort Irwin wetter.

The matter is academic, but I thought you would find it interesting.

Again my thanks for a challenging and enjoyable second week of my MOBDES tour.

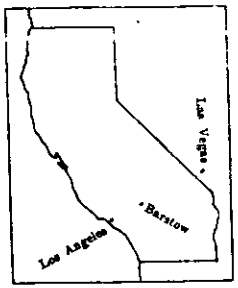
Bill Hubbard

WSH/lb

COMMUNITY ECONOMIC PROFILE
for
THE CITY OF BARSTOW

Prepared By
THE CITY OF BARSTOW AND THE BARSTOW CHAMBER OF COMMERCE
BASED ON THE FORMAT ESTABLISHED BY THE CALIFORNIA CHAMBER OF COMMERCE

JUNE 1978



LOCATION

Barstow, incorporated in 1947, is located 134 miles east of Los Angeles and 152 miles west of Las Vegas in the middle of the Mojave Desert at the junction of I-15 and I-40.

ECONOMIC GROWTH AND TRENDS:	1950	1960	1970	1978
Population in County	281,600	503,600	684,000	756,788
*Total Taxable Retail Sales-County	208,411	547,571	1,171,515	2,903,297
Population in City Limits	6,135	11,644	17,442	18,025
*Total Taxable Retail Sales-City	N/A	19,056	37,379	94,136
Occupied Dwellings-City	1,768	3,419	5,121	5,346
School Enrollment, GR 1-12	N/A	7,910	8,915	8,020

Sources: Dept. of Comm. Development *State Bd. of Equalization (Thousands of dollars)

CLIMATE:

	AVERAGE TEMPERATURE			RAIN	HUMIDITY			ELEVATION 2,142
Period:	Min.°	Mean°	Max°	Inches	4 a.m.	Noon	4 p.m.	PREVAILING WINDS
Jan.	30.9	45.2	59.4	.57	67.4	34.0	41.9	Direction: West
Apr.	50.0	65.8	81.5	.29	51.8	19.0	20.3	Mean Hourly Speed:
July	69.8	86.6	103.4	.04	31.2	19.4	17.4	7 m.p.h.
Oct.	52.2	67.5	82.7	.31	43.2	19.9	18.5	SOURCE:
Year	50.5	65.9	81.3	3.67	48.4	22.6	24.5	U.S. Dept. Commerce

TRANSPORTATION:

RAIL: Atchison, Topeka & Santa Fe and Union Pacific. Barstow is the western division point for Santa Fe's transcontinental mainline where the line branches south to Los Angeles and San Diego and north to the San Joaquin Valley and San Francisco.

Union Pacific Railroad's mainline connects the Los Angeles market through Barstow, directly to Las Vegas, Salt Lake City, Denver, Omaha, and Kansas City. AMTRAK offers one eastbound and one westbound passenger train daily.

TRUCK: Nine common carriers serve Barstow with overnight pickup and delivery service to Los Angeles, San Diego, and Las Vegas.

AIR: Ontario International Airport, 90 miles southwest, scheduled passenger and freight service. Barstow-Daggett Airport, with 5,500' and 6,400' runways, provides service for executive and charter aircraft.

BUS: Greyhound, Orange Belt, and Continental Trailways.

HIGHWAYS: Interstate 40, Interstate 15, State Highways 58 and 247.

INDUSTRIAL SITES:

[illegible] acres in the city limits zone for light and heavy industry--about 60% is vacant and available in parcels ranging in size from ½ to 200 acres. Included in this acreage total are 3 industrial parks or districts. Typical sale prices during 1977 ranged from $12,000 to $20,000 per acre. The terrain is generally level. Drainage is excellent. Subsoil is sandy loam and piling is not required. Sizes of water mains range from 6 to 8 inches. Sizes of sewer lines range from 18 to 27 inches.

FEDERAL GOVERNMENT COMMENTS	RESPONSE
A.1.1	We concur with your comments on rotation of training areas and we have removed this mitigation measure from the EIS. We also agree that recommendations 1, 3 and 4 are likely to reduce adverse impacts on soil and vegetation. These recommendations have been included in the EIS as mitigation measures. [See Sections 6.1 and 6.3] Recommendation 2, development of an erosion control plan for areas utilized for training, does not appear to be an effective mitigation measure given the intensity of training required. Tactical military training which attempts to simulate actual combat conditions would be severely restricted by effective erosion control measures.
A.2.1	The text has been amended to address this comment. See Section 3.6 and Section 4.1.1E.
A.2.2	The text has been amended to clarify these questions. See Section 3.6 and Section 4.1.1E.
A.2.3	Abnormal impacts such as sonic booms must be treated in the same manner as normal impacts in the EIS process. The appendices state that "sonic booms might occur", which is true, and discusses the frequency and areas of impact.
A.3.1	The degree of prior disturbance of Fort Irwin is difficult to quantify for the impact of past military operations is varied over the nearly 1,000 square miles within the reservation boundaries. Figure 8, Ranges and Maneuver Areas illustrates the past and current pattern of use on the reservation. Maneuver areas cover virtually the entire reservation with steep topography confining maneuver activities within each area. There is a general pattern of use intensifying around existing paved roads and tank trails (shown as dashed lines on Figure 8). Figures 11 through 17 illustrate the varying levels of impact as

well as the degree of recovery. There is no question that the environment of Fort Irwin is extremely sensitive and that continuing and extended disturbance will have a cumulative effect. [See Sections 6.1 and 6.3.

Those land uses immediately surrounding Fort Irwin are identified in Section 4.1.1.B 4.1.1.C and 4.1.1.D. Fort Irwin is a Class I installation which precludes other uses. [See Section 4.1.

A.3.2 The text has been amended to address this comment. [See Section B.3.3.1.

A.3.3 The text has been amended to address this concern. [See Section B.3.3.2.

A.3.4 Your comments are noted [see Section 3.6 and Section 3.3.1]. Impacts on all desert pavement will be serious. We do not believe that varying effects on different pavement are material to the overall impact assessment.

A.3.5 The text has been amended to include your observations. [See Section B.3.3.3].

A.3.6 The text has been amended to reflect your assessment. [See Section 3.3.3].

A.3.7 No mitigations are cited to avoid irreversible or irretrievable losses of soil, vegetation and habitat which is why they are "irreversible or irretrievable losses." [See Secton 8.1].

A.3.8 We agree. The revegetation program has been eliminated from the proposed mitigation measures until such time that it is proved technically possible. A prototypical study will be included in the Fort Irwin Conservation Plan.

A.3.9 We agree with your observations and have eliminated the rotation of training areas from the program.

A.3.10 Only tracked vehicles will be transported cross-country from the Mannix siting to Fort Irwin on an existing trail already used for such purposes. Surface scars are already existent. All other vehicles and materials will be brought to the base via existing paved roads.

As part of the Fort Irwin Master Plan, a railroad spur to Fort Irwin is being programmed. When operative no vehicles will use the cross-country access road.

A.3.11 Reducing the land areas identified for use in the National Training Center would defeat the purpose of the Center and the simulation of full-scale force-on-force maneuvers which, in itself, is a new training technique. Please refer to "General Description of the Proposed Location and Proposed Program" and Section 1.1 of the statement.

A.3.12 A detailed analysis is not necessary to evaluate the impacts, however, in the formulation of the Fort Irwin Conservation Program, an element of the Master Plan now being prepared, a detailed program for ongoing inventory and evaluation of wildlife will be included.

A.3.13 Mr. Wessman's observation of the Mojave ground squirrel at Fort Irwin has been acknowledged in the text [Section 2.8.2] and in the Appendices. [Table A-11 and Section A.2.8.1].

A.3.14 The burrowing owl and the desert kit fox have been added to the list of important wildlife species that will be affected by the project [See Section 2.8.2 and Section 3.3.4.B].

A.3.15 A statement of the sensitivity of the prairie falcon to disturbance during the breeding-nesting season has been included in the text. [See Section 3.3.4.B]. A survey of prairie falcon nesting locations is not necessary to evaluate the impacts as required in the EIS process. Identification of nesting locations has been included as a proposed mitigation measure as part of the Wildlife Management Program for Fort Irwin [Section 6.4].

A.3.16 The status of the desert tortoise is discussed in Section 2.8.2 of the text.

A.3.17 The Army's program for identification and protection of cultural resources is included in Appendix D of the EIS, entitled "Proposed Program Survey and Classification of Cultural Resources - Fort Irwin Military Reservation."

Please note sections regarding listing and identification of National Register resources as part of Phase I of the program. Phase II would consist of development of an ongoing program of preservation and mitigation.

Coordination with the California State Historic Preservation Office and the Office of the Indian Heritage Commission is underway.

A.3.18 Prospecting at Fort Irwin would not be allowed during operation of the National Training Center. Mineral production areas would not be formed without the sanction of the government.

Exploration and mining for geology, energy and mineral resources has been non-existent at Fort Irwin as the area has been practically withdrawn from mineral entry for the last thirty years or more. The intended policy of the Army represents no impact on the existing environment.

A.3.19 It does not appear that unsatisfied demand for recreational services would be an adverse impact of the project, however, it is intended that recreational services and facilities at Fort Irwin would be available for local civilian use.

A.3.20 A full discussion of air quality impacts can be found in Section B.3.3.2 of the Appendices, including a discussion of impacts on visibility and health.

A.3.21 Flight routes associated with National Training Center activities would not be close enough to the Monument to adversely impact Death Valley airspace.

A.3.22 The Department of the Army has and will continue to take an active interest in coordinating its National Training Center activities with the Bureau of Land Management. The proposal for the National Training Center was presented on September 22, 1978 to the California Desert Area Advisory Committee which is chaired by a representative of the Bureau of Land Management.

A.3.23 Chapter 7, "Short-term Uses of Man's Environment versus Long-term Productivity", addresses this question. An evaluation of the trade-off between unmitigable adverse environmental impacts and the need for a National Training Center should take into consideration the existing and previous uses of Fort Irwin as a training site.

A.3.24 Correction made. [See Section 1.2.1].

A.3.25 Corrections made. [See Section 1.2.1, Section 2.12.2 and Section 4.1.1.A].

A.3.26 Corrections made. [See Sections 2.7.2 and Section A.2.7.2 of Appendices].

A.3.27 Corrections made. [See Section 2.8.2 of text and Tables A-11 and A-13 of Appendices].

A.3.28 Your suggestion has been accepted.

A.3.29 The Army's cultural resource survey program is included in Phase I of the Proposed Program Survey and Classification of Cultural Resources - Fort Irwin Military Reservation, outlined in Appendix D of this statement.

A.3.30 The assumption is correct. See Section 2.12.1.B(2), for correction.

A.3.31 Information on Death Valley has been inserted [See Section 2.12.2].

A.3.32 Recognition of recreation and tourism (and retirement) as significant factors in the regional economy has been added to the text [Section 2.13.1.A]. This section is designed to give a brief overview of the regional economy.

A.3.33 A quantitative evaluation of soil loss by wind erosion is included in revised Section B.3.3.2 of the Appendices.

A.3.34 Text has been amended to include comment. [Section 3.3.3.A].

A.3.35 Mining of groundwater would take place in the cantonment area and should have little impact on protected springs which are predominantly located in the reservations mountainous areas. These areas are in different basins from that containing the cantonment area.

A.3.36 Text has been amended to include your comments on the bighorn. [Section 3.3.4.A].

A.3.37 Development of an ongoing program for cultural resource preservation and mitigation is the purpose of Phase II of the Army's Proposed Program Survey and Classification of Cultural Resources - Fort Irwin Militar Reservation, outlined in Appendix D of this document.

A.3.38 The text has been modified to include this point. [Section 3.5].

A.3.39 Attenuation of jamming by land configuration would prevent such interference based on studies performed by the Electromagnetic Compatibility Analysis Center.

A.3.40 At present a quantitative response to this question cannot be given. The level of groundwater recharge is being investigated as part of the basin management program in Phase II of the Fort Irwin Master Plan. The program is assessing water requirements and supplies at the reservation.

A.3.41 The "basin in Helendale" is the Mojave River basin. The conclusion that the Helendale water transmission line would not be a long-term solution to Barstow's water problem is correct.

A.3.42 A reference to the Administration-endorsed wilderness proposal has been inserted [Section 4.1.1.C]. Identification of the Monument's air conservation class has been included in the section on air quality [Section 2.2].

A.3.43 The text has been corrected [Section 4.1.1.B].

A.3.44 Section 4.2.1 of the text has been corrected.

A.3.45 To properly train operators of tracked vehicles, it is desirable to use terrain varying in slope from 0-25%, i.e., "challenging terrain". In addition, to implement a year-round training program, it is necessary to use an area which experiences year-round seasonal patterns which do not interfere with tracked vehicle maneuvers, i.e., a "year-round trafficable maneuver area".

A.3.46 Discussion of mitigation measures for controlling windblown litter is not included in the discussion of alternative sites because it is a minor impact which would affect the three "action" alternatives equally and does not aid in distinguishing them. The Fort Irwin Master Plan will include a discussion of education of military personnel in controlling the potential litter problem.

A.3.47 The expression "true desert" has been replaced by "hot desert". See Sections 5.3.3.A and 5.3.4.

A.3.48 Your suggestions have been incorporated into the text. (See Section 6.1).

A.3.49 Administrative and non-tactical vehicle movements will be restricted to established roads. Training will be conducted on desert pavement. The text has been corrected [Section 6.1].

We agree that an unmitigable adverse impact upon soils will be caused by NTC activities. The mitigation measure "rotate training areas" has been eliminated.

A.3.50 We agree that mitigation measures will have little effect on adverse air quality impacts. Please refer to revised Section B.3.3.2. of the Appendices for a complete discussion of air quality impacts.

A.3.51 The replanting program has been eliminated as a proposed mitigation measure [See Section 6.3].

A.3.52 The basin management program of Phase II of the Fort Irwin Master Plan will consider this proposal.

A.3.53 Peragnathus xanthonotus and Crotalus ruber have been deleted. [See Table A-11 of Appendices]. P. Perrcillatus and P. Sollox have also been deleted. None of these species have actually been observed at or near Fort Irwin but were "expected to be in the area" according to our sources.

A.3.54 Comment noted and correction made.

A.3.55 This paragraph has been corrected. [Section A.2.8.1].

A.3.56 Death Valley National Monument has been noted as a "very sensitive" land use with respect to noise (see Appendices, Section A.2.9]. However, Table A-15 is "San Bernardino County Noise Quality Standards" and will not be amended.

A.3.57 The source for this statement is Dr. Gerald Smith, Curator, San Bernardino County Museum, Redlands, California.

A.3.58 This section lists direct impact on soils. Impacts on vegetation, chemical and algal crusts have been added to the list. We believe a further assessment would be immaterial to the purpose of the EIS. [See Section B.3.3.1 of Appendices].

A.3.59 Correction made. [See Section B.3.3.1.A of Appendices].

A.3.60 Correction made. [See Section B.3.3.1 of Appendices].

A.3.61 The paragraph in question has been eliminated.

A.3.62 The matter of creation of wind fetches has been addressed. [See Section 3.3.1.C].

A.3.63 Comment noted. Tank maneuvers will certainly have an adverse impact on air quality.

A.3.64 A revised airborne particulate yield is included in Section B.3.3.2 of the Appendices.

A.3.65 This impact has been noted. [See Section B.3.3.3 of Appendices].

A.3.66 This paragraph has been eliminated.

A.3.67 Seasonal closure would reduce the amount of battallions which could be trained at the National Training Center each year, thus, negatively national defense considerations. [See Section 9.1.3].

A.3.68 Comment noted. [See Section B.3.3.3.A].

A.3.69 These sections are repeated in the Appendices to allow continuity of reading for those who wish to gain a more thorough knowledge of the environmental setting, impacts and alternative sites.

A.3.70 The Helendale transmission line would be likely to have some negative impact on Barstow's normal supply from the Mojave River further downstream. However, this is only one of many proposed solutions.

The General Plan for the Mojave Water Agency is expected to consider these alternatives and make recommendations for long-term solutions to the areas water supply problems. The Plan is expected to be completed in December, 1979.

A.4.1 Traffic on the Fort Irwin-Barstow Access Road is expected to increase from its present ADT of about 1,000 to an ADT of 4,000 as a result of the proposed action. The road is two lanes and has an asphalt surface. Two-lane roads are judged to be safe by the San Bernardino County Department of Transportation if the ADT is under 5,000. Road widening would not be needed. However, increased traffic would result in longer travel times between Barstow and Fort Irwin.

The road's structural strength is variable as repairs and resurfacing have taken place in segments over the past forty years. Heavy vehicles have used the road since the opening of the Fort in 1940. The increased traffic would be likely to accelerate road deterioration.

A $258,000 improvement by the County on the road which eliminated a hazard known as "Dead Man's Curve" has just been completed.

The Army has initiated coordination with the Military Traffic Management Command requesting a survey of the County Road Access to Fort Irwin. These state and local highway agencies have the same responsibility for developing and maintaining highways to serve defense installations as to serve other traffic generators. In extraordinary circumstances, the Military Traffic Management Command has

authority under Chapter 3 AR 55-80 to provide financial assistance for the upgrading of public roads needed for adequate service to defense installations.

A.5.1 The text has been revised to assure conformance to the Clean Water Act of 1977 [see Section 4.2.2]. Fort Irwin Master Plan wastewater control measures are still in the process of being developed. Discussion of sewage disposal during field manuevers is included in the response to comment B.14.1.

A.5.2 Please refer to revised Section B.3.3.2 of Appendices for a complete discussion of air quality impacts.

A.6.1 Recognition of the draft Memorandum of Understanding between the National Aeronautics and Space Administration and the Department of Defense has been given in the text. [See Sections 3.6 and 4.1.1.E].

A.6.2 During the operations phase of the project, expected to begin in 1984, primary and secondary employment of 3,437 workers would be generated, including 2,374 in the military and 1,063 civilians. Almost all of the civilian employment would be in the service occupations either working at the National Training Center or in the Barstow area private sector. These jobs would tend to be relatively low skilled and low paid positions, able to be filled by highly mobile workers. The increase in the demand for labor would unquestionably cause some upward movement in the wage rate for workers in the service sector. The impact on employers, however, is not expected to be serious. Along with enlarged payrolls, the service sector employers are likely to experience increases in sales generated by the increased local population. Increased revenues should more than compensate employers for the increase in wages paid.

A.6.3 The Army's housing assistance program assists personnel in locating adequate housing, but does not provide financial assistance. It is unlikely that new

residents taking on jobs other than with the National Training Center would require housing assistance. In-migrants who consider a move to the Barstow area for a job will take into account the cost of housing in their decision to move. A reasonable assumption would be that if the cost of housing were too great, the move would not be made.

A housing problem would exist, however, for present low income residents who find the price of housing increasing as the population of Barstow grows as a function of the level of National Training Center activities. The increased population would create an increased demand for the Barstow area housing stock. In the long run, the market would adjust to the increasing demand. The National Training Center does not have a restricted life span so it is reasonable to expect that new construction would occur to meet the increase in demand. The additional income brought into the community by the National Training Center would pay for the new construction. In the short run, before the market could adjust, housing prices would increase along with the increased demand. The pinch would be felt by low and some moderate income households. The Army would consider mitigation measures proposed by the California Department of Housing and Community Development (see Comment and Response B.11.1) in its Master Plan for Fort Irwin to alleviate the housing cost burden on low income households.

A.6.4 Please refer to response to Comment A.4.1.

A.6.5 The text has been amended to include the corrections. [See Section 2.12.1.B(2)].

A.7.1 Impacts on housing and civilian employment are discussed in the text [Sections 3.12.2] and the Appendices [Section B.3.12.2, and B.3.13]. Additional information has been added to the section discussing impacts on the water supply [see Section 3.9.1 and 3.14.7 of the text].

A.7.2 The Army does not desire to eliminate the word "national" from the National

Training Center at this time. In discussions with the Department of Defense, the Office of Management and Budget and the Congress, the National Training Center is recognized as an Army program designed to train Forces Command armor and mechanized units. Continuing dialogue with these agencies makes reference to the National Training Center as an Army program. The name and acronym have become familiar and are in frequent usage. To change the identity of this program at this juncture would not only create undue confusion.

It is not the intent of the Army to imply that the creation of the National Training Center would necessitate the curtailment or reduction of activities at United States Marine Corps bases nor eliminate the requirement for such a facility for the United States Marine Corps.

B.1.1 Subsequent comments have not been received from the Arizona State Museum.

B.2.1 As part of the Army's continuing Environmental Programs, data would be gathered on the ecological impacts of training programs at any National Training Center. These data will be made available to public agencies, universities, and other interested parties.

B.2.2 Simulators have been used for crew training at divisional stations, however, they would be neither practical nor effective in the preparation of units. Unit training requires practice on terrain which approximates wartime conditions.

B.3.1 Comment noted. Discussion of vegetation at Yuma can be found in Section 5.3.3 of the text and Sections C.5.3.3.C(9) C.5.3.3.I(6), and C.5.3.3.K(3) of the Appendices.

B.4.1 Comment noted. If the Yuma Proving Grounds were to be chosen for the site of the National Training Center data included in the discussion of socioeconomic impacts on Yuma County in Section C.5.3.J of the Appendices and in Table 3 of the

text would be helpful in assessing population impacts. It should be noted that the 9% increase in population would occur in phases over a six-year period.

B.5.1 Significant wildlife impacts that you have suggested have been added to Section C.5.3.2.I(7) of the Appendices and Section 5.3.3.A of the text.

B.6.1 Permits or leases for prospecting or mining have not been granted within the jurisdictional limits of the Yuma Proving Ground while under management of the Army. This would continue to be the case if the Yuma alternative for the National Training Center were implemented.

B.7.1 A revised air quality analysis is included in Section B.3.3.2 of the Appendices.

B.8.1 Severe impacts on soils and vegetation, regardless of soil characteristics and location, are expected as a result of the proposed action. We feel that a more detailed discussion of soil characteristics and surficial geology would not aid the understanding of impacts on these subjects.

B.8.2 A quantification of the increase in fugitive dust particles has been included in a revised section on air quality impacts. See Section B.3.3.2 of the Appendices.

B.8.3 This mitigation measure, although effective in reducing soil compaction, would conflict with a significant goal of the National Training Center -- to simulate full-scale combat situations in all weather and terrain conditions.

B.8.4 Please refer to response to Comment A.3.4.

B.8.5 Comment noted. Please refer to response to Comment B.8.1.

B.8.6 The 75% figure refers to an increse in intensity over current use. A discussion of the increase in areal use is included in the response to Comment A.3.1.

B.9.1 In the Master Plan for Fort Irwin, the Army would consider the mitigation

opportunities suggested by the California Department of Housing and Community Development (comment B.11.1), Title IX, EDA Act of 1965, and other potential funding sources suggested for the alleviation of potential adverse impacts. Please see the response to Comment E.2.5 for a discussion of housing assistance programs.

B.10.1 Prior to an implementation of the National Training Center at Fort Irwin, the Army would plan to complete a revised Conservation Plan for Fort Irwin, setting aside areas of potentially significant adverse impact on flora and fauna in a manner consistent with the mission of the National Training Center. Observation of the Mojave Ground Squirrel at Fort Irwin has been acknowledged. Please refer to response to Comment A.3.13.

B.11.1 We agree that the estimated 715 secondary jobs generated by 2,772 primary jobs associated with the proposed action would normally be low. However, we are not dealing with a normal situation. The marginal propensity to consume for personnel associated with military installations tends to be smaller than normal where the majority of goods and services are supplied through the military structure. The methodology used for calculating secondary employment is summarized in Section B.3.11.2 of Appendix B. Expenditure allocations are provided from past studies of military installation personal expenditures. As such, theoretical definitions and semantic distinctions between primary and secondary employment tend to be blurred by the nature of the employment itself. Government service employment is an example of this problem. While service industries are generally regarded as secondary (non-export) employment, Fort Irwin employees are classified as primary for the purposes of this study, even though 318 civilian personnel employed at the Fort would be providing secondary services.

Thus, general (private sector) formulas do not apply to public service situations and unique conditions must be uniquely addressed.

Adjusting the general formula;

$$S.E. = \text{Average } \frac{P.I.}{C.I.} \times P.E. \text{ increase}$$

for this situation requires that we first adjust for income. Since the average primary employment income (P.I.) of $11,280 is projected (1980+) and the average community income (C.I.) of $9,880 is historical (1976), it is reasonable to assume that P.I. = C.I. Secondly, it is reasonable to reclassify 318 off-post civilian personnel as secondary employees. Next, we must recognize that, whether on-post or off-post, primary or secondary, all of the employees of Fort Irwin will be making the majority of their retail purchases of goods and services at military installations staffed by personnel already identified as secondary civilian employees. These retail purchases are estimated to represent 30% of the total disposable income for all employees of the Fort. Finally, housing for on-post employees has already been identified in the EIS with respect to the generated secondary employment associated therewith. Housing is assumed to represent another 30% of total disposal income. Assuming no net savings, 40% of disposable income can be applied to the general formula, the 0.4 adjustment factor previously used.

When applied to the general formula, we derive the following:

$$S.E. = 1.0 \times 2,692 \times 0.4 = 1,076-318$$

$$= 748 \text{ net new secondary employees}$$

This figure is not significantly different from the 715 secondary jobs calculated using the methodology described in Appendix B. The real issue seems to be the availability of off-post housing of affordable prices.

We agree that housing costs and prices are becoming unaffordable for most low income and many middle income families. This is a nationwide problem. It is assumed in the EIS analysis that multi-wage earner families can afford housing and that single employees can afford housing. Families with one wage earner, who may have a problem paying for housing, are projected to be a small percentage of the Fort Irwin employment picture. The EIS addresses the problem of housing for this group at length. [See Section 3.13 of the text and B.3.13 of the Appendices].

We agree with the intent of Policy 10 of the State Housing Plan. The Army would consider in the Master Plan the suggestions by the Department of Housing and Community Development to ensure that adequate off-base housing is available at a reasonable price to low income families in the Barstow area.

B.12.1 For a discussion of impacts on the Barstow-Fort Irwin Access Road, please note response to Comment A.4.1. We do not anticipate the need for additional highway improvements to mitigate adverse impacts on this road.

The great majority of the additional project induced 1,000 commuters to Fort Irwin would originate from Barstow. Impacts on Interstate 15 and State Highway 58 would be negligible as a result of increased commuter traffic. Supply vehicles carrying up to a ten-ton payload would use Interstate 15 and Route 58 on their way to Fort Irwin. Increases in average daily traffic will be minor. Heavy equipment will be transported by rail. For a further discussion of transportation impacts, please see Section B.3.13.6 of the Appendices.

B.12.2 As for provision of bus service, any subsidy to a firm providing service from Barstow to Fort Irwin, Federal law (C31USC Section 638a(c)) prohibits federal departments "unless otherwise specifically provided" from spending appropriated funds "for the maintenance, operation and repair of any government-owned passenger motor vehicle...not used

exclusively for official purposes; and official purposes shall not include the transportation of officers and employees between their domiciles and places of employment...except in cases of officers and employees engaged in field work the character of whose duties makes such transportation necessary... "United States Code Title 10, Section 2632 provides a limited exception to 638a(c) shoul Secretary of the Army find it necessary for the effective conduct of the Army to provide assured and adequate transportation. As AR 58-1 notes, however, the Secretary would have to determine that other transportation facilities are inadequate and cannot be made adequate.

The Army would, however, encourage van pooling and car pooling consistent with national policy as reflected in the Energy Policy and Conservation Act, Public Law 94-163 and Army Regulations 210-4. Section 381 of Public Law 94-163 establishes a public education program to promote van pooling and car pooling arrangements. Army Regulation 210-4 similarly establishes a policy of assisting energy conservation and environmental improvement through encouraging expanded use of car pools and mass transit modes and discouraging one-car, one-person travel to and from work. For example, the regulation specifies that "desirable and convenient parking spaces should be allocated/assigned to car pool vehicles and remote and less desirable spaces to sole occupancy vehicles. Should housing be provided off-base, the transportation impacts of alternate locations would be considerable.

B.13.1 We would welcome a meeting.

B.14.1 According to the Commander at Fort Ord (under whose jurisdiction the Fort Irwin Military Reservation lies), when large bodies of troops use the reservation for field maneuvers, bivouac sites used for more than twenty-four hours would be serviced by pit latrines. Maneuver campsites used for less than twenty-four hours will be serviced by field expedient latrines (slit trenches) in accordance with Field Manual 21-10. No significant

adverse impacts to land, water quality or public health are expected by such usage. The depth of the groundwater table, the low permeability of the soil and conformance to Field Manual 21-10 are expected to prevent any significant effects. The above methods have been approved by the California State Water Board and the Fort Ord Director of Health Services.

B.15.1 All solid waste will be disposed of at an existing landfill site which is located within the confines of the Fort Irwin Military Reservation.

B.16.1 Both contracts were awarded in a manner conforming fully to federal guidelines and normal Department of Army procedures. Coordination has taken place between the two firms. Interested parties will have the opportunity to comment on the Master Plan.

B.16.2 Executive Order 12088 reaffirms the federal government policy of complying with applicable pollution control standards in the prevention, control and abatement of environmental pollution. It also establishes in the Army the responsibility of submitting an annual pollution control plan providing for any necessary improvement in the design, construction, management, operation and maintenance of Army facilities and activities, and requesting sufficient funds in its budget for compliance with applicable pollution control standards. It should be noted, moreover, that Army Regulation 200-1 establishes the Army policy to comply with the National Environmental Policy Act, other Federal environmental laws, executive order regulations, and to demonstrate leadership in environmental pollution abatement and enhancement consistent with national security interests.

B.16.3 Assurance has been given the California National Guard that it would be allocated time and facilities to conduct training at current levels at Fort Irwin.

C.1.1 Your support for the project is acknowledged.

C.2.1 Your support for the project is acknowledged. Impacts on employment and unemployment are discussed in Sections 2.13.1 and 3.12.2 of the text.

C.3.1 The water supply situation in the Barstow area has changed considerably since the preparation of the Draft Environmental Impact statement. The Mojave Water Agency reports that early spring rains of 1978 have recharged the middle basin to the point that wells in that area have risen 50 or more feet due to natural flows and the subsequent release of 24,000 acre-feet of water from Silverwood Dam in May of 1978.

Southern California Water Company (City of Barstow water purveyor) will be able to supply water to the City of Barstow and the area for at least 20 more years without additional recharge to the basin due to the recharge of 1978 according to the Mojave Water Agenc. The water levels in the wells used by Southern California Water Company will still be above the 1977 levels in 1998.

The Mojave Water Agency in conjunction with the Department of Water Resources, State of California is 14 months into a General Plan, a study of 28 months duration that will completely explore the subject of water and its availability throughout the Mojave Water Agency (some 4700 square miles in area).

The Final Environmental Impact Statement updates the Barstow water supply situation in Section 3.14.7 of the text. We have recomputed the increase in the rate of overdraught resulting from off-post population generated by the National Training Center using a factor of 150 gallons per capita per day.

C.3.2 We agree that the enactment of the Jarvis-Gann Tax Initiative will lower the maximum tax rates that can be imposed on real property and improvements by some (but not all) taxing authorities. Special taxing districts will be less affected than general countywide property tax authorities. Also the tax base for

countywide taxes on existing real property and improvements will in most cases revert to 1975-76 base year assessed valuations unless or until a change of ownership occurs. This however, does not restrict the tax base and assessed valuations resulting from the construction of new homes and facilities which by definition will be acquired by new owners. In fact, due to the 1975-76 based year restrictions on the assessed value of existing property coupled with interim real property inflation, the property taxes derived from the value of new construction are likely to be far more than proportional to taxes derived from existing property of the same "market" value.

C.3.3 The tax and other fiscal consequences and impacts of the proposed action, while substantial in their own right are virtually negligible and untraceable when compared to the relative magnitude of the San Bernardino County fiscal structure as a whole. The overall demographic and related fiscal impacts are estimated to represent a change of less than one percent (1%) for the entire county. Since these impacts are all focused on the Barstow market area and geographic region of the county, they would represent a significant change on the order of ten percent (10%) for the greater Barstow area, assuming the off-base impacts to be fairly well distributed throughout the market area.

C.3.4 Please note responses to comments A.4.1 and B.12.1 for a discussion of impacts on County Road #440800. No unusual logistical or safety problems are anticipated, nor are any extraordinary maintenance expenses anticipated.

The Master Plan for Fort Irwin envisions a rail siding to the Base. Until this project is implemented, the rail siding at Mannix would be used to unload tracked vehicles. They then would be transported cross-country on an existing trail already used for such purposes. See response and comment A.3.10.

C.3.5 Comment noted.

C.3.6 Refer to Section B.3.3.2 of the Appendices for a revised discussion of air quality impacts. As for possible busing and car pooling, please see response to Comment B.12.2.

C.3.7 We agree that rehabilitation of a desert environment subject to impacts discussed in the EIS is unfeasible within a human time frame. The revegetation program has been removed as a mitigation measure and will not be attempted until such time as it proves technically feasible. We acknowledge your involvement in weed abatement and would contact you if the need arises.

C.3.8 We agree that the timing of the construction of new homes and other facilities associated with the proposed action at Fort Irwin and phased coordination with other major construction (including energy production) activities in the region is critical in order to avoid placing an undue burden on the construction and other capacities of the local communities over the short-term. These concerns are incorporated in the proposed action by reference to the overall construction planning program which is flexible in response to local conditions and shall avoid significant synergistic impacts. In particular, the hypothetical requirements for energy production (which may be pending or approved) would generally take place prior to major requirements related to the construction program which is part of the proposed action for Fort Irwin. This will be assessed on an ongoing basis as actual competing requirements for construction and other local capacities may become known in more detail in future years of the program for the proposed action. That the National Training Center would strengthen the Barstow economic base is acknowledged.

C.3.9 Sludge will be used in accordance with Army Regulations for soil stabilization and conditioning on Fort Irwin.

It is anticipated that all domestic effluent created on base will be handled by base facilities (see Section 3.9.3 of text and response to comment B.14.1).

Other liquid and solid wastes will be disposed of at an existing landfill which is located within the confines of Fort Irwin.

Fort Irwin is currently under a time schedule to upgrade the wastewater treatment facilities to comply with the California Regional Water Quality Control Board (see Comment B.14.1).

C.3.10 Electronic frequency interferences are not expected. Refer to Sections 3.6 and 4.1.1.E for an updated discussion of this potential impact.

C.3.11 This statement has been clarified in the Final EIS.

C.3.12 This statement has been revised (see Section 4.1.3. The resource reserve area referred to has been characterized by the San Bernardino County Planning Department as an area with potential for recreational and mineral development.

C.3.13 The Army has notified Congress of the intention to exchange by mutual agreement 21,120 acres of California Public School lands at Fort Irwin in accordance with Public Law 76-231, 26 July 1939. The General Services Administration is presently in the process of exchanging these lands with the State of California for equal value public lands.

C.3.14 The proposed cultural resource survey is outlined in Phase I of the Proposed Program Survey and classification of Cultural Resources - Fort Irwin Military Reservation found in Appendix D of this document. We acknowledge your offer to discuss site records and mitigation suggestions.

C.3.15 The net impact on housing and employment of options which utilize Fort Irwin are diagrammed in the table following page 75. (Section 5.2). The options reduce the number of persons living off-post and hence, off-post land impacts. There would be no measurable reduction, however, in on-post land disturbance or national defense benefits. See Section 9.2.2 of text.

C.3.16 The future cannot be predicted with complete accuracy, but the size and relative isolation of Fort Irwin will allow realistic combined arms training for the forseeable future. Testing of future weapons systems will be primarily conducted at other installations. There is no plan or intention for expanding Fort Irwin.

D.1.1 Resolution 4-78 is acknowledged.

D.2.1 Please note Section C.5.3.2.I(2) of the Appendices which states that "the use of water resources would be decreased if the National Training Center were established at Marine Corps Base Twenty-Nine Palms".

D.2.2 It is unlikely that land use plans in the Twenty-Nine Palms area would be affected by implementation of the Marine Corps Base alternative. Adverse noise impacts from gunfire and inadvertent breaking of the sound barrier would be expected. We agree that location of many senior citizens in and around Twenty-Nine Palms would exacerbate noise problem.

D.3.1 Your opposition to the Twenty-Nine Palms alternative is noted.

D.4.1 Your opposition to the Twenty-Nine Palms alternative is noted. However, it is incorrect to state that implementation of the National Training Center at the Marine Corps Base would be associated with a large influx of people to Twenty-Nine Palms. Loss of off-base population is more likely. Please refer to Section 5.3.2.B of the text and Sections C.5.3.2.F and C.5.3.2.J of the appendices for a discussion of this topic.

D.5.1 Your opposition to the location of the National Training Center at Twenty-Nine Palms and your comments on water resources are acknowledged. Please note, however, that a change of mission at Twenty-Nine Palms from the Marine Corps Training Center for the Army would reduce the demand for water in the area.

D.6.1 Your comments on the Environmental Impact Statement are appreciated. Please note response D.5.1 concerning water resources.

D.7.1 Paleontologic resource identification, preservation and mitigation are included in the cultural resource program for Fort Irwin contained in Appendix D of this document.

D.8.1 The best available information on water resources at Fort Irwin indicates that an adequate supply of well water exists to satisfy the increase in demand associated with establishment of the National Traiing Center. Please refer to Section B.3.8.1 of the appendices.

Off-base increases in population would cause increased demand for water in the Barstow area where the supply of water is already of concern. The Mojave Water Agency and the California Department of Water Resources are considering the alternative sources of water for the Barstow area. Recommendations on this issue are expected as part of the Mojave Water Agency's General Plan which is due for completion in December, 1979.

D.8.2 Refer to Section B.3.3.2 of Appendices for a revised discussion of air quality impacts.

D.8.3 The public hearing at Twenty-Nine Palms and letters from Twenty-Nine Palms residents indicate that many in this community are opposed to a decision to locate the National Training Center at the Twenty-Nine Palms Marine Corps Base. The Barstow community, however, would appear predominantly to support the location of the National Training Center at Fort Irwin. It should be noted that large-scale military training would not be new to Fort Irwin and the Barstow area. Training has occurred periodically at Fort Irwin since 1940. The U.S. Naval Ordinance Test Station (China Lake) and the U.S. Marine Corps Training Center (Twenty-Nine Palms) are in the general vicinity of Barstow.

D.8.4 There is no National Training Center in Texas or anywhere else at present.

In the best judgement of the Department of the Army's military analysts, the military technology proposed to be employed would be the most effective in a war. The future cannot be predicted with complete accuracy, but the size and relative isolation of Fort Irwin will allow realistic combined arms training for the forseeable future. Testing of future weapons systems will be primarily conducted at other installations. There is no plan or intention for expanding Fort Irwin.

D.8.5 Left over ordnance is a problem which predates the establishment of the National Training Center. The Army would constantly police the reservation to dispose of leftover ordnance.

D.8.6 Local taxes are unlikely to increase as a direct or indirect result of implementation of the National Training Center at Fort Irwin. Although an increase in off-base population would cause an increase in the demand for local government services, tax revenues are expected to rise proportionally. A larger population would result in an increase of the demand for housing, causing increases in housing construction activity and higher property values. The result would be a larger tax base. Local governments also receive transfers from federal and state government as part of their revenue base. Since most transfers take into account population in their allocation formula, this form of revenue would be expected to rise.

The Barstow area would face a problem of adjustment to the new population in the provision of government services, but the adjustment would be similar to that of any rapidly developing area. Two factors are unique to this situation. The increase in population will be a phased increase, not the gradual increase developing areas experience. On the other hand, the Barstow area has had experience in changes of mission at nearby military bases and should be able to adapt relatively well to the National Training Center.

D.9.1 The Army has developed a cultural resource identification, preservation and mitigation program which is contained in Appendix D of this document. Phase I of the program includes a field inventory of significant cultural resources. Phase II includes the development of an ongoing program for cultural resource preservation and mitigation.

D.10.1 A discussion of the impact of the Army's proposed National Training Center on Twenty-Nine Palms is included in the Environmental Impact Statement. Refer to Section 5.3.2 of the text and Section C.5.3.2 of the appendices.

D.11.1 No. The National Training Center proposed for Fort Irwin is for training Army personnel. The Twenty-Nine Palms facility presently trains Marine Corps personnel. See response to Comment A.7.2.

D.11.2 A full range of conventional tactical ordnance would be used if the Twenty-Nine Palms alternative is implemented. The noise level of the shelling would depend on relative location of the shelling sites and noise-impacted areas. The frequency of shelling is expected to increase, therefore, it can definitely be stated that increased noise impacts would occur.

D.11.3 Decision-making responsibility for maintenance and improvement of Highway 62 is held by the San Bernardino County Department of Transportation.

D.11.4 Incoming troops would continue to arrive by air on the expeditionary field. Troops that are stationed at the base for short-term training would not be allowed in town liberty.

D.12.1 Your comments are noted. Comment (3), stating that an increase in school enrollment at Twenty-Nine Palms schools would occur, is incorrect. If the Twenty-Nine Palms alternative were implemented, there would be a decrease in the number of school children attending Twenty-Nine Palms schools as the off-base population would decline.

D.13.1 Please refer to Sections 5.3.2 and 5.3.4 of the text and Section C.5.3.2.J of the Appendices for a discussion of impacts on schools and public services. Table 3 of the text should prove to be particularly helpful.

D.14.1 A program for cultural resource identification, preservation and mitigation has been included in Appendix D of this document.

D.15.1 The figure "1.5 inches of annual rainfall" is taken from data collected at Fort Irwin. Please refer to Section A.2.1 of the Appendices for a discussion of this matter.

3.2 Public Hearing Comments and Responses

In this section are comments made at the three public hearings and the Army's responses. The comments and responses made at the Yuma (Arizona) hearing held on October 24, 1978 are found in Section 3.2.1; the Twenty-Nine Palms (California) hearing held on October 25, 1978 are found in Section 3.2.2; and the Barstow (California) hearing held on October 26, 1978.

Comments have been extracted and paraphrased from transcripts prepared at each hearing. If comments were also submitted in writing, they have been reprinted and have received responses in Section 3.1.2. These comments are not duplicated here.

In some cases, comments made in the public hearings that did not appear to require responses have not been reprinted here. Copies of public hearing transcripts are available at the cost of publication by writing the U.S. Army Corps of Engineers, Sacramento District, 650 Capitol Mall, Sacramento, California 95814.

3.2.1 The Yuma Public Hearing

Comment E.1.1: The Draft Environmental Impact Statement does not adequately assess the impact on the approximately 150 desert bighorn sheet that live on the Yuma Proving Ground.

Response: Please refer to Comment and Response B.5.1, from Arizona Game and Fish Department.

Comment E.1.2: An increase in the number of military personnel at Yuma Proving Ground will increase requirements for police and fire protection in both Yuma City and Yuma County and cause an increase in taxes.

Response: An increase in the demand for police and fire services in the area is expected, as over 5,000 people would migrate to the Yuma area. However, new people mean new tax revenues. Assuming that the new population receives proportionally the same amount of police and fire protection as the old population, and contributes proportionally to the tax base, then no new taxes would be required.

Comment E.1.3: Yuma County presently is not in compliance with 1977 air quality standards. Implementation of the National Training Center at the Yuma Proving Ground would increase the amount of dust in the air.

Response: According to our sources the Yuma Proving Ground is presently in full compliance with all federal and Arizona air quality ordinances. (See Section C.5.3.3.C(2) of Appendices.) The dust problem has been identified as an adverse impact in the EIS. (Section 5.3.3 of text and Section C.5.3.3.I(1) of Appendices.)

Comment E.1.4: Yuma attracts a large number of visitors during the winter. The town's streets and stores are already crowded. Retail activity that is generated by the National Training Center really is not needed.

Response: Comment noted. The number of jobs and economic activity generated by the National Training Center would not fluctuate seasonally.

Comment E.1.5: The Yuma Proving Ground is presently performing an important mission that would be lost.

Response: In Appendix C of the EIS is stated: "(r)elocating Yuma testing activities to another area would be very costly and cause an impact on the environment and economy of that area." (See Section C.5.3.3.N of Appendices.)

3.2.2 The Barstow Public Hearing

Comment E.2.1: The EIS did not give enough information regarding the intended signalization, the total road capacity of Route 58 to be included with the expansion of Fort Irwin and whether or not the Army would be interested in inviting some type of public transit to help the situation.

Response: No serious impacts on Route 58 are anticipated. Major impacts are expected to occur on the Barstow-Fort Irwin Access Road. Please note Section 3.12.2 and responses to Comments A.4.1 and B.12.1 for a discussion of road capacity, improvements and public transit for this facility.

Comment E.2.2: We are concerned with overall air quality. We found the document generally not giving us enough information where we can make any quantified determination.

Response: A reviewed discussion of air quality is included in Section B.3.3.2 of the Appendices.

Comment E.2.3: We (the California Governor's Office of Planning and Research) have concern for the areawide sewage disposal system, total capacity and solid waste. Since the Army will need to consider permits from the State Resources Control Board, we would like to coordinate the effort.

Response: Please refer to Section 2.14.4 as the text for a discussion of the Barstow area sewage disposal system. Sewage disposal on the base is discussed in Sections 2.4.4 and 3.9.3 of text and in the response to Comment B.14.1. Solid waste disposal is also discussed in the response to Comment B.15.1.

Comment E.2.4: We are concerned with groundwater contamination and recharge.

Response: Please refer to Sections 2.4.1, 2.4.2, 2.4.3 and 3.9 of the text for a discussion of groundwater supply, recharge and quality. The question of groundwater recharge will be the subject of further study in preparation of the basin management program as part of Phase II of the Fort Irwin Master Plan.

Comment E.2.5: The vacancy rate in Barstow is approximately 2 percent. What will be the housing situation for low-salaried military personnel? Has the Army considered Section 8, subsidized allocations? The EIS does not consider the existing housing element for Barstow.

Response: Low salaried military personnel who would live off-post may have some difficulty finding adequate and affordable housing. The EIS refers to the Army's housing assistance program in Section 3.13 of the text. A further discussion of this problem is included in the responses to Comments B.11.1 and A.6.3.

The Army has considered HUD's Lower Income Rental Assistance (Section 8) which is available to low and moderate income families, both military and civilian. Under this program, nonprofit and profit-motivated developers, alone or with Public Housing Agencies, may submit proposals for substantial rehabilitation or new construction of family housing. Upon approval of the proposals, HUD contracts to subsidize the units to be occupied by eligible families. According

to a HUD spokesman, approximately 50 percent of off-base personnel (military and civilian) appear eligible for housing assistance. Newly constructed single-family housing, mobile homes and multi-family structures may be utilized in this program.

Under Section 8 Existing Housing Program certified (by the Public Housing Authority) eligible families negotiate directly with landlords to secure rental accommodations that meet both rental and housing quality requirements of the program. HUD also was a Mobile Home Courts Program whereby HUD insures mortgages made by private lending institutions to help finance the construction or rehabilitation of entire mobile home parks.

Comment E.2.6: "With regard to the Regional Health Services Agency and the impact of any health services that may be utilized on Fort Irwin in conjunction with this community, we think we would like to see that expanded on a little better in the Environmental Impact Statement."

Response: Health statistics and impacts are discussed in full in Section 2.14.2, section A2.14.2.A and B3.14.2 of the Appendices.

3.2.3 The Twenty-Nine Palms Public Hearing

Comment E.3.1: A decrease in employment in the Twenty-Nine Palms area is undesirable.

Response: Comment noted. Please refer to Section C.5.3.2.J of the Appendices for consideration of employment impacts.

Comment E.3.2: Electronic jamming will interfere with radio and television, the primary form of entertainment for residents of the area. The noise level will increase as a result of the proposed action.

Response: Comment noted. We agree that these impacts would occur at Twenty-Nine Palms.

Comment E.3.3: Allowing the proposed action to be implemented at Twenty-Nine Palms would effect a change in the character of the local community, which in the long run would be detrimental despite increase in business activity.

Response: Comment noted. The population of Twenty-Nine Palms is expected to decrease by nearly 1,500 as a result of the proposed action. This loss of population is likely to be accompanied by a decrease in business activity.

Comment E.3.4: Will water use in the Twenty-Nine Palms area actually decrease as a result of implementation of the National Training Center at the Marine Corps Base? Including rotating troops, there would be an increase in the number of personnel stationed at the base.

Response: Rotating troops would be working in the field. Water consumption would be much less per capita for troops in the field than for permanent base residents. Overall water consumption would be reduced.

Comment E.3.5: What impact will artillery shelling have on water quality of wells in the Twenty-Nine Palms area? We have been told that the muddy water we have been getting has been the result of Marine Corps shelling.

Response: If it is true that there is a correlation between artillery shelling and siltation of wells, then more siltation can be expected as the frequency of shelling would increase.

Comment E.3.6: What would be the impact on local schools if the National Training Center were located at Twenty-Nine Palms?

Response: Schools in Twenty-Nine Palms are presently filled to capacity. Implementation of the proposed action would reduce the population and the number of school children in the Twenty-Nine Palms area.

Comment E.3.7: What would be the impact on civilian employment at the Twenty-Nine Palms base?

Response: Civilian employment at the base is expected to drop by 285 jobs should the National Training Center be established at Twenty-Nine Palms.

Comment E.3.8: If the National Training Center is located in Fort Irwin, the California National Guard will be deprived of their training site.

Response: The National Guard has been assured that its training exercises would be allowed to continue at present levels if the Fort Irwin site were chosen for the National Training Center.

Comment E.3.9: Why can't the Army pump water into Barstow? This action would solve their water problem, Barstow's water problem and allow the Fort Irwin alternative to be implemented.

Response: The Army is undertaking a study of water reserves at the Fort Irwin site. Your suggestion will be taken into consideration in the preparation of the water management program which will be included in Phase II of the Master Plan for Fort Irwin.