



APPENDIX B

AGENCY CONSULTATION AND COORDINATION



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AGENCY CONSULTATION AND COORDINATION

As part of the environmental impact analysis process (EIAP), consultation and correspondence were performed with federal, state, and local agencies, listed below. Copies of the correspondence are included in this Appendix, in sections as listed below. Consultations are included in Section B.10 (Agency Consultations) as Sections B.10.1 (National Historic Preservation Act Section 106 Consultation) and Section B.10.2 (Endangered Species Act Section 7 Consultation).

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B.1 BUREAU OF LAND MANAGEMENT

Letter from Air Force requesting formal participation as Cooperating Agency: January 29, 2016



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

JAN 29 2016

OFFICE OF THE ASSISTANT SECRETARY

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

Mr. John Ruhs
Director
Nevada Bureau of Land Management
1340 Financial Blvd.
Reno, NV 89502

Dear Mr. Ruhs:

The Air Force is initiating its Land Withdrawal Renewal for the Nevada Test and Training Range (NTTR) and requests BLM formal participation as a Cooperating Agency in the preparation of a Legislative Environmental Impact Statement (LEIS), as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR Part 1501.6, Cooperating Agencies.

The Air Force asks for your participation as a Cooperating Agency in preparation of the LEIS as generally outlined in the steps below. To address the specific responsibilities of the Air Force as Lead Agency and BLM as Cooperating Agency, we also propose development of an Interagency Agreement, the context of which will be worked out between the Cooperating Agencies, subsequent to this request.

- (1) Participating in the LEIS scoping, data gathering, analysis, and consultation processes;
- (2) Assuming responsibility, upon request, for developing information and preparing analyses on issues for which USFWS has special expertise;
- (3) Making USFWS staff support available to enhance interdisciplinary review capability, correspondence, and/or surveys; and
- (4) Responding in writing to this request.

The Air Force requires the support of cooperating agencies be timely, to avoid unnecessary delays in the NEPA process. Should you or your staff have further questions regarding this memo, our point of contact is Mr. Jack Bush, HQ USAF/A4CI, at (703) 614-0237 or jack.bush@pentagon.af.mil.

Sincerely

A handwritten signature in cursive script, reading "Jennifer L. Miller", is positioned above the typed name.

JENNIFER MILLER
Deputy Assistant Secretary of the Air Force
(Installations)

cc:
AF/A30/A4C/TE
HQ ACC/AFMC/CV
Tim Smith, BLM District Manager Southern Nevada

Interagency Agreement between Air Force and Bureau of Land Management: June 29, 2016

INTERAGENCY AGREEMENT
BETWEEN
THE UNITED STATES AIR FORCE
AND
THE BUREAU OF LAND MANAGEMENT
GOVERNING PREPARATION OF THE
NEVADA TEST AND TRAINING RANGE LAND WITHDRAWAL RENEWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT AND SUPPORTING CASE
FILE STUDIES

I. PARTIES TO THE AGREEMENT

This Interagency Agreement (herein Agreement) is made by and between the United States Air Force (herein USAF) and the Bureau of Land Management (herein BLM).

II. PREAMBLE

WHEREAS, the Military Lands Withdrawal Act of 1999, Pub. L. No. 106-65, (MLWA) withdrew from the public domain certain lands known the Nevada Test and Training Range (NTTR) and reserved such lands for military use;

WHEREAS, the NTTR land withdrawal expires November 6, 2021;

WHEREAS, in accordance with the MLWA, USAF intends to: advise Congress and the Secretary of the Interior of a continuing military need for the NTTR withdrawal; consult with the Secretary of the Interior concerning modifications to be made to the boundaries of the NTTR land withdrawal; submit an application to the Secretary of the Interior to extend and potentially modify the withdrawal of the NTTR; and submit a legislative proposal for such extension to Congress no later than May 1, 2020;

WHEREAS, BLM is responsible for processing applications to renew and potentially expand the NTTR land withdrawal in accordance with the MLWA, Section 204 of the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. § 1714) and 43 C.F.R. part 2300.

WHEREAS, USAF is the lead agency (40 C.F.R. § 1501.5) and BLM is a cooperating agency (40 C.F.R. § 1501.6) for preparation of a legislative environmental impact statement (LEIS) for the proposed NTTR land withdrawal renewal;

WHEREAS, BLM has special knowledge and expertise regarding public lands that will assist USAF in successfully completing the LEIS and preparing case file information, studies, analyses and reports (materials) required under 43 C.F.R. § 2310.3-2;

WHEREAS, USAF and BLM recognize the importance of government-to-government relations with Native Americans and the participation of Native Americans in the NTTR land withdrawal renewal;

NOW, THEREFORE, the parties agree to work cooperatively in the following manner:

III. AUTHORITY FOR ENTERING INTO THIS AGREEMENT

The parties enter into this Agreement in accordance with the MLWA, FLPMA, and the National Environmental Policy Act (NEPA) (42 U.S.C. §§ 4321-4347).

IV. PURPOSE

The purpose of this Agreement is to facilitate the preparation of an LEIS that meets the requirements of the NEPA; the preparation of other case file materials as required for the withdrawal application under 43 C.F.R. § 2310.3-2; and the development of proposed legislation and findings and recommendations to submit to the Secretary of the Interior and then to Congress on the renewal and potential expansion of the NTTR land withdrawal.

V. RESPONSIBILITIES

1. USAF and BLM together will:

- (a) Follow procedures necessary to renew and potentially add land to the NTTR land withdrawal in compliance with the MLWA, FLPMA, NEPA and other applicable laws.
- (b) Inform each other of the date, time, location and purpose of major meetings involving designated representatives and/or third parties to discuss the NTTR land withdrawal renewal.
- (c) Protect interagency deliberative communications and information exchanged pursuant to the agreement, consistent with the USAF serving as the release authority under Freedom of Information Act procedures.

2. USAF will:

- (a) Communicate the execution of this Agreement to those elements throughout its chain of command working to complete tasks associated with the renewal of the NTTR land withdrawal.
- (b) Serve as the designated Lead Federal Agency for purposes of compliance, respectively, with consultation requirements under Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and any consultation or conferencing responsibilities under Section 7 of the Endangered Species Act (16 U.S.C. § 1536), pursuant to 36 C.F.R. § 800.2(a)(2) and 50 C.F.R. § 402.07, respectively. Communications to consulted agencies for the NTTR land withdrawal action shall occur through the USAF as the lead agency for the action.
- (c) Designate points of contact for the LEIS and Cooperating Agency Coordinating Committee (CCC).
- (d) Chair an LEIS Technical Working Group that:

- i. Meets as needed to monitor preparation of the LEIS;
- ii. Provides representatives from the lead and cooperating agencies an opportunity to serve on the Technical Working Group;
- iii. Invites representatives from other agencies or organizations to participate in the Technical Working Group, as appropriate;
- iv. Reviews comments received during the scoping process for inclusion into the LEIS;
- v. Makes recommendations to the project team (lead and cooperating agencies);
- vi. Prepares and distributes minutes to Technical Working Group members;
- vii. Contacts the BLM, the Nevada State Historic Preservation Officer, Nevada Department of Wildlife and other Federal and state agencies as appropriate before collecting baseline data necessary for preparation of the LEIS;
- viii. Provides the BLM all of the information necessary to assist in developing the land withdrawal case file;
- ix. Ensures that a cultural resources use permit is obtained before gathering information concerning cultural resources in the project area; and
- x. Provides BLM a copy of all public comments received through the scoping process and on the draft LEIS.

3. In furtherance of Cooperating Agency responsibilities under 40 C.F.R. Part 1500, BLM will:

- (a) Communicate execution of this Agreement to the appropriate BLM offices and the Department of the Interior;
- (b) Designate lead points of contact for the NTTR land withdrawal renewal LEIS and case file review;
- (c) Complete NTTR land withdrawal support activities necessary to adhere to the NTTR land withdrawal project schedule (see Enclosure 1);
- (d) Review proposed methods and procedures for identifying natural and cultural resources in support of the LEIS before initiating field work;

- (e) Grant reasonable access to USAF and its consultants to BLM administered lands within the project area in a timely manner to collect baseline data necessary for LEIS preparation;
- (f) Review results of natural and cultural resources field work and any reports prepared as a result of field work before release of the information to the public;
- (g) Review and provide comments on drafts of environmental planning studies in accordance with the project schedule;
- (h) Review and provide comments on the draft and final LEIS, along with any requested supporting analysis, in accordance with the LEIS project schedule;
- (i) Participate in LEIS scoping and public hearings; and
- (j) Coordinate with USAF, as lead agency, to communicate issues and responses to consulting parties and other agency stakeholders.

VI. REIMBURSEMENT FOR SERVICES

1. USAF agrees to seek sufficient funding authority to reimburse BLM for the costs of providing the following services related to LEIS and case file preparation:

- (a) Review proposed methods and procedures for identifying natural and cultural resources in support of the LEIS before initiating field work.
- (b) Review results of natural and cultural resources field work and any reports prepared as a result of field work before release of the information to the public.
- (c) Work with the USAF in the development of reasonable range of alternatives for the LEIS.
- (d) Review and provide comments on drafts of environmental planning studies.
- (e) Review and provide supporting analysis for drafts of draft and final LEIS in accordance with the project schedule.
- (f) Participate in LEIS scoping and public hearings.
- (g) Complete land survey work necessary to support required legal descriptions as part of the NTTR LEIS and land withdrawal case file.
- (h) Assist in developing other case file materials necessary under FLMA to support the land withdrawal application.
- (i) Other services as agreed to by the parties.

2. Reimbursement for services described in paragraph 1. will be accomplished under the authority of the Economy Act (31 U.S.C. §§ 1535-36) using the ordering procedures described in Federal Acquisition Regulation Subpart 17.5 and Department of Defense Federal Acquisition Regulation Supplement Subpart 217.5 and forms agreed to by the USAF contracting officer and BLM. The parties may enter into multiple Economy Act orders as necessary under this Agreement. BLM may, in writing, request advance payment for all or part of the estimated cost of furnishing requested services.

3. Reimbursement for services under this Agreement and associated Economy Act orders shall not exceed a total of \$1,129,415.00 for fiscal years 2016, 2017 and 2018. USAF may approve an annual budget that exceeds one-third of the total services funds if BLM demonstrates the need for a higher percentage based on the scope of the work projected during the fiscal year.

4. Nothing in this Agreement shall be construed to provide for reimbursement for activities BLM is required by law to perform and for which it has received appropriations.

5. This Agreement is neither a fiscal nor a funds obligation document. Only an Economy Act order executed pursuant to this Agreement shall constitute an obligation of funds by USAF.

VII. DISPUTE RESOLUTION

1. Conflicting scientific evidence, if any, offered by the parties will be discussed in the NTTR land withdrawal renewal LEIS as long as such views are supported by credible scientific evidence.

2. Designated representatives on the Technical Working Group will make all reasonable efforts to informally resolve disputes related to the preparation of the LEIS.

3. If disputes cannot be resolved after 15 days following initiation of dispute resolution, either signatory of this Agreement may request elevation of the matter to their higher headquarters for resolution by issuing a written statement of dispute.

VIII. CONDITIONS

Both parties understand and mutually agree:

1. Implementation of this Agreement is of mutual benefit;

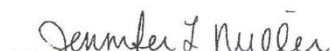
2. This Agreement may be modified or amended only by mutual agreement of the parties in writing and signed by each of the parties hereto;

3. Any documents or data exchange between the parties to the Agreement will not be released to a third party unless the designated representative of the party that generated the document or data approves the release;

4. Nothing herein contained shall be construed as limiting or affecting in any way the vested or delegated authority of the USAF and BLM; and

5. This agreement becomes effective when signed by all parties and shall remain in full force and effect until the submission of the case file and proposed legislation to the Secretary of the Interior or the project is canceled, but may be terminated by either party upon 45 days written notice to the other party.

JUN 23 2016



JENNIFER MILLER

Deputy Assistant Secretary of the Air Force
Installations

DATE



JOHN RUHS

Director, Nevada State Office
Bureau of Land Management

6/29/16

DATE

Enclosure 1: NTTR LEIS Project Schedule

- January - October 2016 – Complete Reviews of Biological and Cultural Survey Plans
- February 2016 - Mar 2017 – Air Force Conducts Biological Field Surveys
- July 2016 - Finalize Content of NTTR Land Withdrawal Application Packets, Property Legal Descriptions and the NTTR LEIS Notice of Intent
- August 2016 – Publish LEIS Notice of Intent
- September 2016 – Participate in LEIS Public Scoping Meetings
- September - December 2016 – Air Force Conducts Cultural Resource Field Surveys
- March 2017 – Draft Biological Assessment Delivered to the Government
- April 2017 – Preliminary Draft EIS Delivered to Government
- April - May 2017 – Complete Review of Preliminary Draft LEIS and Biological Assessment
- June 2017 – Participate in On-board Review of Preliminary Draft LEIS
- June – October 2017 – Endangered Species Act Section 7 Consultation
- July – August 2017 – Review Interim Draft LEIS
- November 2017 – Publish Draft LEIS
- December 2017 – Participate in Public Hearings on Draft LEIS
- May 2018 – Preliminary Final LEIS Delivered to the Government
- May – June 2018 – Government Review of Preliminary Final LEIS
- June 2018 – On-board Review of Preliminary Final LEIS
- July 2018 – Delivery of Interim Final LEIS
- September 2018 – Delivery of Final LEIS
- October 2018 – Publication of Final LEIS
- November 2018 – Delivery of the LEIS and Case file to BLM
- November 2018 to November 2019 – BLM Review and Processing of the Case file
- May 2020 – Secretary of the Interior Submits the Case file to Congress

Letter from Air Force to BLM, Land Withdrawal Extension Application: August 12, 2016



DEPARTMENT OF THE AIR FORCE WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

SAF/IE
1665 Air Force Pentagon
Washington, DC 20330-1665

AUG 12 2016

Mr. John Ruhs, Nevada State Director
Department of the Interior, Bureau of Land Management
1340 Financial Boulevard
Reno, Nevada 89502

Dear Mr. Ruhs,

In accordance with 43 U.S. Code § 155, the National Defense Authorization Act for Fiscal Year 2000, Military Land Withdrawal Act of 1999 (Public Law 106-65), the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 (Public Law 113-291), the Federal Land Policy and Management Act of 1976, as amended (FLPMA) 43 U.S.C. 1714, 43 part 2300 and, as implemented by BLM Instruction Memorandum No. 2001-030, the United States Department of the Air Force (Air Force) requests processing of this land withdrawal application for the withdrawal and reservation of public lands associated with the Nevada Test and Training Range (NTTR), formerly known as the Nellis Air Force Range (Nellis AFR), Nevada. The NTTR is required for military use as a national security test and training range by the Air Force. Priority processing of this application is in the interest of Homeland Defense and the War on Terrorism.

The NTTR consists of 2,949,603 acres of public lands withdrawn and reserved for Air Force use through Public Law 106-65 and Public Law 113-291; the withdrawal expires on November 5, 2021. This withdrawal and reservation overlaps 826,000 acres of public lands withdrawn and reserved for U.S. Fish and Wildlife Service (USFWS), Desert National Wildlife Refuge (DNWR) purposes. The DNWR is withdrawn and reserved by Executive Order No. 7373, Public Land Order (PLO) 4079, and PLO 7070. Public Law 106-65 requires the Air Force and USFWS' co-management of this overlapping withdrawal through a Memorandum of Understanding (MOU). The NTTR-extension request pertains only to lands within the boundaries withdrawn and reserved by Public Law 106-65 and Public Law 113-291.

National defense requirements are rapidly evolving in response to changing world conditions, the Global War on Terrorism, developing technologies, and new emerging threats. The NTTR is a Major Range and Test Facility Base national asset and is used to accommodate two major national defense necessities: Test and Evaluation (T&E); and, large-scale training. The NTTR is sized, operated, and maintained to provide T&E information to Department of Defense (DoD) component users in support of DoD research, development, T&E, and the acquisition process. The NTTR is required to provide a broad base of T&E capabilities that are sufficient to support the full spectrum of DoD T&E requirements. The NTTR contributes to combat readiness

training, providing a venue for major training events, 5th-generation aircraft training, and training for other Federal agencies, state and local governments, allied foreign governments, and commercial entities. The NTTR is the Air Combat Command's range of preference for Tactics Development and Evaluations (TD&E) due to its focus on high-end combat training and operationally relevant testing. Extension of this land withdrawal is essential in order that the Air Force Warfare Center may maintain current test and training at NTTR and support military test and training objectives into the future.

The Air Force will promptly notify the Bureau of Land Management (BLM) if new developments change the purpose of this request that require a revised application for extension of the withdrawal and reservation. We will also notify the BLM if any acreage for extension is not required.

1. Name and Address of Applicant:

(a) Name and address of person delegated the authority to file the application.

Ms. Miranda A. Ballentine, Assistant Secretary of the Air Force for Installations, Environment, and Energy, Headquarters U.S. Air Force, 1670 Air Force Pentagon, Washington, DC 20330-1670, phone (703) 697-5023, email miranda.ballentine.civ@mail.mil.

Ms. Jennifer L. Miller, Deputy Assistant Secretary of the Air Force for Installations, Headquarters U.S. Air Force, 1665 Air Force Pentagon, Suite 4B941, Washington, DC 20330-1665, phone (703) 695-3592, email Jennifer.L.miller273.civ@mail.mil

Mr. James Sample, Office of the Deputy Assistant Secretary of the Air Force for Installations, Headquarters U.S. Air Force, 1665 Air Force Pentagon, Washington, DC 20330-1670, phone (703) 693-3349, email james.a.sample6.civ@mail.mil.

(b) Name and address of using agency.

Maj. Gen. Glen D. VanHerck, Commander, United States Air Force Warfare Center (Air Combat Command), 3770 Duffer Drive, Nellis AFB, NV 89191-7001, United States Air Force:

Mr. Roger Christensen, NTTR/XPN, 3770 Duffer Drive, Nellis AFB, NV 89191-7001, phone (702) 653-4650, email roger.christensen@us.af.mil.

(c) Name, address, and phone number of primary point of contact for all aspects in preparing and processing the application.

Mr. Mike Ackerman, NEPA Division (AFCEC/CZN), Bldg. 1650, 2261 Hughes Ave., Lackland AFB, TX 78236, phone (210) 925-2741, email michael.ackerman.2@us.af.mil.

2. Designation and Delegation of Authority:

The Secretary of the Air Force (SECAF) Mission Directive 1-18 (HAF MD 1-18) assigns responsibility for real property authorities, to include the acquisition, management, and disposal of real property, to the Assistant Secretary of the Air Force for Installation, Environment and Energy (SAF/IE). SAF/IE delegates authorities for real estate transactions, including responsibilities for the withdrawal of public lands, to the Deputy Assistant Secretary for Air Force Installations (SAF/IEI). Air Force Instruction 32-9001, Real Property Acquisition, identifies procedural guidance and requirements for real estate actions, including withdrawal application preparation and proposed legislation development. For this specific project, the SAF/IEI is delegated authority to accomplish real estate actions on behalf of the Air Force. As outlined in Air Force Instruction 32-9001, the Air Force Civil Engineer Center (AFCEC), will assist the Deputy Assistant Secretary of the Air Force for Installations (SAF/IEI) with staffing and review of the land withdrawal application.

3. Other Agency Consent:

The public lands subject to this application are currently withdrawn and reserved for Air Force use by Public Law 106-65 and Public Law 113-291. Portions of the withdrawal extension area are withdrawn and reserved from the public domain for use by the USFWS, DNWR. The Air Force letter inviting the USFWS to be a cooperating agency to the NTTR withdrawal renewal Legislative Environmental Impact Statement (LEIS) is enclosed with this application.

4. Type of Withdrawal Action:

The Air Force requests the public lands be withdrawn from all forms of appropriation under the public land laws, including the mining laws, mineral leasing laws, and geothermal leasing laws; and reservation for Air Force purposes. In addition, the Air Force requests the transfer of jurisdiction.

5. Legal Description:

The withdrawal extension is located in Clark, Lincoln, and Nye Counties, Nevada. Enclosure (1) contains maps of the withdrawal extension areas, and Enclosure (2) delineated legal description.

6. Legal Description of Overlapping Withdrawals:**Gross Land and Water Acreage within the Exterior Boundaries:**

(a) The gross land area within the withdrawal extension area contains 2,949,603 acres. A map of the withdrawal extension area is provided in Enclosure (1).

(b) The legal description for the entire withdrawal extension area is provided in Enclosure (2).

- (1) BLM-managed lands – 2, 123,150.51 acres.
- (2) USFWS-DNWR – 826,000 acres.
- (3) Air Force acquired lands – 87.49 acres.

(c) The acreage of all non-federal lands are as follows and is in Enclosure (1):

(1) Private lands: 365 acres.

(d) The legal description of the private lands within the withdrawn extension area is provided in Enclosure (2).

7. Overlapping and Existing Withdrawals:

The withdrawal and reservation made by Public Law 106-65 and 113-291 overlaps a total of 826,000 acres of public lands withdrawn and reserved for USFWS, DNWR use by Executive Order Number 7373, dated, May 20, 1936, as amended by Public Land Order (PLO) 4079, dated, August 26, 1966, and PLO 7070, dated, August 4, 1994. As required by Public Law 106-65, the overlapping withdrawal is co-managed by the USFWS and the Air Force, the USFWS has primary jurisdiction over 714,000 acres, and the Air Force has primary jurisdiction over the remaining 112,000 acres that are used as target impact areas. The Secretary of the Interior maintains secondary jurisdiction over the 112,000 acres for wildlife conservation purposes.

8. Purpose of Statutory Program:

(a) Withdrawal extension is necessary to support national security objectives, provide for national security testing and training, and provide for public safety within the context of Homeland Defense and the War on Terrorism. The withdrawal extension will support the Air Force's need to accommodate long-term test capability for new and existing technologies and sufficient range capacity for large-scale, live-fire exercises and operational tactics development. The NTTR is a national asset with capabilities that cannot currently be replicated anywhere else in the world. The NTTR is critical for training various combat units of all branches of the U.S. Armed Services as well as U.S. allies that support or participate in certain aspects of tactical aviation and land combat missions. The NTTR land withdrawal extension is also critical to National Security and includes but is not limited to the activities of DoD, Department of Energy, and Homeland Security and must be extended to ensure that unique and enduring test and training range capabilities are available in the future.

(b) In accordance with Public Law 106-65, the lands are withdrawn and reserved for use by the Secretary of the Air Force.

(c) Specific purpose for which the lands are withdrawn and reserved are:

- (1) as an armament and high-hazard testing area;
- (2) for training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support;
- (3) for equipment and tactics development and testing; and,
- (4) for other defense-related purposes consistent with the purposes specified above.

9. Extent of Segregation:

The Air Force requests that the land in the extension application be withdrawal from all forms of appropriation under the public land laws, including the mining laws, mineral leasing laws, and geothermal leasing laws, and subject to valid existing rights, and reservation established by Public Law 106-65 be extended for an indefinite period.

10. Temporary Land Uses:

Under Public Law 106-65, the Secretary of the Interior may issue a lease, easement, right-of-way, or other authorization with respect to the non-military use of public lands and only with concurrence of the Air Force's delegated authorized officer.

11. Analysis of Alternatives:

The primary reasons for the withdrawal extension are national security testing and training conducted at the NTTR and public safety. Extending the land withdrawal would be the only authorization option that would satisfy the Air Force and NTTR requirements for national security testing and training, safety, and control of access to the lands. Military testing and training activities performed in the area cannot be statutorily accommodated under either a FLPMA right-of-way or a cooperative agreement. The Interior Board of Land Appeals has found that military training on public lands is appropriately authorized by a withdrawal in the case of contamination from military munitions, unexploded ordnance, munitions debris, and other range related debris and BLM policy reflects that finding. The withdrawal extension may only be authorized by Congress.

12. Duration of Withdrawal:

The Air Force is applying for an indefinite withdrawal of the area from the date enacted by Congress unless Congress deems it appropriate to withdraw the land for a shorter timeframe.

13. Alternative Sites:

No alternative sites are available for the use for the following reasons:

(a) The Air Force's need for the NTTR land withdrawal, is supported by the Report to Congressional Committees *2025 Air Test and Training Range Enhancement Plan (January 2014)* (2014 Congressional Report), which states "...a few select ranges which will become hubs for intermediate to advanced training. The first of these ranges is the Nevada Test and Training Range (NTTR)." The 2014 Congressional Report indicates that current test and training activities will continue and increase to support six priorities that are critical to ensuring the viability of major range infrastructure through 2025.

(b) The NTTR range infrastructure, described in the 2014 Congressional Report, has an approximate value of \$4 billion. The approximate cost to decontaminate the NTTR varies from \$1 to 4 billion.

(c) The NTTR is unique from an airspace perspective. Restricted airspace, where commercial and private air traffic operating under both visual and instrument flight rules are prohibited from overflight, remains a key operational element of the NTTR. These restrictions allow for national security testing and training activities to be conducted.

(d) The geographic proximity of the NTTR to Naval Air Weapons Station (NAWS) China Lake and the Utah Test and Training Range increases the DoD's capability for specialized test and training activities. For example, one annual tactics development exercise that supports new approaches to operations requires access to Military Operating Area and restricted airspace from NAWS China Lake in the southwest to the Utah Test and Training Range in the northeast. The NTTR geographically links the three ranges with its electronic warfare capability, and provides a crucial tactics mission environment.

The capabilities of the NTTR cannot be replicated anywhere else in the world without significant and unforeseeable commitment of financial and other organization resources. Because of the infrastructure investment, airspace attributes, geographic location, and encroachment concerns, the Air Force has filed this withdrawal extension application to renew the current NTTR land withdrawal.

14. Water Requirements:

All surface and groundwater rights currently being utilized by the Air Force within NTTR have been properly appropriated through the State of Nevada. On average, water use by the Air Force is directly associated with the number of personnel stationed at and the work being conducted on NTTR. In the 1998 water requirements study, a total of 947 acre-feet per year (AFY) of surface water on the Nellis AFR, now NTTR, was appropriated for stock, wildlife, domestic, and irrigation purposes, with 84 percent (797 AFY) owned by the Federal government and 16 percent privately held (149 AFY). With respect to groundwater, 1,852 AFY has been appropriated through the State of Nevada. The Federal government (Air Force and DOE) has appropriated 98 percent (1,826 AFY) and private domestic and stock users have appropriated 2 percent (25 AFY). In addition, the Air Force is entitled to federally reserved water rights for reserved lands within NTTR. The priority dates for the reserved water rights are senior to recent water rights applications by the Southern Nevada Water Authority in association with its Groundwater Development Project. The Air Force's federally reserved water rights have not been judicially quantified.

The Nellis Air Force Base Natural Resources Program has recently completed a project to identify all seeps and springs within the boundaries of NTTR. Some of the seeps and springs identified have no prior documentation. The Air Force may apply for surface water rights for the newly discovered springs.

15. Location of Application Records:

Records relating to this application are available for examination at the following locations:

Nellis Test and Training Range/XPN
3770 Duffer Drive
Nellis AFB, NV 89191-7001

BLM Nevada State Office
1340 Financial Blvd
Reno, NV 89502

BLM Southern Nevada District Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

16. Summary of Potential Mineral Activity in the Subject Area:

In accordance with Public Law 106-65, a Geology and Mineral Potential Report covering the withdrawal extension area will be provided.

17. Contamination of any or all Requested Withdrawn Lands:

The Air Force will analyze whether the current and/or proposed use has/will result in contamination of any or all of the requested withdrawal area, and if so, whether such contamination will be permanent or temporary.

If additional information is required, please contact Mr. Mike Ackerman at (210) 925-2741 or by email at michael.ackerman.2@us.af.mil.

Sincerely,



JENNIFER L. MILLER
Deputy Assistant Secretary of the Air Force
Installations

Enclosures: (1) Maps for Withdrawal Extension
(2) Legal Descriptions for Withdrawal Extension

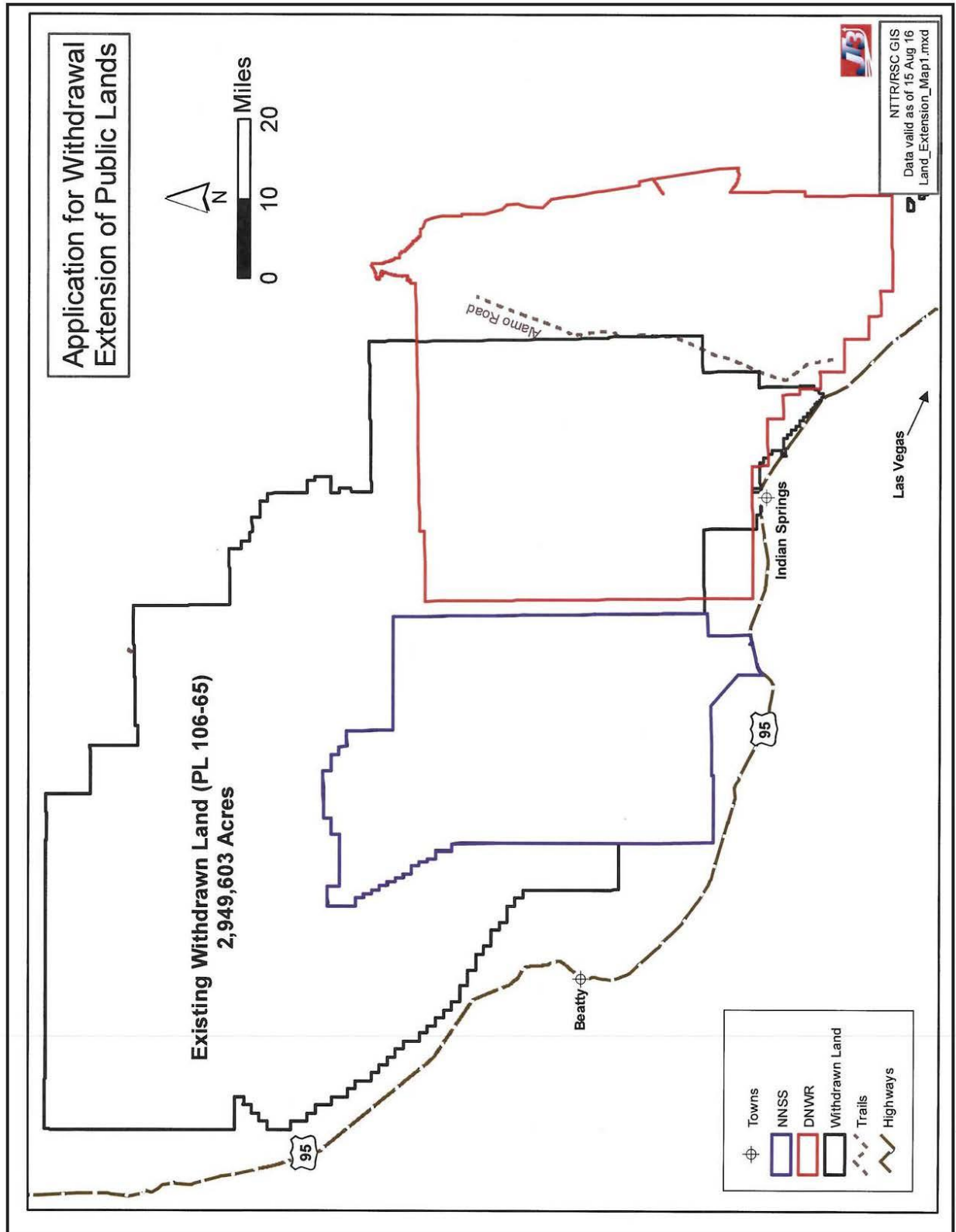
Copy to:
SAF/IEI
SAF/GCN
HAF/A4C
NTTR/XP

Department of the Interior, BLM, WO-350
Military Program Leads
Attn: Celeste Mitchell/Brenda Wilhight
1849 C. Street, NW, Room 2134LM
Washington, DC 20240

BLM Nevada State Director
Withdrawal Program
Attn: Edison Garcia
1340 Financial Blvd
Reno, NV 89502

BLM Southern Nevada District Office
Project Manager
Attn: Thomas Seley
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

Enclosure 1



Enclosure 2

Renewal of the Existing Land Withdrawal

Nevada Test and Training Range Renewal

Legal Description

(added Nellis parcels)

EXISTING WITHDRAWN LANDS

Mount Diablo Meridian, Nevada

Tps. 1, 2, 3, and 4 S., R. 44 E.

T. 5 S., R. 44 E., partly unsurveyed,
secs. 1 and 2;
secs. 10 thru 16;
secs. 20 thru 36.

T. 6 S., R. 44 E., unsurveyed,
secs. 1 thru 6;
secs. 8 thru 17;
secs. 21 thru 27;
secs 34 thru 36.

T. 7 S., R. 44 E., partly unsurveyed,
secs. 1 and 2;
secs. 11 thru 13.

Tps. 1, 2, 3, and 4 S., R. 45 E.

Tps. 5 and 6 S., R. 45 E., unsurveyed.

T. 7 S., R 45 E., unsurveyed,
secs. 1 thru 30;
secs. 32 thru 36.

T. 8 S., R. 45 E., unsurveyed,
secs. 1 thru 4;
secs. 10 thru 14;
secs. 24 and 25.

Tps. 1 and 2 S., R. 46 E.

Tps. 3, 4, 5, 6, 7, and 8 S., R. 46 E., unsurveyed.

T. 9 S., R. 46 E., unsurveyed,
secs. 1 thru 5;
secs. 9 thru 15;
secs. 23 and 24.

Tps. 1 and 2 S., R. 47 E.

Tps. 3, 4, 5, 6, 7, and 8 S., R. 47 E., unsurveyed.

T. 9 S., R. 47 E., unsurveyed,
secs. 1 thru 30;
secs. 33 thru 36.

T. 10 S., R. 47 E., partly unsurveyed,
secs. 1, 2, and 12.

Tps. 1 and 2 S., R. 48 E.

Tps. 3, 4, and 5 S., R. 48 E., unsurveyed.

T. 6 S., R. 48 E., unsurveyed,
secs. 1 thru 34;
sec. 35, N1/2;
sec. 36, N1/2.

T. 7 S., R. 48 E., unsurveyed,
secs. 3 thru 10;
secs 15 thru 23;
sec 25, W1/2;
secs. 26 thru 36.

Tps. 8 and 9 S., R. 48 E., unsurveyed.

T. 10 S., R. 48 E., unsurveyed,
secs. 1 thru 17;
secs. 21 thru 26;
sec. 36.

Tps. 1 and 2 S., R. 49 E.

Tps. 3, 4, and 5 S., R. 49 E., unsurveyed.

T. 6 S., R. 49 E., unsurveyed,
secs. 1 thru 30;
sec. 31, N1/2 and SE1/4;
secs. 32 thru 36.

T. 7 S., R. 49 E., unsurveyed,
secs. 1 thru 5;
sec. 6, E1/2.

T. 8 S., R. 49 E., unsurveyed,
sec. 6, W1/2;
sec. 7;
sec. 17, W1/2;
secs. 18 thru 20;
secs. 28 thru 33;
sec. 34, W1/2.

T. 9 S., R. 49 E., unsurveyed,
secs. 3 thru 11;
secs. 14 thru 23;
secs. 24 and 25, excepting those portions withdrawn by Public Land Order 2568;
secs. 26 thru 35;
sec. 36, excepting those portions withdrawn by Public Land Order 2568.

T. 10 S., R. 49 E., unsurveyed,
sec. 1, excepting those portions withdrawn by Public Land Order 2568;
secs. 2 thru 11;
secs. 12 and 13, excepting those portions withdrawn by Public Land Order 2568;
secs. 14 thru 23;
secs. 24 and 25, excepting those portions withdrawn by Public Land Order 2568;
secs. 26 thru 35;
sec. 36, excepting those portions withdrawn by Public Land Order 2568.

T. 11 S., R. 49 E., unsurveyed,
sec. 1, excepting those portions withdrawn by Public Land Order 2568;
secs. 2 thru 11;
secs. 12 and 13, excepting those portions withdrawn by Public Land Order 2568;
secs. 14 thru 23;
secs. 24 and 25, excepting those portions withdrawn by Public Land Order 2568;
secs. 26 thru 35;
sec. 36, excepting those portions withdrawn by Public Land Order 2568.

T. 12 S., R. 49 E., unsurveyed,
sec. 1, excepting those portions withdrawn by Public Land Order 2568;
secs. 2 thru 11;
secs. 12 and 13, excepting those portions withdrawn by Public Land Order 2568;
secs. 14 thru 23;
secs. 24 and 25, excepting those portions withdrawn by Public Land Order 2568;
secs. 26 thru 35;
sec. 36, excepting those portions withdrawn by Public Land Order 2568.

Tps. 1, 2, 3, 4, and 5 S., R. 50 E., unsurveyed.

T. 6 S., R. 50 E., unsurveyed,
secs. 1 thru 33.

T. 7 S., R. 50 E., unsurveyed,
sec. 6.

Tps. 2, 3, 4, and 5 S., R. 51 E., unsurveyed.

T. 6 S., R. 51 E., unsurveyed,
secs. 1 thru 30;
secs. 34 thru 36.

T. 7 S., R. 51 E., unsurveyed,
sec. 1.

Tps. 3 and 4 S., R. 51 1/2 E., unsurveyed.

Tps. 3, 4, 5, and 6 S., R. 52 E., unsurveyed.

T. 7 S., R. 52 E., unsurveyed,
secs. 1 thru 16;
secs. 21 thru 28;
secs. 33 thru 36.

T. 8 S., R. 52 E., unsurveyed,
secs. 1 thru 4;
secs. 9 thru 12, excepting those portions withdrawn by Public Land Order 805.

Tps. 3 and 4 S., R. 53 E.

Tps. 5, 6, and 7 S., R. 53 E., unsurveyed.

T. 8 S., R. 53 E., unsurveyed,
secs. 1 thru 6;
secs. 7 thru 12, excepting those portions withdrawn by Public Land Order 805.

T. 3 S., R. 54 E.,
secs. 4 thru 9;
secs. 16 thru 21;
secs. 28 thru 33.

T. 4 S., R. 54 E.,
secs. 4 thru 9;
secs. 16 thru 21;
secs. 28 thru 33.

Tps. 5, 6, and 7 S., R. 54 E., unsurveyed.

T. 8 S., R. 54 E., unsurveyed,
secs. 1 thru 6;
secs. 7 thru 11, excepting those portions withdrawn by Public Land Order 805;
secs. 12 and 13;
secs. 14 and 23, excepting those portions withdrawn by Public Land Order 805;
secs. 24 and 25;
secs. 26 and 35, excepting those portions withdrawn by Public Land Order 805;
sec. 36.

T. 9 S., R. 54 E., unsurveyed,
sec. 1;
secs. 2 and 11, excepting those portions withdrawn by Public Land Order 805;
secs. 12 and 13;
secs. 14 and 23, excepting those portions withdrawn by Public Land Order 805;
secs. 24 and 25;
secs. 26 and 35, excepting those portions withdrawn by Public Land Order 805;
sec. 36.

T. 10 S., R. 54 E., unsurveyed,
sec. 1;
secs. 2 and 11, excepting those portions withdrawn by Public Land Order 805;
secs. 12 and 13;
secs. 14 and 23, excepting those portions withdrawn by Public Land Order 805;
secs. 24 and 25;
secs. 26 and 35, excepting those portions withdrawn by Public Land Order 805;
sec. 36.

T. 11 S., R. 54 E., unsurveyed,
sec. 1;
secs. 2 and 11, excepting those portions withdrawn by Public Land Order 805;
secs. 12 and 13;
secs. 14 and 23, excepting those portions withdrawn by Public Land Order 805;
secs. 24 and 25;
secs. 26 and 35, excepting those portions withdrawn by Public Land Order 805;
sec. 36.

T. 12 S., R. 54 E., unsurveyed,

sec. 1;

secs. 2 and 11, excepting those portions withdrawn by Public Land Order 805;

secs. 12 and 13;

secs. 14 and 23, excepting those portions withdrawn by Public Land Order 805;

secs. 24 and 25;

secs. 26 and 35, excepting those portions withdrawn by Public Land Order 805;

sec. 36.

T. 13 S., R. 54 E., unsurveyed,

sec. 9, excepting those portions withdrawn by Public Land Order 805;

secs. 10 thru 15;

secs. 16 and 21, excepting those portions withdrawn by Public Land Order 805;

secs. 22 thru 27;

secs. 28 and 33, excepting those portions withdrawn by Public Land Order 805;

secs. 34 thru 36.

T. 14 S., R. 54 E., unsurveyed,

secs. 1 thru 3;

secs. 4 and 9, excepting those portions withdrawn by Public Land Order 805;

secs. 10 thru 15;

secs. 16 and 21, excepting those portions withdrawn by Public Land Order 805;

secs. 22 thru 27;

secs. 28 and 33, excepting those portions withdrawn by Public Land Order 805;

secs. 34 thru 36.

Tps. 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14 S., R. 55 E., unsurveyed.

T. 5 S., R. 55 1/2 E., unsurveyed,

secs. 6 thru 8;

secs. 16 thru 21;

secs. 28 thru 33.

Tps. 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15 S., R. 55 1/2 E., unsurveyed.

T. 16 S., R. 55 1/2 E.,

sec. 1, N1/2;

sec 2, lots 1 and 2; NE1/4.

T. 5 S., R. 56 E., unsurveyed,
secs. 19 and 20;
secs 27 thru 35.

T. 6 S., R. 56 E., partly unsurveyed,
secs. 2 thru 11;
secs. 14 thru 23;
secs. 25 thru 36.

T. 7 S., R. 56 E., partly unsurveyed,
secs. 1 thru 11;
sec 13, W1/2;
secs. 14 thru 23;
sec. 24, NW1/4;
secs. 26 thru 35.

Tps. 8, 9, 10, 11, 12, 13, and 14 S., R. 56 E., unsurveyed.

T. 15 S., R. 56 E.

T. 16 S., R. 56 E.,
secs. 1 thru 6;
sec. 8, lot 1;
sec. 9, lot 1;
Tracts 38, 39, 40, 41;
Tract 42, lots A, B and C.

T. 6 S., R. 57 E.,
sec. 30, lots 1 thru 4, E1/2NW1/4, E1/2SW1/4;
sec. 31.

T. 7 S., R. 57 E.,
sec. 6.

Tps. 8, 9, 10, 11, 12, 13, 14, and 15 S., R. 57 E., unsurveyed.

T. 16 S., R. 57 E., partly unsurveyed,
secs. 1 thru 6;
sec. 7, NE1/4;
secs. 8 thru 16;
sec. 17, NE1/4;
sec. 20, SE1/4SW1/4, S1/2SE1/4;
secs. 21 thru 26;
sec. 27, NE1/4;
sec. 28, NW1/4NW1/4;
sec. 29, N1/2NE1/4, NE1/4NW1/4;
sec. 35, NE1/4;
sec. 36.

Tps. 8, 9, 10, 11, 12, 13, 14, and 15 S., R. 58 E., unsurveyed.

T. 16 S., R. 58 E., unsurveyed,
secs. 1 thru 10;
secs. 15 thru 22;
secs. 27 thru 34.

T. 17 S., R. 58 E.,
secs. 1 thru 4;
sec. 5, NE1/4;
sec. 9, NE1/4;
sec. 10, N1/2, N1/2SW1/4, SE1/4SW1/4, SE1/4;
secs. 11 and 12;
sec. 13, NW1/4;
sec. 14, N1/2, NE1/4SW1/4, SE1/4;
sec. 15, NE1/4NE1/4.

Tps. 8, 9, 10, 11, 12, 13, and 14 S., R. 59 E., unsurveyed.

LAND ADDED TO EXISTING WITHDRAWAL**2015 National Defense Authorization Act (Public Law 113-291)**

Mount Diablo Meridian, Nevada

T. 19 S., R. 62 E.,

sec. 13, lots 2, 4 and 5, excepting those portions lying within the right-of-way of the Union Pacific Railroad;

sec. 14, lots 1, 2, 5, 6, and 8, N1/2NE1/4, NW1/4, excepting those portions lying within the right-of-way of the Union Pacific Railroad;

sec. 24, SE1/4, excepting those portions lying within the right-of-way of Nevada State Route 604 (Las Vegas Blvd.);

sec. 25, lot 2.

T. 19 S., R. 63 E.;

sec. 19, lot 4, SE1/4SW1/4, and SW1/4SE1/4, excepting those portions lying within the right-of-way of Nevada State Route 604 (Las Vegas Blvd.);

sec. 27, S1/2NW1/4 and SE1/4SE1/4;

sec. 28, S1/2NE1/4 and SE1/4NW1/4;

sec. 30, lots 1 and 2, W1/2NE1/4 and E1/2NW1/4.

**Letter from Air Force to BLM, Land Withdrawal Expansion Application:
August 12, 2016**



**DEPARTMENT OF THE AIR FORCE
WASHINGTON DC**

OFFICE OF THE ASSISTANT SECRETARY

SAF/IE
1665 Air Force Pentagon
Washington, DC 20330-1665

AUG 12 2016

Mr. John Ruhs, Nevada State Director
Department of the Interior, Bureau of Land Management
1340 Financial Boulevard
Reno, Nevada 89502

Dear Mr. Ruhs,

In accordance with 43 U.S.C. § 155 -158, the Federal Land Policy and Management Act of 1976, as amended, (FLPMA) 43 U.S.C. 1714, 43 CFR Part 2300 and, as implemented by BLM Instruction Memorandum No. 2001-030, the United States Department of the Air Force (Air Force) requests processing of this land withdrawal application for the withdrawal and reservation of 301,507 additional acres of public lands located near the Nevada Test and Training Range (NTTR), Nevada. The NTTR, formerly known as the Nellis Air Force Range (Nellis AFR) is required for military use as a national security testing and training range by the Air Force. Priority processing of this application is in the interest of Homeland Defense and the War on Terrorism.

The current NTTR land withdrawal and reservation consists of 2,949,603 acres of public lands authorized by the National Defense Authorization Act for Fiscal Year 2000, Military Land Withdrawal Act of 1999 (Public Law 106-65), and the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 (Public Law 113-291). The Air Force requests to expand the NTTR by 301,507 acres of public lands known as the EC South, 64C/D and 65D, South Range Administrative Incorporation, and Alamo for use as a national security testing and training range to meet NTTR requirements. The acres of the withdrawal expansion and the lands withdrawn and reserved by Public Law 106-65 and Public Law 113-291 would total 3,251,110 acres. A separate application requesting the extension (renewal) of the withdrawal and reservation under Public Law 106-65 and Public Law 113-291 is in process.

National defense requirements are rapidly evolving in response to changing world conditions, the Global War on Terrorism, developing technologies, and new emerging threats. The NTTR is a Major Range and Test Facility Base national asset and is used to accommodate two major national defense necessities: Test and Evaluation (T&E); and large-scale training. The NTTR is sized, operated, and maintained to provide T&E information to Department of Defense (DoD) component users in support of DoD research, development, T&E, and the acquisition process. The NTTR is required to provide a broad base of T&E capabilities that are sufficient to support the full spectrum of DoD T&E requirements. The NTTR also contributes to combat readiness

training, providing a venue for major training events, 5th-generation aircraft training, and training for other Federal agencies, state and local governments, allied foreign governments, and commercial entities. The NTTR is the Air Combat Command's range of preference for Tactics Development and Evaluations (TD&E) due to its focus on high-end combat training and operationally relevant testing.

The requested withdrawal is essential to the Air Force to enhance large-scale training at the NTTR by increasing Major Combat Operations (MCO) test and training capabilities to meet the demands of strategic guidance, alleviating the competition for critical MCO assets, providing a two-access battle space for Irregular Warfare (IW) test and training, and increasing NTTR operational security and safety to prevent encroachment and sustain the NTTR mission into the future while providing for public safety.

The Air Force will promptly notify the BLM if new developments change the purpose or acreage associated with this request.

In addition, the Air Force has requested the Bureau of Land Management (BLM) to petition or apply to the Secretary of the Interior, pursuant to section 204 of FLPMA for a 7-year administrative withdrawal of the public lands within the exterior boundaries of the lands described in paragraph 6 of this withdrawal application for the purpose of maintaining the *status quo* of the lands so that the Air Force and the BLM may conduct a land management analysis in support of a possible future transfer of lands to Air Force jurisdiction. The BLM has separately filed such petition/application.

1. Name and Address of Applicant:

(a) Name and address of person delegated the authority to file the application.

Ms. Miranda A. Ballentine, Assistant Secretary of the Air Force for Installations, Environment, and Energy, Headquarters U.S. Air Force, 1670 Air Force Pentagon, Washington, DC 20330-1670, phone (703) 697-5023, email miranda.ballentine.civ@mail.mil.

Ms. Jennifer L. Miller, Deputy Assistant Secretary of the Air Force for Installations, Headquarters U.S. Air Force, 1665 Air Force Pentagon, Suite 4B941, Washington, DC 20330-1665, phone (703) 695-3592, email Jennifer.L.miller273.civ@mail.mil.

Mr. James Sample, Office of the Deputy Assistant Secretary of the Air Force for Installations, Environment, and Energy, Headquarters U.S. Air Force, 1665 Air Force Pentagon, Suite 4B941, Washington, DC 20330-1670, phone (703) 693-3349, email james.a.sample6.civ@mail.mil.

(b) Name and address of using agency.

Maj. Gen. Glen D. VanHerck, Commander, United States Air Force Warfare Center (Air Combat Command), 3770 Duffer Drive, Nellis AFB, NV 89191-7001, phone (702) 652-2201, email glen.vanherck@us.af.mil.

Mr. Roger Christensen, NTTR/XPB, 3770 Duffer Drive, Nellis AFB, NV 89191-7001, phone (702) 653-4650, email roger.christensen@us.af.mil.

(c) Name, address, and phone number of primary point of contact for all aspects in preparing and processing the application.

Mr. Mike Ackerman, NEPA Division (AFCEC/CZN), Bldg 1650, 2261 Hughes Ave., Lackland AFB, TX 78236, phone (210) 925-2741, email michael.ackerman.2@us.af.mil.

2. Designation and Delegation of Authority:

The Secretary of the Air Force (SECAF) Mission Directive 1-18 (HAF MD 1-18) assigns responsibility for real property authorities, to include the acquisition, management, and disposal of real property, to the Assistant Secretary of the Air Force for Installation, Environment and Energy (SAF/IE). SAF/IE delegates authorities for real estate transactions, including responsibilities for the withdrawal of public lands, to the Deputy Assistant Secretary for Air Force Installations (SAF/IEI). Air Force Instruction 32-9001, Real Property Acquisition, identifies procedural guidance and requirements for real estate actions, including withdrawal application preparation and proposed legislation development. For this specific project, the SAF/IEI is delegated authority to accomplish real estate actions on behalf of the Air Force. As outlined in Air Force Instruction 32-9001, the Air Force Civil Engineer Center (AFCEC), will assist the Deputy Assistant Secretary of the Air Force for Installations (SAF/IEI) with staffing and review of the land withdrawal application.

3. Other Agency Consent:

The public lands subject to this application are under the administration of the Department of the Interior. Portions of the requested withdrawal expansion area are withdrawn and reserved from the public domain for use by the U.S. Fish and Wildlife Service (USFWS), Desert National Wildlife Refuge (DNWR). The Air Force letter inviting the USFWS to be a cooperating agency to the NTTR withdrawal renewal Legislative Environmental Impact Statement (LEIS) is enclosed with this application.

4. Type of Withdrawal Action:

The Air Force requests the withdrawal of public lands known as the EC South, 64C/D and 65D, South Range Administrative Incorporation, and Alamo from all forms of appropriation under the public land laws, including the mining laws, mineral leasing laws, and geothermal leasing laws; and reservation for Air Force purposes. In addition, the Air Force requests jurisdictional transfer of the lands.

5. Legal Description:

The withdrawal expansion area is located in Clark, Lincoln, and Nye Counties, Nevada. Enclosure (1) contains maps of the withdrawal expansion area, and Enclosure (2) delineated legal description.

6. Legal Description of Overlapping Withdrawals:**Gross Land and Water Acreage within the Exterior Boundaries:**

- (a) The gross land area within the withdrawal expansion area contains 301,507 acres of land. A map of the withdrawal expansion area is provided in Enclosure (1).
- (b) The legal description for the entire withdrawal expansion area is provided in Enclosure (2).
 - (1) BLM-managed lands – 35,361 acres
 - (2) USFWS- managed lands – 266,146 acres
- (c) There are no private or state lands within the withdrawal expansion area.
- (d) The Air Force is conducting a study to determine whether any surface water areas exist within the withdrawal expansion area. The results of the study will be provided in the related NTTR LEIS.

7. Overlapping and Existing Withdrawals:

This requested withdrawal expansion would overlap portions of the DNWR. The DNWR is withdrawn and reserved for USFWS use by Executive Order 7373, dated May 20, 1936, as amended by Public Land Order (PLO) 4079, dated August 26, 1966, and PLO 7070, dated August 4, 1994.

8. Purpose of Statutory Program:

(a) The withdrawal expansion is necessary to support national security objectives and to provide for public safety within the context of Homeland Defense and the War on Terrorism. This withdrawal expansion will support: the Air Force Warfare Center's mission; ongoing military test and training; and is required to develop enhancement of the Air Force's capability to conduct such test and training into the future.

- (1) Increase MCO test/training capability to meet the demands of strategic guidance. MCO test and training operations at NTTR are artificially constrained into the North Range. Expanding the South Range would provide a two-axis battle space that is relevant to current operational plans and strategic guidance.

- (2) Alleviate competition for critical MCO assets. Currently, test and training operations compete for time and space on the North Range. Increasing the size and flexibility of the South Range will create two MCO environments and allow for additional testing and improved training.
- (3) Enhance IW test/training capability, which is critical to current combat missions. IW operations on the South Range are artificially constrained by current management practices. Indefinite primary jurisdiction over the South Range will allow realistic IW training.
- (4) Increase NTTR operational security and safety. Operations on NTTR are sensitive and additional buffer areas to prevent encroachment will sustain the NTTR mission into the future.

(b) Specific purposes for which the lands will be withdrawn are for use:

- (1) as an armament and high-hazard testing area;
- (2) for training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support;
- (3) for equipment and tactics development and testing; and,
- (4) for other defense-related purposes consistent with the purposes specified above.

9. Extent of Segregation:

The Air Force requests that the lands identified in this withdrawal expansion application be withheld from location and entry under the public land laws, including the mining laws, mineral leasing laws, and geothermal leasing laws, and subject to valid existing rights. The Air Force requests the maximum segregation period of 2 years.

10. Temporary Land Uses:

Licenses, permits, cooperating agreements, and discretionary land use authorizations, may be allowed during the segregative period with the approval of the BLM Authorized Officer and/or USFWS Authorized Officer, as appropriate, and with the concurrence of the Commander of the Nevada Test and Training Range, Nellis Air Force Base, Nevada. Points of contact are shown in paragraph 1 of this application.

11. Analysis of Alternatives:

The primary reasons for the NTTR withdrawal expansion request are the unique nature of national security testing and training conducted at NTTR and public safety. Expanding the land

withdrawal would be the only authorization option that would satisfy the Air Force and NTTR requirements for national security testing and training, safety, and control of access to the lands. Military test and training activities performed in the area cannot be statutorily accommodated under either a FLPMA right-of-way or a cooperative agreement. The Interior Board of Land Appeals has found that military training on public lands is appropriately authorized by a withdrawal in the case of contamination from military munitions, unexploded ordnance, munitions debris, and other range related debris and BLM policy reflects that finding. The withdrawal expansion may only be authorized by Congress.

12. Duration of Withdrawal:

The Air Force is applying for an indefinite withdrawal of the area from the date enacted by Congress unless Congress deems it appropriate to withdraw the land for a shorter timeframe.

13. Alternative Sites:

No alternative sites are available for the proposed use for the following reasons:

(a) The Air Force considered expansion of the NTTR in various directions. However, there are external encroachment issues that limit the Air Force's ability to expand the NTTR in a configuration that provides for public safety and necessary test and training. The existing external encroachment issues include, but are not limited to, major state and interstate highways, interrelated population centers, and local roadway infrastructure. Furthermore, existing wilderness areas limit the Air Force's ability to expand the NTTR. Wilderness areas to the north include the Toiyabi National Forest, with Table Mountain, Arc Dome, and Alto Toquima Wilderness areas. To the northeast are the Humboldt National Forest (with Quinn Canyon and Grant Range Wilderness areas) and the Worthington Mountain, and Weepah Springs Wilderness areas. The Big Rocks, Mount Irish, and South Paroc, Delamar Mountains, Meadow Valley Range, Mormon Mountains, Muddy Mountain, and Arrow Canyon Wilderness areas are to the east, and the Mount Charleston Wilderness area is to the southwest.

(b) The withdrawal expansion area must be located adjacent to the current NTTR land withdrawal area to support the current use of the lands by the Secretary of the Air Force: as an armament and high-hazard testing area; for training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support; for equipment and tactics development and testing; and for other defense-related purposes consistent with the uses specified above. In addition, the withdrawal expansion area is required to sufficiently accommodate and support the Air Force Warfare Center's mission.

14. Water Requirements:

The Air Force will need to control, appropriate, distribute and/or use water where current, valid existing rights have been acquired by the United States or other entities in conformity with State laws and procedures. The acquisition of rights to the use of water will be in conformity with

State laws and procedures relating to the control, appropriation, use and distribution of water insofar as such laws and procedures are applicable to the United States.

The Air Force is conducting a study to determine whether any surface water areas exist within the withdrawal expansion area. The results of the study will be provided in the related NTTR LEIS.

Based on a preliminary review of the Nevada Division of Water Rights (NDWR) Water Rights Database, the water rights in the withdrawal expansion area include several underground water rights certificates for stock watering in Oasis Valley and protested water rights applications by the Southern Nevada Water Authority in Three Lakes Valley. In addition, the USFWS has water rights certificates for springs, water rights certificates for stock watering, and underground water permits and protested applications by the Southern Nevada Water Authority in the southern part of Tikapoo Valley.

15. Location of Application Records:

Records relating to this application are available for examination at the following locations:

Nellis Test and Training Range/XPN
3770 Duffer Drive
Nellis AFB, NV 89191-7001

BLM Nevada State Office
1340 Financial Blvd
Reno, NV 89502

BLM Southern Nevada District Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

16. Summary of Potential Mineral Activity in the Subject Area:

In accordance with the Engle Act, a comprehensive Geology and Mineral Potential Report covering the withdrawal expansion area will be prepared.

17. Contamination of any or all Requested Withdrawn Lands:

The Air Force will analyze whether the proposed use will result in contamination of any or all of the requested withdrawal expansion area, and if so, whether such contamination will be permanent or temporary [Engle Act Section 3 (5)].

If additional information is required, please contact Mr. Mike Ackerman at (210) 925-2741 or by email at michael.ackerman.2@us.af.mil.

Sincerely,



JENNIFER L. MILLER
Deputy Assistant Secretary of the Air Force
Installations

Enclosures: (1) Maps for Withdrawal Expansion
(2) Legal Descriptions for Withdrawal Expansion

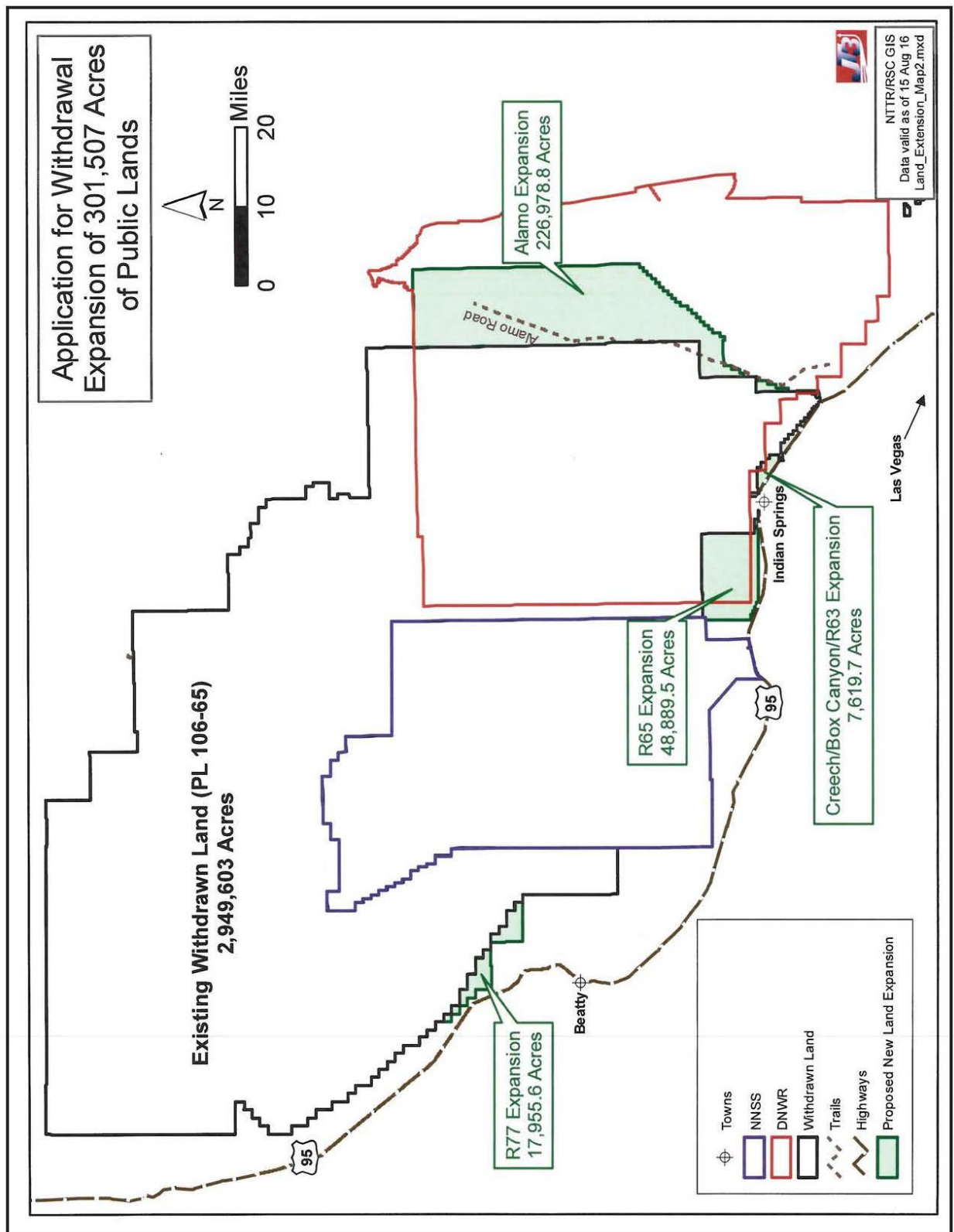
Copy to:
SAF/IEI
SAF/GCN
HAF/A4C
NTTR XP

Department of the Interior, BLM, WO-350
Military Program Leads
Attn: Celeste Mitchell/Brenda Wilhight
1849 C. Street, NW, Room 2134LM
Washington, DC 20240

BLM Nevada State Director
Withdrawal Program
Attn: Edison Garcia
1340 Financial Blvd
Reno, NV 89502

BLM Nevada Southern Nevada District Office
Project Manager
Attn: Thomas Seley
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

Enclosure 1



Enclosure 2

Withdrawal of Federal Lands
Nevada Test and Training Range Expansion
Legal Description

EC South/Range 77:

Mount Diablo Meridian, Nevada

T. 9 S., R. 46 E., unsurveyed,
secs. 16, 22, 25, 26, and 36.

T. 9 S., R. 47 E., unsurveyed,
secs. 31 and 32.

T. 10 S., R. 47 E., partly unsurveyed,
secs. 3 thru 11.

T. 10 S., R. 48 E., unsurveyed,
secs. 18 thru 20;
secs. 27 thru 35.

Range 65D:

Mount Diablo Meridian, Nevada

T. 15 S., R. 54 E., unsurveyed,
secs. 1 thru 3;
sec. 4, excepting those portions withdrawn by Public Land Order 805;
secs. 9 thru 16;
secs. 21 thru 28;
secs. 33 thru 36.

T. 16 S., R. 54 E.,
secs. 1 and 2;
sec. 3, lots 1 thru 4, S1/2NE1/4, S1/2NW1/4, N1/2SW1/4, and SE1/4;
sec. 4, lots 1 thru 4, and S1/2NE1/4.

T. 15 S., R. 55 E., unsurveyed.

T. 16 S., R. 55 E.,
secs. 1 thru 6.

T. 16 S., R. 55 1/2 E.,
sec. 1, lot 1, E1/2SW1/4, NW1/4SW1/4, and SE1/4;
sec. 2, lots 3 thru 5, NE1/4SE1/4, and W1/2SE1/4.

Ranges 63/64:

Mount Diablo Meridian, Nevada

T. 16 S., R. 56 E.,
sec. 7, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
sec. 9, lot 2, that portion lying northerly of the northerly right-of-way line of U.S. Highway 95;
secs. 10 and 11, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
sec. 12;
secs. 13 and 14, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
Tract 37.

T. 16 S., R. 57 E., partly unsurveyed,
sec. 7, W1/2 and SE1/4;
sec. 17, W1/2 and SE1/4;
secs. 18 and 19, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
sec. 20, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95, excepting those portions withdrawn by Public Law 106-65;
sec. 27, W1/2 and SE1/4;
sec. 28, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95, excepting those portions withdrawn by Public Law 106-65;
secs. 33 and 34, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
sec. 35, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95, excepting those portions withdrawn by Public Law 106-65.

T. 17 S., R. 58 E.,
sec. 5, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95,
excepting those portions withdrawn by Public Law 106-65;
sec. 6, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
sec. 8, those portions lying northerly of the northerly right-of-way line of U.S. Highway 95;
secs. 9 and 10, those portions lying northerly of the northerly right-of-way line of U.S. Highway
95, excepting those portions withdrawn by Public Law 106-65;
sec. 13, NE1/4 and S1/2;
secs. 14 and 15, those portions lying northerly of the northerly right-of-way line of U.S.
Highway 95, excepting those portions withdrawn by Public Law 106-65;

Alamos:

Mount Diablo Meridian, Nevada

T. 16 S., R. 58 E., unsurveyed,
sec. 11;
sec. 12, W1/2;
sec. 13, NW1/4, that portion lying westerly of the westerly boundary of Alamo Road;
sec. 14;
sec. 23, NE1/4 and W1/2;
sec. 26, W1/2.

T. 15 S., R. 59 E., unsurveyed,
secs. 2 thru 11;
secs. 14 thru 19;
sec. 20, W1/2, that portion lying westerly of the westerly boundary of Alamo Road;
sec. 30, that portion lying westerly of the westerly boundary of Alamo Road;
sec. 31, NW1/4.

Tps. 9, 10, 11, 12, 12 1/2, and 13 S., R. 60 E., unsurveyed.

T. 14 S., R. 60 E., unsurveyed,
secs. 1 thru 11;
sec. 12, NE1/4 and W1/2;
sec. 14, NE1/4 and W1/2;
secs. 15 thru 22;
sec. 23, NW1/4;
sec. 27, NW1/4;
secs. 28 thru 32;
sec. 33, NW1/4.

T. 15 S., R. 60 E., unsurveyed,
sec. 5, NW1/4;
sec. 6;
sec. 7, NE1/4 and W1/2.

T. 9 S., R. 61 E., unsurveyed,
secs. 3 thru 10;
secs. 15 thru 22;
secs. 27 thru 34.

T. 10 S., R. 61 E., unsurveyed,
secs. 3 thru 10;
secs. 15 thru 22;
secs. 27 thru 34.

T. 11 S., R. 61 E., unsurveyed,
secs. 3 thru 10;
secs. 15 thru 22;
secs. 27 thru 34.

T. 12 S., R. 61 E., unsurveyed,
secs. 3 thru 10;
secs. 15 thru 22;
secs. 27 thru 34.

T. 12 1/2 S., R. 61 E., unsurveyed,
secs. 31 thru 34.

T. 13 S., R. 61 E., unsurveyed,
secs. 3 thru 10;
secs. 15 thru 21;
sec. 22, NE1/4 and W1/2;
sec. 28, NE1/4 and W1/2;
secs. 29 thru 31;
sec. 32, NE1/4 and W1/2.

T. 14 S., R. 61 E., unsurveyed,
sec. 6, NE1/4 and W1/2.

B.2 DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION

Letter from Air Force requesting formal participation as Cooperating Agency: January 29, 2016



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

JAN 29 2016

OFFICE OF THE ASSISTANT SECRETARY

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

Lt Gen Frank G. Klotz
Administrator
National Nuclear Security Administration
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585

Dear Mr. Klotz:

The Air Force is initiating its Land Withdrawal Renewal for the Nevada Test and Training Range (NTTR) and requests NNSA formal participation as a Cooperating Agency in the preparation of a Legislative Environmental Impact Statement (LEIS), as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR Part 1501.6, Cooperating Agencies.

The Air Force asks for your participation as a cooperating agency in preparation of the LEIS as generally outlined in the steps below. To address the specific responsibilities of the Air Force as Lead Agency and NNSA as Cooperating Agency, we also propose development of an Interagency Agreement, the context of which will be worked out between the Cooperating Agencies, subsequent to this request.

- (1) Participating in the LEIS scoping, data gathering, analysis, and consultation processes;
- (2) Assuming responsibility, upon request, for developing information and preparing analyses on issues for which NNSA has special expertise;
- (3) Making NNSA staff support available to enhance interdisciplinary review capability, correspondence, and/or surveys; and
- (4) Responding in writing to this request.

The Air Force requires the support of cooperating agencies be timely, to avoid unnecessary delays in the NEPA process. Should you or your staff have further questions regarding this memo, our point of contact is Mr. Jack Bush, HQ USAF/A4CI, at (703) 614-0237 or jack.bush@pentagon.af.mil.

Sincerely,

A handwritten signature in cursive script, reading "Jennifer L. Miller", is positioned above the typed name.

JENNIFER MILLER
Deputy Assistant Secretary of the Air Force
(Installations)

cc:
AF/A30/A4C/TE
HQ ACC/AFMC/CV
NNSA, Nevada Field Office Manager

Cooperating Agency acceptance letter from the National Nuclear Security Administration: June 6, 2016



Department of Energy
Under Secretary for Nuclear Security
Administrator, National Nuclear Security Administration
Washington, DC 20585



June 6, 2016

Ms. Jennifer Miller
Deputy Assistant Secretary of the Air Force
1665 Air Force Pentagon
Washington, DC 20330-1665

Dear Ms. Miller:

Thank you for your January 29 letter inviting the National Nuclear Security Administration (NNSA) to participate as a Cooperating Agency in the preparation of a Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR). NNSA accepts and understands it will be expected to participate in various portions of the LEIS development and, to the extent practicable, NNSA will:

- Participate in the LEIS scoping, data gathering, analysis, and consultation process;
- Assume responsibility, upon request, for developing information and preparing analyses on issues which NNSA has special expertise; and
- Make NNSA staff support available to enhance interdisciplinary review capability, correspondence, and/or surveys.

Should you or your staff have further questions, the NNSA point of contact for this action as related to the Nevada National Security Site is Mr. Brian Wedl, Attorney for the Nevada Field Office at (702) 295-1347 or brian.wedl@nnsa.doe.gov, and the NNSA point of contact as related to the Tonopah Test Range is Ms. Susan Lacy at (505) 845-5542 or susan.lacy@nnsa.doe.gov.

Sincerely,

Frank G. Klotz



B.3 U.S. FISH AND WILDLIFE SERVICE

Letter from Air Force requesting formal participation as Cooperating Agency: January 29, 2016



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

JAN 29 2016

OFFICE OF THE ASSISTANT SECRETARY

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

Mr. Ren Lohofener
Director, Region 8
US Fish and Wildlife Service
2800 Cottage Way
Sacramento, CA 95825

Dear Mr. Lohofener:

The Air Force is initiating its Land Withdrawal for the Nevada Test and Training Range (NTTR) and requests USFWS formal participation as a Cooperating Agency in the preparation of a Legislative Environmental Impact Statement (LEIS), as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR Part 1501.6, Cooperating Agencies.

The Air Force asks for your participation as a cooperating agency in preparation of the LEIS as generally outlined in the steps below. To address the specific responsibilities of the Air Force as Lead Agency and USFWS as Cooperating Agency, we also propose development of an Interagency Agreement, the context of which will be worked out between the Cooperating Agencies, subsequent to this request.

- (1) Participating in the LEIS scoping, data gathering, analysis, and consultation processes;
- (2) Assuming responsibility, upon request, for developing information and preparing analyses on issues for which USFWS has special expertise;
- (3) Making USFWS staff support available to enhance interdisciplinary review capability, correspondence, and/or surveys; and
- (4) Responding in writing to this request.

The Air Force requires the support of cooperating agencies be timely, to avoid unnecessary delays in the NEPA process. Should you or your staff have further questions regarding this memo, our point of contact is Mr. Jack Bush, HQ USAF/A4CI, at (703) 614-0237 or jack.bush@pentagon.af.mil.

Sincerely,

A handwritten signature in cursive script, reading "Jennifer Miller", is positioned above the typed name.

JENNIFER MILLER
Deputy Assistant Secretary of the Air Force
(Installations)

cc:
AF/A30/A4C/TE
HQ ACC/AFMC/CV
Polly Wheeler, USFWS Region 8 Assistant Regional Director

**Interagency Assistance Agreement between the U.S. Fish and Wildlife Service
and the U.S. Air Force for the Conservation of Natural Resources on Air Force
Controlled Lands: June, 7, 2012**

**INTERAGENCY ASSISTANCE AGREEMENT
between the**

**UNITED STATES FISH AND WILDLIFE Service,
and the**

**THE UNITED STATES AIR FORCE
for the**

**CONSERVATION OF NATURAL RESOURCES
ON AIR FORCE CONTROLLED LANDS**

I. PURPOSE

This interagency assistance agreement (IAA) establishes a cooperative conservation program between the United States Fish and Wildlife Service (Service) and the United States Air Force (USAF) to support the management of natural resources on USAF controlled lands. This IAA will help the USAF meet Federal stewardship requirements and ensure the continued availability of installation lands to support military readiness. Implementation of this IAA will be a cooperative effort utilizing the combined expertise of USAF natural resources managers and Service staff located at the Washington Office, Ecological Services Field Offices, Fisheries Field Offices, and National Wildlife Refuges. Separate agreements and statements of work under the auspices of this IAA may be established to define the means by which the Service may be reimbursed for assistance provided to the USAF. The Assistant Director for Fisheries and Habitat Conservation, in coordination with the Assistant Director for Endangered Species Program, shall oversee the implementation of this IAA for the Service. The Air Force Center for Engineering and the Environment (AFCEE), as Field Operating Agency for Headquarters Air Force, shall be the office of primary responsibility for implementation of this IAA in USAF. Each of the parties to the agreement agrees to cooperate and work to protect Service trust species and to work collaboratively to manage, protect, stabilize and/or improve natural resources on military lands.

II. BACKGROUND

The Service is charged with the mission to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the American people. The USAF is steward to millions of acres of lands used for national defense purposes that include a variety of intact ecosystems and habitats that support Service trust species. The USAF also hosts recreational hunting and fishing programs, and actively supports efforts to conserve species at risk. The mutual interests and responsibilities of both agencies provide opportunities for the USAF and Service to cooperate in ways that will not only enhance the management of natural resources

on Federal lands, but will facilitate landscape linkages contributing to regional biodiversity. This cooperation benefits Service in its mission to protect lands and waters that are essential for Service trust resource conservation, and helps the USAF implement an environmental program that will enhance the ecosystems under its stewardship while sustaining the use of the land for military purposes. Ultimately, this agreement will benefit the public purpose by identifying, restoring and maintaining natural resources through compliance with Federal laws, regulations and statutes.

III. AUTHORITY

This IAA is enacted under the following authorities:

A. The Fish and Wildlife Coordination Act.

The Fish and Wildlife Coordination Act, as amended, authorizes the Service to provide assistance to, and cooperate with, other Federal agencies to prepare and implement plans to protect wildlife resources. The Act, as codified in Title 16, United States Code, Subchapter I, Section 661 – *Declaration of purpose; cooperation of agencies; surveys and investigations; donations*, subparagraphs (1)-(3), authorizes the Secretary of Interior...

(1) to provide assistance to, and cooperate with, Federal, State, and public or private agencies and organizations in the development, protection, rearing, and stocking of all species of wildlife, resources thereof, and their habitat, in controlling losses of the same from disease or other causes, in minimizing damages from overabundant species, in providing public shooting and fishing areas, including easements across public lands for access thereto, and in carrying out other measures necessary to effectuate the purposes of said sections;

(2) to make surveys and investigations of the wildlife of the public domain, including lands and waters or interests therein acquired or controlled by any agency of the United States; and

(3) to accept donations of land and contributions of funds in furtherance of the purposes of said sections.

B. The Sikes Act.

This IAA supports and is supported by the Sikes Act, as codified in Title 16, United States Code, Section 670 *et seq.*, Subchapter I – *Conservation Programs on Military Installations*. The Sikes Act authorizes programs for conservation and rehabilitation of natural resources on military installations, to include the cooperative development by the USAF, Service, and State fish and wildlife agency of an Integrated Natural Resources Management Plan (INRMP). Sections of the Sikes Act (16 U.S.C. § 670 *et seq.*) that provide specific authorities to support this interagency cooperative assistance agreement are provided below.

- 16 U.S.C. § 670a(a)(2) *Cooperative preparation*, states:

"The Secretary of a military department shall prepare each integrated natural resources management plan for which the Secretary is responsible in cooperation with the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, and the head of each appropriate State fish and wildlife agency for the State in which the military installation is located.

- 16 U.S.C. § 670a(d)(2) states:

"priority shall be given to the entering into of contracts for the procurement of such implementation and enforcement Services with Federal and State agencies having responsibility for conservation and management of fish and wildlife."

- 16 U.S.C. § 670c-1 – Cooperative agreements for land management on Department of Defense installations, subparagraph (b) Multiyear agreements provides the following in regards to the obligation of funds for cooperative assistance provided under the terms of this IAA:

"Funds appropriated to the Department of Defense for a fiscal year may be obligated to cover the cost of goods and Services provided under a cooperative agreement entered into under subsection (a) or through an agency agreement under section 1535 of title 31, United States Code, during any 18 month period beginning in that fiscal year, without regard to whether the agreement crosses fiscal years.

C. The Economy Act.

This Economy Act, as codified in Title 31 United States Code, Section 1535, provides authority for interagency transactions between agencies of the Federal government. The Federal Acquisition Regulation (FAR), Subpart 17.5 – *Interagency Acquisitions Under the Economy Act*, prescribes the policies and procedures applicable to interagency acquisitions under the Economy Act (31 U.S.C. § 1535). Defense regulation DFARS 217.5 and Air Force regulation AFFARS 5317.5 supplement the FAR.

D. Executive Order 13352, Facilitation of Cooperative Conservation.

On August 26, 2004, the President enacted Executive Order 13352 to encourage collaboration among Federal, State, local, and tribal governments, private for-profit and nonprofit institutions, other nongovernmental entities and individuals to facilitate actions related to the enhancement and enjoyment of natural resources and protection of the environment. The President states the purpose of the Executive Order as follows:

"The purpose of this order is to ensure that the Departments of the Interior, Agriculture, Commerce, and Defense and the Environmental Protection Agency implement laws relating to the environment and natural resources in a manner that promotes cooperative conservation, with an emphasis on appropriate inclusion of local participation in Federal decision making, in accordance with their respective agency missions, policies, and regulations.

E. Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds

On January 10, 2001, the President signed Executive Order 13186, "*Responsibilities of Federal Agencies to Protect Migratory Birds*", (66 FR 3853, January 17, 2001). The Executive Order directs agencies to take certain actions to further comply with the migratory bird conventions, the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA), and other pertinent statutes through development of an Memorandum of Understanding (MOU) with the Service. On July 31, 2006, the Department of Defense (DoD) and the Service entered into a *Memorandum of Understanding (MOU) to Promote the Conservation of Migratory Birds*. The purpose of the MOU is to strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and avoid or minimize adverse impacts on migratory birds through enhanced collaboration between the Service and DoD. The MOU describes how the Service and DoD will work together cooperatively to achieve these ends.

F. Air Force Instruction 32-7064.

Air Force Instruction (AFI) 32-7064, *Integrated Natural Resources Management* directs the USAF to manage vegetation, wildlife, water, and outdoor recreation resources in accordance with applicable laws. The regulation supports USAF operations by facilitating the stewardship of natural resources within and around airfields, ranges, and other training areas while simultaneously supporting the Sikes Act objective to sustain "no net loss in the capability of military installation lands to support the military mission of the installation." In regards to the authority of AFCEE to enter into cooperative agreements on behalf of the Air Force, AFI 32-7064 states:

"AFCEE Director is delegated authority to sign cooperative agreements entered into pursuant to the Sikes Act, Title 16, United States Code, Section 670c-1."

G. Other Authority.

In addition to the authorities listed above, this IAA supports and is supported by the following statutes and guidances:

- Anadromous Fish Conservation Act, as amended (16 U.S.C 757a-757g).
- Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668d).
- Cave Resources Protection Act (16 U.S.C. 4301 et seq.)
- Comprehensive Environmental Response Compensation and Liability Act of 1980 (26 U.S.C. 4611-4682), as amended 1983 (42 U.S.C. 9601-9657) and 1986 (P.L. 99-499).
- Department of Defense Instruction (DODI) 4715.03, *Natural Resources Conservation Program*.
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).
- Executive Order 11988, *Flood plain Management*, May 24, 1977.
- Executive Order 11990, *Protection of Wetlands*, May 24, 1977.

- Executive Order 12962, *Recreational Fisheries*, June 7, 1995.
- Executive Order 13112, *Invasive Species*, February 3, 1999.
- Estuaries and Clean Waters Act of 2000 (P.L. 106-457).
- Estuary Protection Act (16 U.S.C. 1221-1226).
- Federal Grant and Cooperative Agreement Act of 1977 (P.L. 95-114).
- Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701).
- Federal Noxious Weed Act of 1976 (7 U.S.C. 2801).
- Federal Water Pollution Control Act of 1977 (Clean Water Act), as amended (33 U.S.C. 1251-1376).
- Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901).
- Hunting, Fishing and Trapping on Military Lands [An update of the Military Construction Authorization Act] (10 U.S.C. 2671).
- Lacey Act of 1900 (16 U.S.C. 701, 702).
- *Memorandum of Understanding Between the U.S. Department of Defense and U.S. Fish and Wildlife Service and the International Association of Fish and Wildlife Agencies for a Cooperative Integrated Natural Resource Management Program on Military Lands*, January 31, 2006.
- Migratory Bird Treaty Act, as amended (16 U.S.C. 701 *et. seq.*).
- National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321-4347).
- Resource Conservation and Recovery Act (RCRA), P.L. 94-580 (42 U.S.C. 6901-6992; 90 Stat. 2795), as amended by P.L. 95-609 (92 Stat. 3081), P.L. 96-463 (94 Stat. 2055), P.L. 96-482 (94 Stat. 2334), P.L. 98-616 (98 Stat. 3224), P.L. 99-339 (100 Stat. 654), P.L. 99-499 (100 Stat. 1696), P.L. 100-556 (102 Stat. 2779)
- Rivers and Harbors Act of 1899 (33 U.S.C. 401 *et. seq.*).
- Soil and Water Conservation Act (16 U.S.C. 2001).

IV. SCOPE

A. Mutual Responsibilities.

1. The parties will collaborate on matters relating to the conservation and management of natural resources on or affecting the lands administered by the USAF, such as fish and wildlife management projects, research activities, law enforcement, education and outreach programs, and other matters as may be relevant to natural resources conservation. An interdisciplinary, united approach shall be promoted by the parties to resolve problems relating to multiple use management of natural resources.
2. The parties shall cooperate in preparing and implementing Integrated Natural Resources Management Plans (INRMPs) in accordance with the Sikes Act, and in conducting natural resources conservation studies on lands under USAF control in support of the Endangered Species Act or to comply with the National Environmental Policy Act.

3. The USAF and Service agree that the involvement of each agency in this IAA shall not be used in any way by either agency to imply an endorsement of the other agency's actions. All advertising or other publicity regarding activities undertaken as part of this agreement, which mentions the participation of the other agency, shall first be approved for release by both agencies, and approval may be withheld for any reason sufficient to either agency. If either agency should appear to have violated this clause, the aggrieved agency may request the immediate cessation of those actions plus further action to effectively counteract any mistaken impressions in the public mind. If the violating agency fails to comply fully with the request, the aggrieved agency may unilaterally take any action it considers necessary to correct the mistaken impression and bill the other agency for the reasonable costs of that action. Failure to promptly pay those reasonable costs shall be treated as a dispute under the terms of this agreement.

4. Nothing in this IAA is intended to modify in any manner currently ongoing cooperative programs with other public agencies, conservation groups, or educational institutions, or modify any rights granted by treaty or otherwise to any Indian tribe or member thereof.

5. All data collected or generated as a result of this agreement will be shared between all parties involved and will remain the property of the United States of America.

6. The USAF and Service will conduct a joint annual review of this agreement.

B. United States Fish and Wildlife Service Responsibilities.

The Service shall, consistent with Service policy and within limitations of available funding provided by the USAF:

1. Establish a point of contact for this agreement in the Service Washington Office.

Chief, Division of Habitat and Resource Conservation
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive
Arlington, VA 22203

2. Assign one or more Service employees to the AFCEE as liaison to the USAF. Duties for a Service liaison position will be as specified in a position description approved by the Service. Goals and objectives for Service employees supported by USAF shall be established in a statement of work approved jointly by the Service and AFCEE, and amended periodically by mutual agreement of both parties. Service liaison support may include, but is not limited to:

- a. Support Air Force compliance with the Endangered Species Act, as specified in Title 16 U.S.C. § 1531-1544, by providing technical assistance for the conservation, protection and management of Service trust species. The Service liaison will work with the USAF to create a consolidated source of information on

Service trust species on USAF controlled properties. The incumbent will help disseminate information to USAF installations on upcoming proposed threatened and endangered species listings and critical habitat designations.

- b. Support Air Force and Service compliance with the Sikes Act, as specified in Title 16 U.S.C. § 670a(a)(2), and in accordance with DoD and Service Sikes Act guidelines. The Service liaison shall provide technical and advisory assistance for the development and implementation of Integrated Natural Resources Management Plans (INRMPs) as required by the Sikes Act, and will help insure the synchronization of INRMPs with existing Service and State Wildlife Action Plans. The incumbent will help facilitate and track the required coordination and review of INRMPs with the appropriate Service Field Office and Regional Office Sikes Act Coordinator.
- c. Advise Air Force installations of opportunities for cooperative conservation and natural resources management assistance available from Service offices. The Service liaison shall facilitate cooperative conservation partnerships between USAF installations and Service Regions, Ecological Services Field Offices, Fisheries Field Offices, and National Wildlife Refuges as appropriate. The incumbent may also assist with the implementation of INRMPs by coordinating the assistance of qualified Service experts in the fields of endangered species conservation, fish and wildlife management, and other natural resource management disciplines. Upon acceptance of USAF funds, the Service may facilitate reimbursable assistance to USAF from Service offices nationwide.

C. United States Air Force Responsibilities.

The USAF will, consistent with Department of Defense policy and within limitations of appropriations:

1. Provide a POC to administer and facilitate Service assistance for USAF natural resource program needs at the Air Force Center for Engineering and the Environment

Natural Resources Subject Matter Expert
AFCEE/TDN
2261 Hughes Avenue, Suite 155
Lackland AFB, TX 78236-9853

2. Reimburse the appropriate Service organization for costs incurred by the Service for support provided to USAF for the conservation and management of fish and wildlife resources. The USAF will reimburse the Service for the salary, employee benefits, travel, transfer of station, administrative overhead and other support costs for liaison positions with a duty station at the AFCEE. Funding for reimbursement of Service assistance will be provided by the USAF to the Service office providing the Services by means of a DD Form 448 *Military Interdepartmental Purchase Request* (MIPR). Each MIPR will reference the specific support provided and will reimburse the Service for the total cost of assistance.

Funds will be considered obligated upon the Service acceptance of the MIPR as Category I – Reimbursement.

3. Provide workspace, computer support, clerical support, security clearance and appropriate access privileges for Service employees permanently assigned or detailed to Air Force offices.

V. FINANCIAL ADMINISTRATION

A. Funding.

1. The USAF agrees to seek sufficient funds to support Service activities as identified in the agreed upon statement of work. The USAF will submit an annual request for funds through the Air Force budgetary process. Any requirement for payment or obligation of funds shall be subject to the availability of appropriated funds.

2. The USAF organization requesting assistance and the supporting Service office will review and approve a project budget prior to any Services being rendered. The Air Force will issue a MIPR to the supporting Service office for the estimated cost of assistance to be provided for a period not to exceed 18 months.

3. In accordance with 16 U.S.C. § 670c-1(b), funds obligated by the USAF and transmitted to the Service by MIPR, may be obligated to cover the cost of goods and Services specified in the associated program of work during an 18 month period, beginning in that fiscal year, without regard to whether the agreement crosses fiscal years. Funds for specific tasks that Service is unable to execute during the allowable period will be returned to the USAF.

B. Payments.

1. The Service office accepting a MIPR for reimbursable Services shall bill the USAF by means of an SF 1080 or, if available, via Intra-Governmental Payment and Collection system (IPAC), for any effort completed during the previous 90 days or less. Each billing statement will include the project title, project number and the applicable MIPR number. Payment requests will be submitted through the Defense Finance and Accounting Service (DFAS) office designated on the MIPR (Block 13).

2. Allowable costs under this IAA will include all direct and indirect costs incurred by the Service for work to be completed within the scope of this IAA. The Service will maintain a record of costs incurred.

a. The Service office performing reimbursable Services for USAF shall provide the USAF with cost documentation, as requested, which will reflect an annual reconciliation of costs and expenditures incurred by the Service for each task.

b. The Service indirect cost rate for this agreement will be the current and applicable Service overhead cost rate.

c. If there are any discrepancies regarding the reimbursable costs associated with this agreement, the Service and USAF will resolve any issues.

VI. MODIFICATIONS

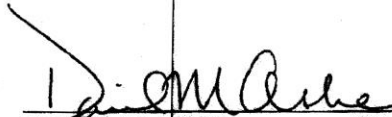
Modifications to this IAA will be made in writing and signed by the parties prior to being incorporated. Correspondence between the parties may be considered part of this IAA when appropriate and countersigned by the receiver and returned to the sending party.

VII. TERMINATION

Each party may terminate its participation in this IAA at the end of any fiscal year, (1 October to 30 September), providing that written Notice of Termination is given by the terminating party to the non-terminating party. The Service will return any unused funds to USAF upon termination. The USAF will notify the Service at least 90 days in advance if funding to support salary and benefits of Service personnel will be terminated.


VIII. EFFECTIVE DATE

This inter-agency agreement becomes effective upon its execution by signature of authorized representatives from each cooperating agency. This IAA shall be valid until terminated in accordance with Section VII. This IAA may be modified, revised or renewed at any time, as agreed upon by the effected parties.



DANIEL M. ASHE (DATE)
Director
U.S. Fish and Wildlife Service

6-7-2012



TERRY G. EDWARDS, P.E., SES (DATE)
Director, Air Force Center for Engineering and the Environment

DECEMBER 2017

National Historic Preservation Act Consultation request from Air Force to U.S. Fish and Wildlife Service, Region 8: October 18, 2016



DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE NEVADA

Lieutenant Colonel Michael A. Freeman
Commander
4430 Grissom Ave., Ste. 101
Nellis AFB NV 89191-6520

OCT 18 2016

Mr. Paul Souza
U.S. Fish and Wildlife Service
Regional Director – Pacific Southwest (Region 8)
2800 Cottage Way
Sacramento, CA 95825

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation Request; Nevada Test and Training Range (NTTR) Land Withdrawal at Nellis Air Force Base, Nevada

Dear: Mr. Souza,

The United States Air Force (USAF) is now preparing a Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR) Military Land Withdrawal. The Military Lands Withdrawal Act of 1999 (Public Law 106-65) withdrew 2,919,890 acres from the Department of Interior for use by the Department of Defense. The current withdrawal will expire in 2021. As a result, the USAF is working with the Department of the Interior (DoI) to support Congressional legislation to extend and possibly expand the current footprint of the NTTR to support military training and testing requirements.

In addition to extending the current existing land withdrawal, USAF alternatives being evaluated in the LEIS include 3 sub-alternatives that involve NTTR expansion by up to 301,507 acres. Options include withdrawing ~18,000 additional acres on the South side of the North Range, withdrawal of an additional ~57,000 acres on the South side of the NTTR South range, and withdrawal of ~227,000 acres of land overlapping the Desert National Wildlife Refuge (DNWR) to the East of the NTTR.

In furtherance of meeting requirements of Section 106 and other provisions of the National Historic Preservation Act (NHPA), the USAF has identified the USFWS as an appropriate NHPA consulting party to this action due to the nature of the proposal and the ownership/management of identified land areas. The USAF has also identified lands within Attachment 1 as the Area of Potential Effect, or APE, for the NTTR land withdrawal proposal.

The types of activities that are now taking place on existing withdrawn lands will not change under the withdrawal extension. The USAF has identified the general types of activities that may take place in the proposed withdrawal expansion area. New activities in proposed withdrawal expansion areas would include establishment of electronic emitter and radar sites, overland movement by small tactical teams of 10-12 military personnel, establishment of an airstrip, limited road and trail construction, fencing, and establishment of controlled access to ensure public safety during military operations. Specific locations for

these activities cannot be defined until after enactment of any withdrawal legislation. The USAF is not proposing any site-specific activities that would involve ground-disturbance at this time. Accordingly, the USAF is preparing a programmatic LEIS that will identify cultural resources within proposed withdrawal areas, and to the extent possible address impacts to those resources based on the types of activities that may occur in the future in these areas. Specific future activities on any withdrawn lands would be subject to the appropriate level of future NEPA review and associated supporting consultations at the time they are proposed. The Air Force anticipates completing a Programmatic Agreement (PA) to meet its Section 106 consultation requirements and, with this letter, invites the USFWS to participate as a consulting party in the formulation of the PA.

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and 36 CFR 800.1(c), the USAF initiated consultation with the Nevada State Historic Preservation Office (NVSHPO) in July 2016 for the NTTR military land withdrawal proposal. Nellis Air Force Base (NAFB) also initiated discussions with affiliated Native American tribes early in the planning process in order to take into account tribal concerns. With this letter, the USAF is also formally requesting the initiation of NHPA consultation with the US Fish and Wildlife Service for the NTTR military land withdrawal proposal given that the APE under consideration may impact your agency and cultural resource management programs.

Sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, that have an interest in the NTTR Land Withdrawal LEIS have been contacted and offered an opportunity to partner in cultural resource studies and participate as consulting parties. Tribes affiliated with NAFB include: the Benton Paiute Tribe, Fort Independence Paiute Tribe, Duckwater Shoshone Tribe, Timbisha Shoshone Tribe, Yomba Shoshone Tribe, Ely Shoshone Tribe, Big Pine Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, Bishop Paiute Tribe, Fort Mojave Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Kaibab Band of Southern Paiutes, Las Vegas Paiute Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah (Tribes). The Air Force initiated discussions with these Tribes by visiting tribal offices and informally discussing the NTTR land withdrawal project in February/ March of 2015.

In November of 2015, the Air Force held a second informational meeting on NAFB, where the tribes were invited to comment on the project and provide feedback on issues important to them. As a result of this meeting, the tribes requested that four additional meetings be held at locations around Nevada and California that were more conveniently located for tribal members to attend. These meetings were held from April 25-29 at the Bishop Paiute Tribe Reservation, the Ely Shoshone Tribal Reservation, the Mojave Tribal Reservation, and at the Las Vegas Paiute Tribal Reservation. A government-to-government letter initiating formal consultations was sent to all sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, on June 22, 2016. In addition to these interactions, the tribes are providing input on special studies associated with the LEIS. The attached Cultural and Paleontological Survey Plan (Duke, 2016) was submitted to the NAFB affiliated tribes for review and input in March 2016. So far, the Tribes have not requested any modifications to the survey strategy.

As discussed, on 18 July 2016 the USAF initiated NHPA Section 106 consultation with the NVSHPO regarding this proposed action (copy of letter provided as Attachment 2); the Air Force held a discussion with the NVSHPO on 5 August 2016 to provide additional background information on the proposed project.

The Air Force plans to initiate a Cultural Resources Study within the proposed withdrawal expansion areas to identify and characterize resources that may be present. The Air Force has coordinated the survey plan with USFWS, and has updated the plan to include USFWS recommendations for Phase I cultural surveys in these areas. The USAF coordinated this plan with Mr. Anan Raymond (Regional Historic Preservation Officer for Regions 1 and 8) and Mr. Spencer Lodge Staff Archaeologist) in August 2016. USFWS input has been incorporated into the updated plan which has been provided back to these POCs and is available upon request. The plan will be supplemented by any previous studies in these areas and any available data

from the NVSHPO and partner agencies. All identified cultural resources 50 years or older will be recorded as part of the survey (including historical structures).

In support of NHPA consultation efforts for this undertaking the USAF seeks information from the USFWS on historic property sites and concerns within the area of potential effect, input on methods for data gathering, as well the USFWS' perceived historic property identification needs. The USAF also invites your comments regarding:

- Any outstanding cultural and/or tribal resources.
- The potential for irresolvable management conflicts, such as areas where it would be difficult or impossible to avoid, minimize, or mitigate impacts from future actions.
- Any other issues or concerns you request be considered during preparation of consultation documentation or the LEIS.

As the USAF develops the LEIS and works through the NHPA Section 106 consultation process with the NVSHPO, tribes, and other consulting parties, we look forward to the USFWS' contributions as we work collaboratively for the preservation of the historic resources entrusted to the stewardship of the USAF on the withdrawn NTTR lands.

If you have any questions or comments regarding the information presented in this letter, please direct them to Ms. Kish Lapierre by e-mail at kish.lapierre@us.af.mil or by phone at (702) 652-5813. Thank you for your attention to this matter.

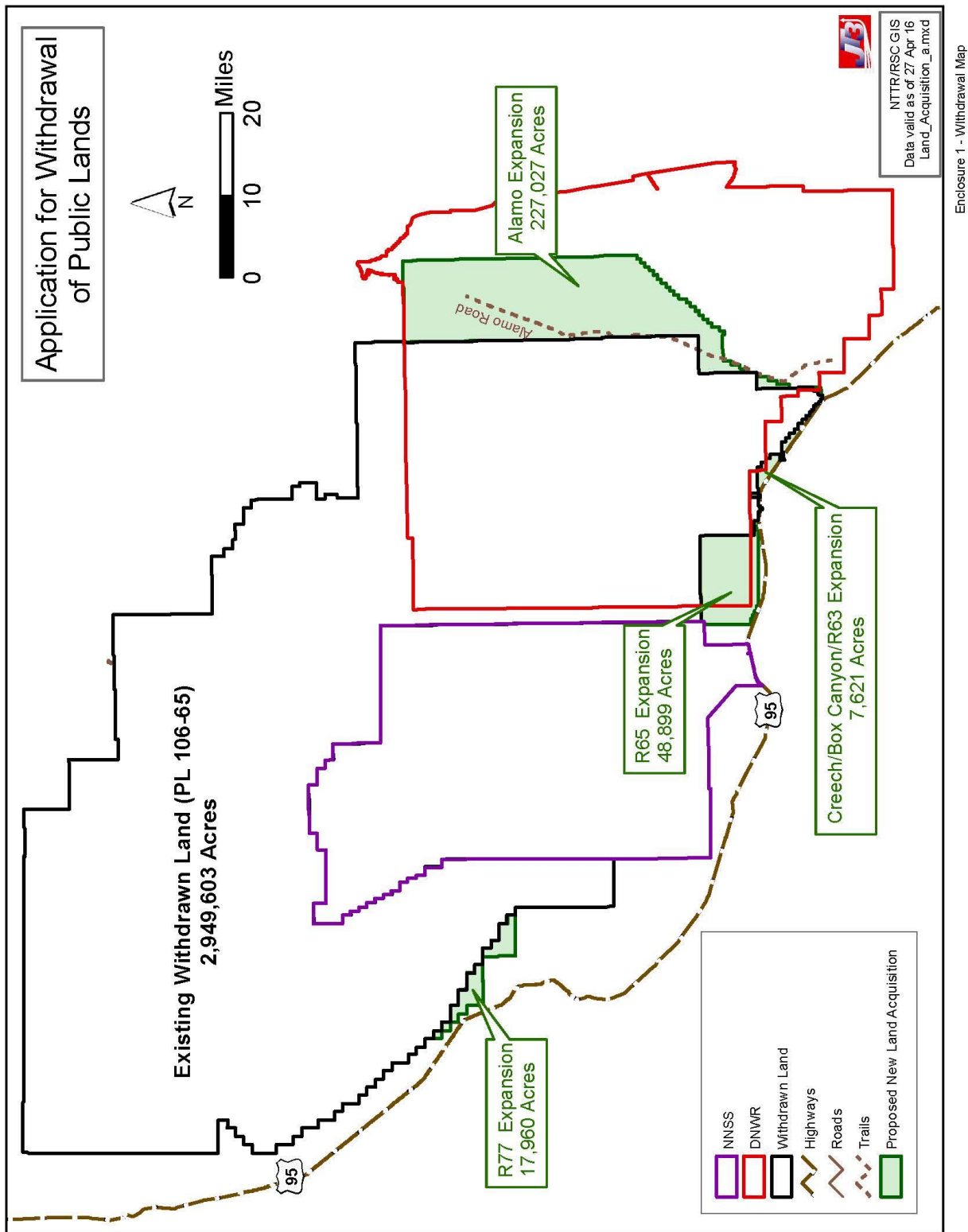
Sincerely,



Michael A. Freeman
Lieutenant Colonel, USAF
Commander

Cc:

Polly Wheeler, Assistant Regional Director for Refuges, Pacific SW Region
Christy Smith, Desert National Wildlife Refuge Complex
Anan Raymond, USFWS Cultural Resources Management
Spencer Lodge, USFWS Cultural Resources Management
Rebecca Palmer, NV State Historic Preservation Office





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE NEVADA

Enclosure 2

Lieutenant Colonel Michael A. Freeman
Commander
6020 Beale Ave.
Nellis AFB NV 89191

JUL 18 2016

Ms. Rebecca Palmer
State Historic Preservation Officer
State Historic Preservation Office
Department of Conservation and Natural Resources
901 South Stewart Street, Ste. 5004
Carson City NV 89701-5248

Dear Ms Palmer

The United States Air Force (USAF) is now preparing a *Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR) Land Withdrawal* extension and proposed expansion. Because the current NTTR land withdrawal (Attachment 1) will expire in 2021, the USAF seeks Congressional action to extend the currently withdrawn lands for the purpose of continuing the existing test and training activities. The USAF is also considering a proposal for Congress to expand lands withdrawn for the NTTR (Attachment 2) to provide additional security and safety while enhancing the functionality and capacity of the NTTR. The additional features associated with the proposed expansion are critical to meet increasing demands on the NTTR to satisfy national security requirements. Under this concept, the USAF proposes to expand the withdrawn lands associated with EC South on the west side of the range, 64C/D and 65D on the south side of the range and east of 62A/B, for a total of approximately 310,000 acres.

While Congress and the President ultimately make the decision with respect to legislative withdrawals such as this one, the USAF anticipates engaging in undertakings in the future, should the withdrawal be enacted. In addition, the proposed expansion would change the accessibility of these lands depending upon the alternative means of implementing these features as determined by Congress. Therefore, in accordance with Section 106 of the National Historic Preservation Act (NHPA) and 36 C.F.R. §800.1(c), the USAF seeks to consult with you early in the planning process in order to take into account any historic preservation concerns you may have as it formulates these undertakings.

The types of activities that are now taking place on existing withdrawn lands will not change under the withdrawal extension. While the USAF has identified the general types of activities that will take place in the proposed withdrawal expansion area, specific activities and their locations cannot be defined until after enactment of any withdrawal legislation. As a result, the USAF is preparing an LEIS which is programmatic in nature. The LEIS will identify cultural resources within proposed withdrawal areas, and to the extent possible address impacts to those

Enable Success Through Innovative Base Support

resources based on the types of activities that may occur in the future in these areas. Specific future activities would be subject to additional and appropriate NEPA analysis and NHPA consultation.

To develop the LEIS and meet NHPA obligations, the USAF would use existing cultural resource information for the current NTTR lands. It plans to initiate a Cultural Resources Study of 15,000 acres of land within the proposed withdrawal expansion areas to identify and characterize resources that may be present. Because the proposed expansion areas consist of over 300,000 acres and the results of the land withdrawal process may not be known until 2021, the Air Force has developed a draft plan to characterize cultural resources through a random-sample survey strategy in these areas. The plan will be supplemented by any previous studies in these areas and associated available data; all identified cultural resources 50 years or older will be recorded as part of the survey (including historical structures). This survey will also serve to supplement and test a successful probabilistic model developed for work conducted previously on the adjacent NTTR property. The USAF has included the proposed plan to address characterization of historic properties as Attachment 3 to this letter.

Sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, that have an interest in the NTTR Land Withdrawal LEIS have been contacted and offered an opportunity to partner in cultural resource studies and participate as consulting parties. Tribes affiliated with Nellis AFB (NAFB) include: the Benton Paiute Tribe, Fort Independence Paiute Tribe, Duckwater Shoshone Tribe, Timbisha Shoshone Tribe, Yomba Shoshone Tribe, Ely Shoshone Tribe, Big Pine Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, Bishop Paiute Tribe, Fort Mojave Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Kaibab Band of Southern Paiutes, Las Vegas Paiute Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah (Tribes). The USAF initiated discussions with these Tribes by visiting tribal offices and informally discussing the NTTR land withdrawal project in February/March of 2015.

In November of 2015, the USAF held a second informational meeting on NAFB, where the tribes were invited to comment on the project and provide feedback on issues important to them. As a result of this meeting, the tribes requested that four additional meetings be held at locations around Nevada and California that were more conveniently located for tribal members to attend. These meetings were held from April 25-29 at the Bishop Paiute Tribe Reservation, the Ely Shoshone Tribal Reservation, the Mojave Tribal Reservation, and at the Las Vegas Paiute Tribal Reservation. A government-to-government letter initiating formal consultations to all seventeen federally recognized tribes was sent to all tribes on June 22, 2016. In addition to these interactions, the tribes are providing input on special studies associated with the LEIS. The attached Cultural and Paleontological Survey Plan (Duke, 2016) was submitted to the NAFB affiliated tribes for review and input in March 2016. So far, the Tribes have not requested any modifications to the survey strategy.

For consultation with your office, the USAF identifies the Area of Potential Effect as the extended and potentially expanded withdrawn NTTR lands. The USAF invites your comments regarding the following:

- Outstanding cultural and/or tribal resources.
- The potential for irresolvable management conflicts, such as areas where it would be difficult or impossible to avoid, minimize, or mitigate impacts from future actions.
- Any other issues or concerns you request be considered during preparation of the LEIS.

As the USAF develops the LEIS, it will continue consulting with you under Section 106 and provide the necessary information and determinations for established procedures under NHPA. We look forward to the NV SHPO's valuable contributions as we work collaboratively for the preservation of the historic resources entrusted to the stewardship of the USAF on the withdrawn NTTR lands.

If you have any questions or comments regarding the information presented in this letter, please contact the NAFB cultural resource manager and tribal liaison Ms. Kish LaPierre, 702-652-5813 or kish.lapierre@us.af.mil.

Sincerely



MICHAEL A. FREEMAN, Lt Col, USAF
Commander

Attachments:

1. Location of the NTTR, Population Centers, Roadway Infrastructure, and Wilderness/Wilderness Study Areas
2. Alternative 3A, 3B, and 3C Locations and Acreages
3. Cultural and Paleontological Survey Plan (Duke, 2016)

cc:

Mr. Michael Ackerman (AFCEC/CZN)
Mr. Skip Canfield (Nevada State Clearinghouse)

**Cooperating Agency acceptance letter from the U.S. Fish and Wildlife Service:
August 5, 2016**



In Response Reply To:
FWS/RR/

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Southwest Region
2800 Cottage Way, Suite W-2606
Sacramento, California 95825



Ms. Jennifer Miller
SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

AUG 5 2016

Dear Ms. Miller:

The U.S. Fish and Wildlife Service (USFWS) will formally participate as a Cooperating Agency in the preparation of a Legislative Environmental Impact Statement (LEIS), as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations, 40 CFR Part 1501.6.

The Air Force is the lead Agency in the preparation of the LEIS, and the USFWS as a Cooperating Agency agrees to:

- 1) Participate in the LEIS scoping, data gathering, analysis, and consultation processes;
- 2) Assuming responsibility, upon request, for developing information and preparing analyses on issues for which USFWS has special expertise; and
- 3) Provide staff support to enhance interdisciplinary review capability, correspondence, and/or surveys.

In addition, the USFWS names Christy Smith, Project Leader for the Desert National Wildlife Refuge Complex, to be the representative for the LEIS process described above.

Polly Wheeler
Assistant Regional Director
US Fish and Wildlife Service
Pacific Southwest Region

cc:
Jack Bush
Michael Ackerman

B.4 NEVADA DEPARTMENT OF WILDLIFE

Letter from Air Force requesting formal participation as Cooperating Agency: January 29, 2016



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

JAN 29 2016

OFFICE OF THE ASSISTANT SECRETARY

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

Mr. Anthony Wasley
Director
Nevada Department of Wildlife
6980 Sierra Center Pkwy #120
Reno, NV 89511

Dear Mr. Wasley:

The Air Force is initiating its Land Withdrawal Renewal for the Nevada Test and Training Range (NTTR) and requests NDOW formal participation as a Cooperating Agency in the preparation of a Legislative Environmental Impact Statement (LEIS), as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR Part 1501.6, *Cooperating Agencies*.

The Air Force asks for your participation as a cooperating agency in preparation of the LEIS as generally outlined in the steps below. To address the specific responsibilities of the Air Force as Lead Agency and NDOW as Cooperating Agency, we also propose development of an Interagency Agreement, the context of which will be worked out between the Cooperating Agencies, subsequent to this request.

- (1) Participating in the LEIS scoping, data gathering, analysis, and consultation processes;
- (2) Assuming responsibility, upon request, for developing information and preparing analyses on issues for which NDOW has special expertise;
- (3) Making NDOW staff support available to enhance interdisciplinary review capability, correspondence, and/or surveys; and
- (4) Responding in writing to this request.

The Air Force requires the support of cooperating agencies be timely, to avoid unnecessary delays in the NEPA process. Should you or your staff have further questions regarding this memo, our point of contact is Mr. Jack Bush, HQ USAF/A4CI, at (703) 614-0237 or jack.bush@pentagon.af.mil.

Sincerely,

A handwritten signature in cursive script, reading "Jennifer Miller", is positioned above the typed name.

JENNIFER MILLER
Deputy Assistant Secretary of the Air Force
(Installations)

cc:
AF/A30/A4C/TE
HQ ACC/AFMC/CV
Brad Hardenbrook, NDOW Southern Region

Cooperating Agency acceptance letter: March 17, 2016

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
6980 Sierra Center Parkway, Suite 120
Reno, Nevada 89511
Phone (775) 688-1500 • Fax (775) 688-1495

TONY WASLEY
Director

LIZ O'BRIEN
Deputy Director

JACK ROBB
Deputy Director

Thursday, March 17, 2016

Mr. Jack Bush
HQ USAF/A4CI
1665 Air Force Pentagon
Washington, DC 20330-1665

Dear Mr. Bush:

The Nevada Department of Wildlife (NDOW) received a formal request from the United States Air Force to participate as a Cooperating Agency on the Nevada Test and Training Range (NTTR) Legislative Environmental Impact Statement (LEIS). This letter is a brief response to that request to inform you that we would like to be a Cooperator.

As you may know, NDOW staff have been participating in meetings since late last year to assist in identifying wildlife resource issues and related recommendations that might be incorporated into the NTTR LEIS. Our staff will continue to participate as needed and available to assure that important wildlife resources are managed in ways that, hopefully, are compatible for both NDOW and NTTR missions.


Sincerely,

For Tony Wasley

cc:
John Tull, NDOW Wildlife Staff Specialist

B.5 NYE COUNTY BOARD OF COMMISSIONERS

Letter to Air Force requesting Cooperating Agency status: December 20, 2016

<p>Pahrump Office Nye County Government Center 2100 E. Walt Williams Drive Suite 100 Pahrump, NV 89048 Phone (775) 751-7075 Fax (775) 751-7093</p>	 Board of County Commissioners Nye County, Nevada	<p>Tonopah Office Nye County Courthouse William P. Beko Justice Facility PO Box 153 Tonopah, NV 89049 Phone (775) 482-8191 Fax (775) 482-8198</p>
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December 20, 2016

99th Air Base Wing Public Affairs, 4430
Grissom Ave., Ste. 107, Nellis AFB, NV
89191 or by email at
99ABW.PAOutreach@us.af.mil.

John Ruhs
Nevada State Director, Bureau of Land Management
BLM Nevada State Office
1340 Financial Blvd.,
Reno, NV 89502
E-mail: Jruhs@blm.gov

Tom Seley
Project Manager, BLM Southern
Nevada District Office, 4701 North
Torrey Pines Drive, Las Vegas, NV,
89130-2301
email: tseley@blm.gov

Subject: Request to become Cooperating Agency for the Nevada Test and Training
Range Military Land Withdrawal at Nellis Air Force Base, Nevada
(August 25, 2016). 81 Fed. Reg. 60727; 81 Fed. Reg. 58496.

To Whom It May Concern:

Nye County formally requests participation as a Cooperating Agency in the Nellis Air Force Base Military Land Withdrawal process. Nye County is a local government that may serve as a Cooperating Agency either under jurisdiction by law or special expertise. 40 CFR 1508.5 (CEQ); 40 CFR 1501.6 and 1508.5; 40 CFR 1508.26.

A County has jurisdiction by law over any land within the County's borders. 40 CFR 1508.15. Counties also have "special expertise" with respect to the several environmental impacts that will result from a land withdrawal. 40 CFR 1508.26. Special expertise means statutory responsibility, agency mission, or related program experience, which emphasizes the "relevant capabilities or knowledge" that a local government entity has with respect to reasonable alternatives or any significant environmental, social, or economic impacts associated with a proposed action. 40 CFR 1501.6.

16-0221FC

Nye County is an Equal Opportunity Employer and Provider

Nellis Air Force Base Cooperating Agency
December 20, 2016
Page 2

Counties possess special expertise for policies or programs affecting the condition and use of public lands, or on the environmental, social, or economic impacts of a proposal and specialized local data and information. 43 CFR 1610.3-1, 3-2; BLM Desk Guide at 9.

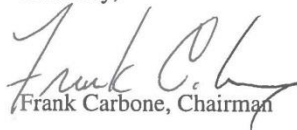
Nye County qualifies as government possessing expertise (1) relevant to Withdrawing from Mineral Entry areas designated as SFAs; and (2) contains program focus and staff capabilities to help raise concerns, collaborate, and provide relevant analyses.

Nye County understands the importance of our potential role to: Arrange for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; Analyze data; Develop alternatives; or carry out other tasks necessary for the development of the environmental analysis and documentation. 40 CFR 1501.6; 43 CFR 46.230.

Should you decide to grant this request, Nye County is happy to help assist entering into a Memorandum of Understanding to establish Cooperating Agency status in the planning and NEPA processes so that we may work together under the terms of the agreement. 43 CFR 46.225(d),(e). As part of its MOU, Nye County requests to designate the Nevada Association of Counties ("NACO") as its representative. Other Agencies, such as the Bureau of Land Management, have recognized that as an intergovernmental organization, the Nevada Association of Counties may be offered as a representative of a County in the Cooperating Agency MOU. BLM Desk Guide at 23-24; BLM Desk Guide at 9; 40 CFR 1508.2. The BLM's opinion is "An intergovernmental organization may represent one or more CAs, provided that all agencies to be represented are members of that organization and all have formally authorized it to act on their behalf. Such authorizations should be identified in the MOU."

If you find it is inappropriate to extend an invitation, we look forward to hearing your response and reasons in the EIS. 40 CFR 1501.6(c).

Sincerely,



Frank Carbone, Chairman

FC/

DECEMBER 2017

Email response from Air Force: January 4, 2017

From: [ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN](#)
To: jreeves@co.nye.nv.us
Cc: [GREENE, LFA M GS-12 USAF ACC 99 ABW/PA; 99 ABW/PA \(Outreach\)](#)
Subject: FW: NTTR//Nye County Request to Become Cooperating Agency
Date: Wednesday, January 04, 2017 1:21:39 PM
Attachments: [16-0221FC.pdf](#)

Hello Ms. Reeves,

We received Nye Counties request to become a cooperating agency sent on 20 Dec (see attached letter). On 8 December the Air Force spoke with the NV State clearinghouse and other members of the State, County, and local NV planning community. Shortly following that meeting we discussed making the NV Association of Counties (NV NACO) a Cooperating Agency on the Nevada Test and Training Range (NTTR) Military Land Withdrawal and its associated Legislative Environmental Impact Statement (LEIS) to represent NV County planning concerns through the planning process. We are working the request at this time to set up an effective structure to engage with Nye County and other potentially effected Counties, as we move forward with planning.

Thank you for your letter and please feel free to share any information or planning concerns with us as we move the LEIS process forward.

Sincerely,

Mike Ackerman

Air Force Civil Engineer Center
NEPA Division (AFCEC/CZN)
(210) 925-2741, DSN 945-2741

-----Original Message-----

From: Jaynee Reeves [<mailto:jreeves@co.nye.nv.us>]
Sent: Wednesday, December 21, 2016 11:26 AM
To: 99 ABW/PA (Outreach) <99ABW.PAOutreach@us.af.mil>
Subject: FW: Nye County Request to Become Cooperating Agency

Hello,

Please see attached letter from Nye County Chairman Frank Carbone, Board of County Commissioners. Should you have any questions please feel free to contact me. Thank you.

Jaynee Reeves

Administrative Secretary

Letter from Air Force to Nye County Board of Commissioners: March 31, 2017

DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER
JOINT BASE SAN ANTONIO LACKLAND TEXAS

AFCEC/CZN
2261 Hughes Ave., Ste. 155
JB SA Lackland, TX 78236-9853

31 March, 2017

Mr. Frank Carbone
Chairman, Nye County Board of County Commissioners
2100 E. Walt Williams Drive
Suite 100
Pahrump, NV 89048

Re: Nevada Test and Training Range (NTTR) Legislative Environmental Impact Statement (LEI) Public Scoping Letter – Request for Cooperating Agency Status.

Dear Mr. Carbone,

The U.S. Air Force (USAF) appreciates the input provided by the Nye County Board of Commissioners on 9 December 2016 regarding the NTTR LEIS. Although the USAF does not typically respond directly to public scoping comments, we believe a response is merited regarding your request for cooperating agency status.

After your 9 December 2016 letter was submitted, the USAF met with Nye County representatives, held discussions with other effected Counties, and participated in a teleconference with the Nevada Association of Counties (NVNACO). Through these interactions, the USAF has agreed to establish a cooperating agency relationship with NVNACO, as a central focal point for interaction with Counties potentially affected by the NTTR land withdrawal proposal as opposed to becoming a cooperating agency with each individual County. This will provide an equal opportunity for information sharing across all potentially affected Counties and ensure that the USAF receives the collective benefit of County planning expertise in the development of the NTTR LEIS. The Air Force looks forward to working with Nye County and NVNACO in sharing information and getting early feedback on the USAF NTTR land withdrawal proposal.

With respect to requests to extend the public scoping period, the Air Force did not extend the public scoping period, but does welcome any new information or comments from Nye County that may assist in the preparation and development of the NTTR LEIS.

As previously mentioned, we appreciate your comments and felt it was important to reply to your request regarding cooperating agency status. We welcome any input or information that you wish to share with us on the NTTR land withdrawal proposal.

If you have any questions, please do not hesitate to contact me at (210) 925-2741;
michael.ackerman.2@us.af.mil

Sincerely,



Michael Ackerman
Program Manager
NEPA Division (AFCEC/CZN)

B.6 NEVADA ASSOCIATION OF COUNTIES

Cooperating Agency acceptance letter: June 2, 2017



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC



OFFICE OF THE ASSISTANT SECRETARY

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

JUN 02 2017

Mr. Jeffrey Fontaine
Executive Director
Nevada Association of Counties
304 S. Minnesota Street
Carson City, NV 89703

Dear Mr. Fontaine,

The Air Force accepts the Nevada Association of Counties's (NACO) request to become a Cooperating Agency (CA) in the continuing planning efforts for the Nevada Test and Training Range military land withdrawal and its preparation of a Legislative Environmental Impact Statement (LEIS), as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR Part 1501.6, *Cooperating Agencies*.

In accepting the NACO's request, the Air Force asks that NACO participate in preparation of the LEIS, as generally outlined below:

- (1) Participate in the LEIS data gathering, analysis, and consultation processes;
- (2) Assume responsibility, upon request, for developing information and preparing analyses on issues for which NACO has special expertise;
- (3) Make NACO staff support available to enhance interdisciplinary review capability, correspondence, and/or surveys; and
- (4) Protect "deliberative process" information from public dissemination and recognize that Air Force retains sole authority for authorizing public release of LEIS information.
- (5) Respond in writing to this letter with name(s) and contact information for NACO's CA representative(s).

The Air Force requires the support of cooperating agencies be timely, to avoid unnecessary delays in the NEPA process. Should you or your staff have further questions regarding this response, our point of contact is Mr. Jack Bush, HQ USAF/A4CI, at (703) 614-0237 or jack.bush@pentagon.af.mil.

Sincerely,

JENNIFER L. MILLER
Deputy Assistant Secretary of the Air Force
(Installations)

BREAKING BARRIERS...SINCE 1947

Letter from Nevada Association of Counties to Air Force: June 7, 2017**Nevada Association of Counties**

304 South Minnesota Street

Carson, City, NV 89703

775-883-7863

www.nvnaco.org

June 7, 2017

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

Re: Nevada Association of Counties acceptance as a Cooperating Agency for the planning efforts of the Nevada Test and Training Range military land withdrawal and LEIS project.

Dear Jennifer Miller,

In accord with the Air Force's acceptance of the Nevada Association of Counties (NACO) to become a Cooperating Agency (CA) in the planning efforts for the Nevada Test and Training Range military withdrawal and preparation of the Legislative Environmental Impact Statement (LEIS), NACO hereby accepts the responsibilities and obligations previously outlined and requested by the Air Force in preparation of the LEIS.

As a Cooperating Agency assisting with the LEIS for the President's Council on Environmental Quality (CEQ) and the National Environmental Policy Act (NEPA), NACO agrees to the following LEIS preparation measures:

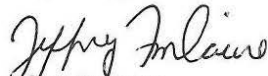
- Participation efforts in gathering data, necessary analysis, and consultation processes that are essential to the LEIS preparation.
- NACO will assume responsibility, upon request, for the development and preparation of information on issues that NACO has special expertise.
- NACO support staff will be available for processes to enhance interdisciplinary review capabilities, correspondence, and surveys.
- NACO will protect "deliberative Process" information from public dissemination and recognizes that the Air Force will retain sole authority for authorizing public release of LEIS information and materials.

NACO fully understands the importance of timely communication and is committed to assisting effectively and efficiently. To this end, NACO's CA representatives that will be assisting in

LEIS preparation and planning are to include: Tori Sundheim, Public Lands and Natural Resources Coordinator, at tsundheim@nvnapco.org; Jeff Fontaine, Executive Director, at jfontaine@nvnapco.org; and Amanda Evans, Office Manager, at www.nvnapco.org. All contacts may be reached by their email addresses or by telephone at (775) 883-7863.

Thank you for accepting NACO's request to become a Cooperating Agency. NACO looks forward to continued support and cooperation with the Air Force throughout the processes needed to see through planning efforts and the LEIS preparation.

Respectfully,



Jeffrey Fontaine
Executive Director

Jf/ja
Cc: file



B.7 NEVADA STATE HISTORIC PRESERVATION OFFICE

Letter from Air Force to SHPO notification of random sample surveys: April 14, 2016



DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

Lt Col Michael A. Freeman
Commander
99 Civil Engineer Squadron
6020 Beale Ave.
Nellis AFB NV 89191

APR 14 2016

Ms. Rebecca Palmer
State Historic Preservation Officer
State Historic Preservation Office
Department of Conservation and Natural Resources
901 South Stewart Street, Ste. 5004
Carson City NV 89701-5248

Subject: Cultural & Paleontological Resources Survey Plan (Draft) (#02-2016-NTTR)

Dear Ms. Palmer

Nellis Air Force Base (NAFB) is forwarding this letter in compliance with 36CFR800. This letter is to notify the State Historic Preservation Office (SHPO) of NAFB plans to conduct random sample surveys of 14,000 acres plus 1,000 non-random surveys on proposed expansion lands that total approximately 300,000 acres. These lands under consideration are currently managed by US Fish & Wildlife Service (USFWS) and Bureau of Land Management (BLM) and could become part of the Nevada Test and Training Range (NTTR) footprint. Descriptions of this proposal and methods for study are further outlined in the attached Draft Cultural & Paleontological Resources Survey Plan dated 5 Apr 2016.

We ask your office to review the survey plan and provide comment. Tribal notification has consisted of forwarding copies of this letter and the attachment to NAFB affiliated Tribal offices. A consultation introduction with the Tribes took place in November 2015 at the Annual Leadership Meeting in Las Vegas, Nevada.

Should you or your staff have any questions about the project, please contact our tribal liaison/archaeologist, Ms. Kish La Pierre, 99 CES/CEIEA, at (702) 682-5813 or at kish.lapierre@us.af.mil.

Sincerely

MICHAEL A. FREEMAN, Lt. Col., USAF
Commander

Attachment:
Cultural & Paleontological Resources Survey Plan (Draft) (#02-2016-NTTR)) (1 hardcopy & 1 DVD)

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cc:

Katherine R. Kerr Advisory Council on Historic Preservation (ACHP)
Danelle Gutierrez, Tribal Historic Preservation Officer, Big Pine Paiute Tribe
Raymond Andrews, Tribal Historic Preservation Officer, Bishop Paiute-Shoshone Tribe
Billie G. Saulque, Chairperson, Benton Utu Utu Gwaitu Paiute Tribe
Stephanie Arman, Tribal Historic Preservation Officer, Fort Independence Paiute Tribe
Barbara Durham, Tribal Historic Preservation Officer, Timbisha Shoshone Tribe
Janice Aten, Environmental Director, Lone Pine Paiute-Shoshone Reservation
Perline Thompson, Chairperson, Duckwater Shoshone Tribe
Wayne Dyer, Chairperson, Yomba Shoshone Tribe
Alvin Marques, Chairperson, Ely Shoshone Tribe
Charles Wood, Chairperson, Chemehuevi Indian Tribe
Roland Maldonado, Chairperson, Kaibab Band of Southern Paiutes
Benny Tso, Chairperson, Las Vegas Paiute Tribe
Robert Tom, Chairperson, Moapa Band of Paiutes
Richard Arnold, Native American Coordinator NAFB, Pahrump Paiute Tribe
Corrina Bow, Chairperson, Paiute Indian Tribes of Utah
Dennis Patch, Chairperson, Colorado River Indian Tribes
Timothy Williams, Chairperson, Ft. Mojave Tribe

Letter from Air Force to SHPO regarding project notification: July 18, 2016

**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE NEVADA**

Lieutenant Colonel Michael A. Freeman
Commander
6020 Beale Ave.
Nellis AFB NV 89191

JUL 18 2016

Ms. Rebecca Palmer
State Historic Preservation Officer
State Historic Preservation Office
Department of Conservation and Natural Resources
901 South Stewart Street, Ste. 5004
Carson City NV 89701-5248

Dear Ms Palmer

The United States Air Force (USAF) is now preparing a *Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR) Land Withdrawal* extension and proposed expansion. Because the current NTTR land withdrawal (Attachment 1) will expire in 2021, the USAF seeks Congressional action to extend the currently withdrawn lands for the purpose of continuing the existing test and training activities. The USAF is also considering a proposal for Congress to expand lands withdrawn for the NTTR (Attachment 2) to provide additional security and safety while enhancing the functionality and capacity of the NTTR. The additional features associated with the proposed expansion are critical to meet increasing demands on the NTTR to satisfy national security requirements. Under this concept, the USAF proposes to expand the withdrawn lands associated with EC South on the west side of the range, 64C/D and 65D on the south side of the range and east of 62A/B, for a total of approximately 310,000 acres.

While Congress and the President ultimately make the decision with respect to legislative withdrawals such as this one, the USAF anticipates engaging in undertakings in the future, should the withdrawal be enacted. In addition, the proposed expansion would change the accessibility of these lands depending upon the alternative means of implementing these features as determined by Congress. Therefore, in accordance with Section 106 of the National Historic Preservation Act (NHPA) and 36 C.F.R. §800.1(c), the USAF seeks to consult with you early in the planning process in order to take into account any historic preservation concerns you may have as it formulates these undertakings.

The types of activities that are now taking place on existing withdrawn lands will not change under the withdrawal extension. While the USAF has identified the general types of activities that will take place in the proposed withdrawal expansion area, specific activities and their locations cannot be defined until after enactment of any withdrawal legislation. As a result, the USAF is preparing an LEIS which is programmatic in nature. The LEIS will identify cultural resources within proposed withdrawal areas, and to the extent possible address impacts to those

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resources based on the types of activities that may occur in the future in these areas. Specific future activities would be subject to additional and appropriate NEPA analysis and NHPA consultation.

To develop the LEIS and meet NHPA obligations, the USAF would use existing cultural resource information for the current NTTR lands. It plans to initiate a Cultural Resources Study of 15,000 acres of land within the proposed withdrawal expansion areas to identify and characterize resources that may be present. Because the proposed expansion areas consist of over 300,000 acres and the results of the land withdrawal process may not be known until 2021, the Air Force has developed a draft plan to characterize cultural resources through a random-sample survey strategy in these areas. The plan will be supplemented by any previous studies in these areas and associated available data; all identified cultural resources 50 years or older will be recorded as part of the survey (including historical structures). This survey will also serve to supplement and test a successful probabilistic model developed for work conducted previously on the adjacent NTTR property. The USAF has included the proposed plan to address characterization of historic properties as Attachment 3 to this letter.

Sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, that have an interest in the NTTR Land Withdrawal LEIS have been contacted and offered an opportunity to partner in cultural resource studies and participate as consulting parties. Tribes affiliated with Nellis AFB (NAFB) include: the Benton Paiute Tribe, Fort Independence Paiute Tribe, Duckwater Shoshone Tribe, Timbisha Shoshone Tribe, Yomba Shoshone Tribe, Ely Shoshone Tribe, Big Pine Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, Bishop Paiute Tribe, Fort Mojave Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Kaibab Band of Southern Paiutes, Las Vegas Paiute Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah (Tribes). The USAF initiated discussions with these Tribes by visiting tribal offices and informally discussing the NTTR land withdrawal project in February/March of 2015.

In November of 2015, the USAF held a second informational meeting on NAFB, where the tribes were invited to comment on the project and provide feedback on issues important to them. As a result of this meeting, the tribes requested that four additional meetings be held at locations around Nevada and California that were more conveniently located for tribal members to attend. These meetings were held from April 25-29 at the Bishop Paiute Tribe Reservation, the Ely Shoshone Tribal Reservation, the Mojave Tribal Reservation, and at the Las Vegas Paiute Tribal Reservation. A government-to-government letter initiating formal consultations to all seventeen federally recognized tribes was sent to all tribes on June 22, 2016. In addition to these interactions, the tribes are providing input on special studies associated with the LEIS. The attached Cultural and Paleontological Survey Plan (Duke, 2016) was submitted to the NAFB affiliated tribes for review and input in March 2016. So far, the Tribes have not requested any modifications to the survey strategy.

For consultation with your office, the USAF identifies the Area of Potential Effect as the extended and potentially expanded withdrawn NTTR lands. The USAF invites your comments regarding the following:

- Outstanding cultural and/or tribal resources.
- The potential for irresolvable management conflicts, such as areas where it would be difficult or impossible to avoid, minimize, or mitigate impacts from future actions.
- Any other issues or concerns you request be considered during preparation of the LEIS.

As the USAF develops the LEIS, it will continue consulting with you under Section 106 and provide the necessary information and determinations for established procedures under NHPA. We look forward to the NV SHPO's valuable contributions as we work collaboratively for the preservation of the historic resources entrusted to the stewardship of the USAF on the withdrawn NTTR lands.

If you have any questions or comments regarding the information presented in this letter, please contact the NAFB cultural resource manager and tribal liaison Ms. Kish LaPierre, 702-652-5813 or kish.lapierre@us.af.mil.

Sincerely



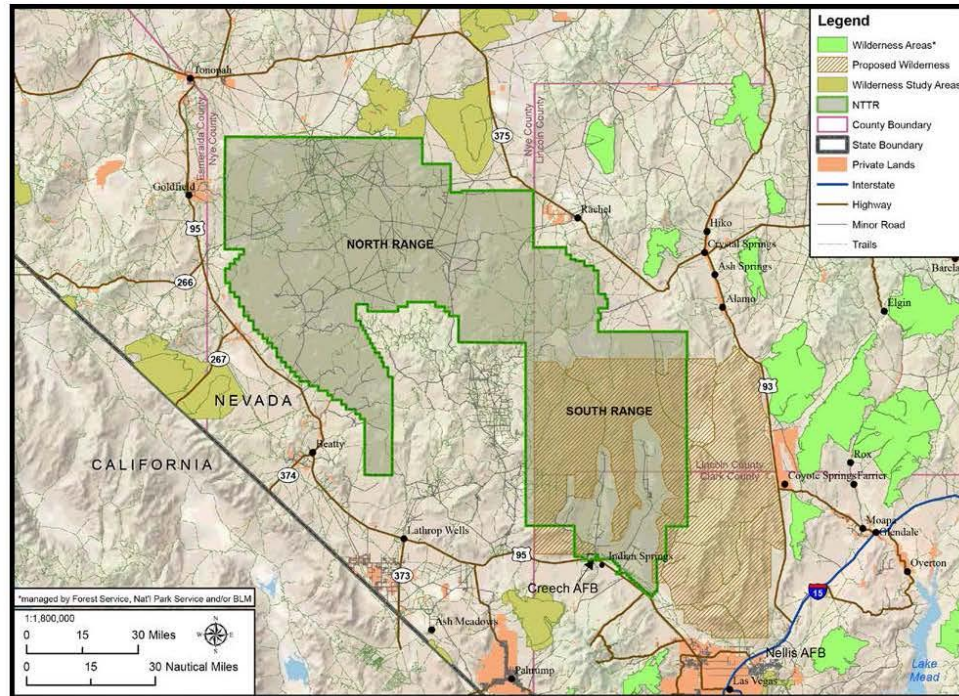
MICHAEL A. FREEMAN, Lt Col, USAF
Commander

Attachments:

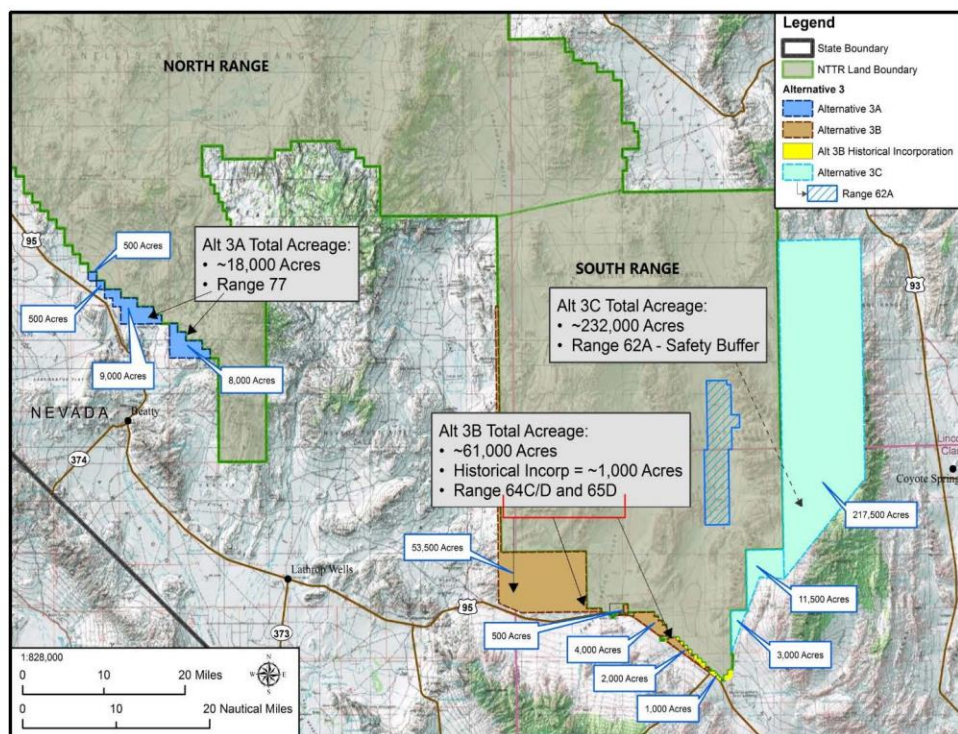
1. Location of the NTTR, Population Centers, Roadway Infrastructure, and Wilderness/Wilderness Study Areas
2. Alternative 3A, 3B, and 3C Locations and Acreages
3. Cultural and Paleontological Survey Plan (Duke, 2016)

cc:

Mr. Michael Ackerman (AFCEC/CZN)
Mr. Skip Canfield (Nevada State Clearinghouse)



Attachment 1 - Location of the NTTR, Population Centers, Roadway Infrastructure, and Wilderness/Wilderness Study Areas



Attachment 2 - Alternative 3A, 3B, and 3C Locations and Acreages

Letter from Advisory Council on Historic Preservation to Air Force and SHPO regarding project notification: August 17, 2016



Preserving America's Heritage

August 17, 2016

Lieutenant Colonel Michael A. Freeman
Commander
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base, NV 89191

Ms. Rebecca Palmer
State Historic Preservation Officer
Historic Preservation Office
901 S. Stewart Street
Suite 5004
Carson City, NV 89701-4285

*REF: Nevada Test and Training Area Land Withdrawal by Nellis Air Force Base
Clark, Lincoln, and Nye County, Nevada
ACHPConnect Log Number: 010399*

Dear Lt Col Freeman and Ms. Palmer:

The Advisory Council on Historic Preservation (ACHP) understands that the Military Lands Withdrawal Act of 1999 (Public Law 106-65) withdrew 2,919,890 acres from the Department of Interior (DOI) for military use in the State of Nevada, primarily for use within the Nevada Test and Training Range (NTTR). The Department of the Air Force intends to submit, in accordance with the Federal Land Policy Management Act (FLPMA), a Land Withdrawal Case File renewal request to continue the withdrawal, and a separate Land Withdrawal Case File for a request to withdraw 300,000 additional acres by November 2018. We have been asked whether the act of land withdrawal itself constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). The ACHP has been consistent in stating that the transfer of property from one federal agency to another federal agency is not an undertaking subject to Section 106, because a federal agency still has responsibilities under Sections 106 and 110 of the NHPA for the land it controls. However, how a federal agency plans to utilize the land once transferred may be subject to Section 106 review.

We are aware that the 99th Civil Engineer Squadron (99CES), with support from the Air Force Civil Engineer Center's National Environmental Policy Act Center (AFCEC/NEPA Center), is preparing a Legislative Environmental Impact Statement (LEIS) to be included in the recommendation to Congress on the withdrawal proposal. A LEIS does not require a Record of Decision, as the decision on whether or not to approve the Land Withdrawal Case Files is made by Congress. However, we believe it is in the best interest of the 99CES to be considering effects to historic properties for the proposed use of the land proposed for withdrawal as early as possible in the process.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

On July 26, 2016, the ACHP received a copy of the correspondence the 99CES sent to the Nevada State Historic Preservation Office (SHPO) for the extension and proposed expansion of the withdrawal, and the initiation of the Section 106 process. We applaud this proactive outreach to the SHPO, even though they do not have a regulatory role in the development of the LEIS. As the ACHP is assisting both the SHPO and the 99CES in improving its working relationship under Section 106, we wish to provide both parties with the following initial suggestions and recommendations as this discussion continues:

- The undertaking should be clearly defined as the *consideration* of the use of acquired withdrawal land for the purposes of meeting the mission of the NTTR. This means that the 99CES focuses consultation on the mission of the NTTR, how the newly acquired land could assist that mission, and how historic properties may be affected by mission activities on the land.
- The Section 106 regulations do not require a federal agency to identify every single historic property within an Area of Potential Effects (APE), but to make a “reasonable and good faith effort” to identify historic properties. A strategy to survey a sample of the proposed withdrawal land should be developed in consultation with the SHPO, federally recognized Indian tribes, and other applicable federal agencies (it is our understanding this includes the Bureau of Land Management (BLM) and the United States Fish and Wildlife Service (USFWS) currently managing the land) to identify historic properties. It is recommended that the 99CES should first complete a grey literature search of survey work completed by the BLM and the USFWS for the proposed withdrawal land and using that as a base line for a new survey.
- The 99CES has presented a draft Cultural Resources Study (CRS) to the SHPO for review and comment. The current draft CRS is intended to characterize cultural resources through a random-sample survey strategy.
 - After completing the grey literature search, the 99CES should update the CRS accordingly to meet the goal of a phased approach to the identification of historic properties within the proposed withdrawal land.
 - This phased approach should include a model for the initial survey and define a process for continuing the identification effort within areas of the proposed withdrawal land once designated for NTTR mission use.
 - The CRS should include a time frame for when the survey work will be completed and when consulting parties will be given the opportunity to review the findings.
- Once the 99CES and the SHPO have a working knowledge of the range of potential historic properties within the proposed withdrawal land, and before you begin to assess effects of the proposed undertaking, we would appreciate an update on the status of the consultation and survey results.

Should you have any questions regarding our recommendations or require additional assistance, please contact Ms. Katharine R. Kerr at (202) 517-0216 or by e-mail at kkerr@achp.gov and reference the ACHPConnect Log Number.

Sincerely,



Tom McCulloch, Ph.D., R.P.A.
Assistant Director
Office of Federal Agency Programs
Federal Property Management Section

B.8 NEVADA STATE CLEARINGHOUSE

Notification of preparation of LEIS from State Clearinghouse to State Agencies: July 25, 2016

From: [ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN](#)
To: [McLaurine, Henry C](#); [Akstulewicz, Kevin D](#)
Cc: [Sands, Amy L](#)
Subject: FW: Nevada State Clearinghouse Notice E2017-006 (LEIS - NTTR Land Withdrawal Extension and Expansion)
Date: Tuesday, July 26, 2016 1:55:21 PM

Gentlemen,
FYSA for the project record. The state clearinghouse notified state agencies on the NTTR proposal.

See below.

-Mike

Mike Ackerman
Air Force Civil Engineer Center
NEPA Division (AFCEC/CZN)
(210) 925-2741, DSN 945-2741

-----Original Message-----

From: HOPPER, ELOISA V CIV USAF ACC 99 CES/CEI
Sent: Tuesday, July 26, 2016 11:03 AM
To: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN [REDACTED]
Cc: LAPIERRE, KISH D GS-12 USAF ACC 99 CES/CEIEA <[REDACTED]>; KIRKWOOD, JEFFREY L GS-12 USAF ACC 99 CES/CEIEA [REDACTED]
Subject: FW: Nevada State Clearinghouse Notice E2017-006 (LEIS - NTTR Land Withdrawal Extension and Expansion)

Mike,

FYSA.

VR, Loi

-----Original Message-----

From: [REDACTED]
Sent: Monday, July 25, 2016 2:31 PM
To: [REDACTED]



Subject: Nevada State Clearinghouse Notice E2017-006 (LEIS - NTTR Land Withdrawal Extension and Expansion)

<http://lands.nv.gov/graphic/state_seal.jpg> NEVADA STATE CLEARINGHOUSE
Department of Conservation and Natural Resources, Division of State Lands
901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
(775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 07/25/2016

U.S. Air Force

Nevada State Clearinghouse Notice E2017-006
Project: LEIS - NTTR Land Withdrawal Extension and Expansion

Follow the link below to find information concerning the above-mentioned project
for your review and comment.

E2017-006 <<http://clearinghouse.nv.gov/public/Notice/2017/E2017-006.pdf>> -
<http://clearinghouse.nv.gov/public/Notice/2017/E2017-006.pdf>

* Please evaluate this project's effects on your agency's plans and programs and any other issues that you are
aware of that might be pertinent to applicable laws and regulations.

* Please reply directly from this e-mail and attach your comments.

* Please submit your comments no later than Thursday August 25th, 2016.

Clearinghouse project archive <<http://clearinghouse.nv.gov>>

Questions? Skip Canfield, Program Manager, (775) 684-2723 or nevadaclearinghouse@lands.nv.gov
<<mailto:nevadaclearinghouse@lands.nv.gov>>

___ No comment on this project ___ Proposal supported as written

AGENCY COMMENTS:

Signature:

Date:

Requested By:

Distribution:

- 99ABW Nellis

- Division of Emergency Management

- Intermountain Range

Adele M. Basham - NDEP

Alan Jenne - Department of Wildlife, Elko Alisa Huckle - UNR Library Alisanne Maffei - Department of Administration Alysa Keller - Legislative Counsel Bureau Angela Dykema - Nevada State Energy Office Anna Higgins - Nevada Division of Forestry Bert Bedeau - Comstock Historic District Commission Bette Hartnett - State Energy Office Bill Thompson - Department of Transportation, Aviation Birgit Henson - NDEP Bob Turner - Nellis AFB Cayenne Engel - Nevada Division of Forestry Chris Anderson - Washoe County Health Department Chuck King - Hawthorne Army Depot Claudia Vecchio - Nevada Commission on Tourism Connie Lee - NDOW Connie Lucido - Department of Administration Cory Lytle - Lincoln County Craig Mortimore - Wild Nevada D. Bradford Hardenbrook - Department of Wildlife, Las Vegas Dagny Stapleton - NACO David David - UNR Bureau of Mines David Mouat - Desert Research Institute Deborah Stockdale - Nellis Air Force Base Denesa Johnston - Fire Marshal Ed Ryan - Smith and Mason Valleys Conservation District Ed Rybold - NAS Fallon Eddy Quagliari - Division of Water Resources Elizabeth A. Harrison - Tahoe Resource Team - Division of State Lands Eloisa Hopper - Nellis Air Force Base Elyse Randles - State Land Office Gary Reese - Nevada Division of Forestry Ian Kono - Nevada Division of Water Resources J Crandell - Colorado River Commission of Nevada James D. Morefield - Natural Heritage Program Jane Freeman - US Forest Service Jennifer Celio - Sagebrush Ecosystem Technical Team Jennifer Newmark - NDOW - Wildlife Diversity Jered McDonald - Legislative Counsel Bureau Jim Balderson - NDEP Jim English - Washoe County Jim Olson - Lander County Jim Souba - City of Fallon Public Works Joe Freeland - Nevada Division of Forestry John Christopherson - Nevada Division of Forestry John Muntean - UNR Bureau of Mines John Tull - NDOW Jon Price - UNR Bureau of Mines Kacey KC - Nevada Division of Forestry Karen Beckley - State Health Division Kevin Hill - Nevada State Energy Office Kevin Verre - NDOT Kim Borgzinner - NDEP Kristin Szabo - Nevada Natural Heritage Program Kurt Haukohl - NDOT Larry Cruz - Hawthorne Army Depot Lee Bonner - NDOT Levi Kryder - Nye County Linda Cohn - National Nuclear Security Administration Lindsey Lesmeister - NDOW Lori M. Story - Attorney General Louis Groffman - Nevada Department of Transportation Lowell Price - Commission on Minerals Lynn Haarklau - Nellis Air Force Base Major Doug McEldowney - Nevada National Guard Mark Costa - NDOT Mark Enders - NDOW Mark Freese - Department of Wildlife Mark Harris, PE - Public Utilities Commission Marta Adams - Attorney General Matt Maples - NDOW Meghan Brown - Dept of Agriculture Michael J. Stewart - Legislative Counsel Bureau Michael Visser - Division of Minerals Mike Dang - Governor's Office on Economic Development Mitch Ison - NDOT Miteshell Lanham - Lander County Moira Kolada - NDOW Nancy Boland - Esmeralda County Rebecca Palmer - State Historic Preservation Office Rich Perry - Nevada Division of Minerals Richard Arnold - Nevada Indian Commission Rick Martin - Division of Emergency Management Robert Halstead - Nevada Agency for Nuclear Project Robert Rule - NAS Fallon Sandy Quilici - Department of Conservation & Natural Resources Sheila Anderson - Governor's Office Sherry Rupert - Indian Commission Shimi Mathew - Nellis AFB Shirley DeCrona - Nevada Division of State Parks Skip Canfield - State Land Use Planning Agency Stephen Foree - NDOW Steve Endacott - City of Fallon Susan Scholley - Legislative Counsel Bureau Tim Mueller - Department of Transportation Tim Rubald - Conservation

Districts Tod Oppenborn - Nellis Air Force Base Tori Sundheim - NACO Tracy Kipke - NDOW Valerie King -
NDEP Warren Turkett - Colorado River Commission of Nevada Wes Henderson - Nevada League of Cities Zip
Upham - NAS Fallon

Notice of LEIS preparation and scoping meetings from Air Force to Nevada State Clearinghouse: August 19, 2016



DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE NEVADA

19 August 2016

Lieutenant Colonel Michael A. Freeman
Commander
4430 Grissom Ave., Ste. 101
Nellis AFB NV 89191-6520

Skip Canfield
Nevada State Clearinghouse
Nevada Division of State Lands
901 S. Stewart St, Ste 5003
Carson City, NV 89701-5246

Dear Mr. Canfield

The United States Air Force (USAF) is issuing this notice to notify state and local agencies of its intent to prepare a Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR) military land withdrawal at Nellis Air Force Base, Nevada. The LEIS is being prepared in accordance with National Environmental Policy Act (NEPA) of 1969; 40 Code of Federal Regulations (CFR), Parts 1500–1508, the Council on Environmental Quality (CEQ) regulations for implementing NEPA; and the Air Force Environmental Impact Analysis Process (EIAP) [32 CFR Part 989].

This notice also serves to invite early public and agency participation in determining the scope of environmental issues and alternatives to be analyzed in the LEIS and to identify and eliminate from detailed study the issues which are not significant. To effectively define the full range of issues and concerns to be evaluated in the LEIS, the Air Force is soliciting scoping comments from interested local, state and federal agencies, interested American Indian tribes, and interested members of the public. This notice also serves to provide early notice of compliance with Executive Order (EO) 11990, "Protection of Wetlands," and EO 11988, "Floodplain Management." State and federal regulatory agencies with special expertise in wetlands and floodplains have been contacted to request comment.

The current NTTR land withdrawal expires in November 2021. In accordance with the Military Lands Withdrawal Act of 1999, the Air Force has notified Congress of a continuing military need for the NTTR withdrawal. Military land withdrawal applications have been

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prepared and submitted to Bureau of Land Management (BLM). The segregation of lands proposed for military withdrawal are addressed in a separate BLM Federal Register notice.

The Air Force LEIS supports Congressional decision-making for the proposed military land withdrawal and will be programmatic in nature, adding value by setting out a broad view of environmental impacts and alternatives for Congress to consider. Following Congressional action on the NTTR land withdrawal proposals, site specific proposals based on particular DoD or Air Force defined needs for the range would be evaluated with the appropriate level of tiered or supplemental NEPA.

In particular, the LEIS will analyze alternatives for military land withdrawal of the NTTR to improve the range capacity and capability to support military test and training requirements now and into the future. The LEIS will assess the potential environmental consequences of the proposal to extend the existing NTTR military land withdrawal beyond the current withdrawal expiration date. As part of the withdrawal extension, the Air Force proposes to continue military operations on the NTTR's existing 2,949,603 acres of land. In addition to extending the existing land withdrawal, the Air Force is also proposing to withdraw up to an additional 301,507 acres to improve the range's capacity to support military testing and training.

The alternatives being evaluated in the LEIS include: 1) extending the existing land withdrawal and management of the NTTR (Status Quo); 2) extending the existing land withdrawal and providing the Air Force with increased access for military activities in the South Range of the NTTR; 3) Alternative 1 or 2 and expanding the existing withdrawal by including up to 301,507 additional acres, via three sub-alternatives; 4) establishing the time period of the withdrawal as either 20 years, 50 years, or as an indefinite military withdrawal; and 5) the No Action alternative, which includes returning NTTR lands to the public domain, through the Department of the Interior.

The alternatives structure allows for combining elements of alternatives in an additive fashion. For example, Alternative 2 could be selected along with sub-alternatives of Alternatives 3 (an option for expansion) and 4 (option for duration) as part of the Air Force's recommendation to Congress for the future military withdrawal. Within the framework of these alternatives, the LEIS will support Congressional action by identifying and evaluating potential impacts to land use, airspace, safety, noise, hazardous materials and solid waste, earth resources, water resources, air quality, transportation, wilderness and wilderness study areas, cultural resources, biological resources, socioeconomics, and environmental justice.

The Air Force will be holding public open house scoping meetings in areas potentially impacted by the proposal. The purpose of the meetings and the scoping period is to further solicit input regarding the scope of issues to be addressed and identify environmental issues to be

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analyzed in depth. The Air Force's notice of intent (NOI) to prepare a LEIS and hold scoping meetings will be published in the Federal Register the week of August 26, 2016, and local notices announcing scheduled dates, locations, and addresses for each meeting will be published fifteen (15) days prior to each meeting.

During scoping meetings, the Air Force will provide additional information about the NTTR Land Withdrawal. Public and agency comments presented at the meetings, as well as written comments received by the Air Force during the scoping period and throughout the environmental process, will be considered in the preparation of the Draft LEIS. Scoping comments may be submitted to the Air Force at the planned public scoping meetings and/or in writing. Comments will be accepted at any time during the Environmental Impact Analysis Process (EIAP). However, to ensure the Air Force has sufficient time to consider public input in the preparation of the Draft LEIS, scoping comments must be submitted no later than December 10, 2016.

DATES: The Air Force plans to hold five public scoping meetings from 5 p.m. to 9 p.m., on the dates and at the locations listed below.

- Wednesday, October 12, 2016: Beatty Community Center, 100 A Avenue South, Beatty, NV 89003
- Thursday, October 13, 2016: Tonopah Convention Center, 301 Brougher Avenue, Tonopah, NV 89049
- Tuesday, October 18, 2016: Caliente Elementary School, 289 Lincoln Street, Caliente, NV 89008
- Wednesday, October 19, 2016: Pahrangat Valley High School, 151 S. Main Street, Alamo, NV 89001
- Thursday, October 20, 2016: Aliante Hotel, 7300 Aliante Parkway, North Las Vegas, NV 89084

The agenda for each scoping meeting is as follows:

- 5:00 p.m. to 6:30 p.m. – Open House and comment submission
- 6:30 p.m. to 7:00 p.m. – Air Force Presentation
- 7:00 p.m. to 9:00 p.m. – Open House and comment submission resumes

During the meetings, the Air Force will provide information on the potential environmental impacts associated with the proposed action and solicit public comments on alternative development. If state or local agencies have specific questions or comments about the proposal, please direct any written comments or requests for information to 99th Air Base Wing Public Affairs, 99ABW.PAOutreach@us.af.mil.

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Information on the NTTR Military Land Withdrawal and LEIS process can be accessed at the project website at www.nttrleis.com. The project website can be used to submit scoping comments to the Air Force or comments and inquiries may also be submitted by mail to the 99th Air Base Wing Public Affairs, 4430 Grissom Ave., Ste. 107, Nellis AFB, NV 89191 or by e-mail at 99ABW.PAOutreach@us.af.mil.

Sincerely



Michael A. Freeman
Lieutenant Colonel, USAF
Commander

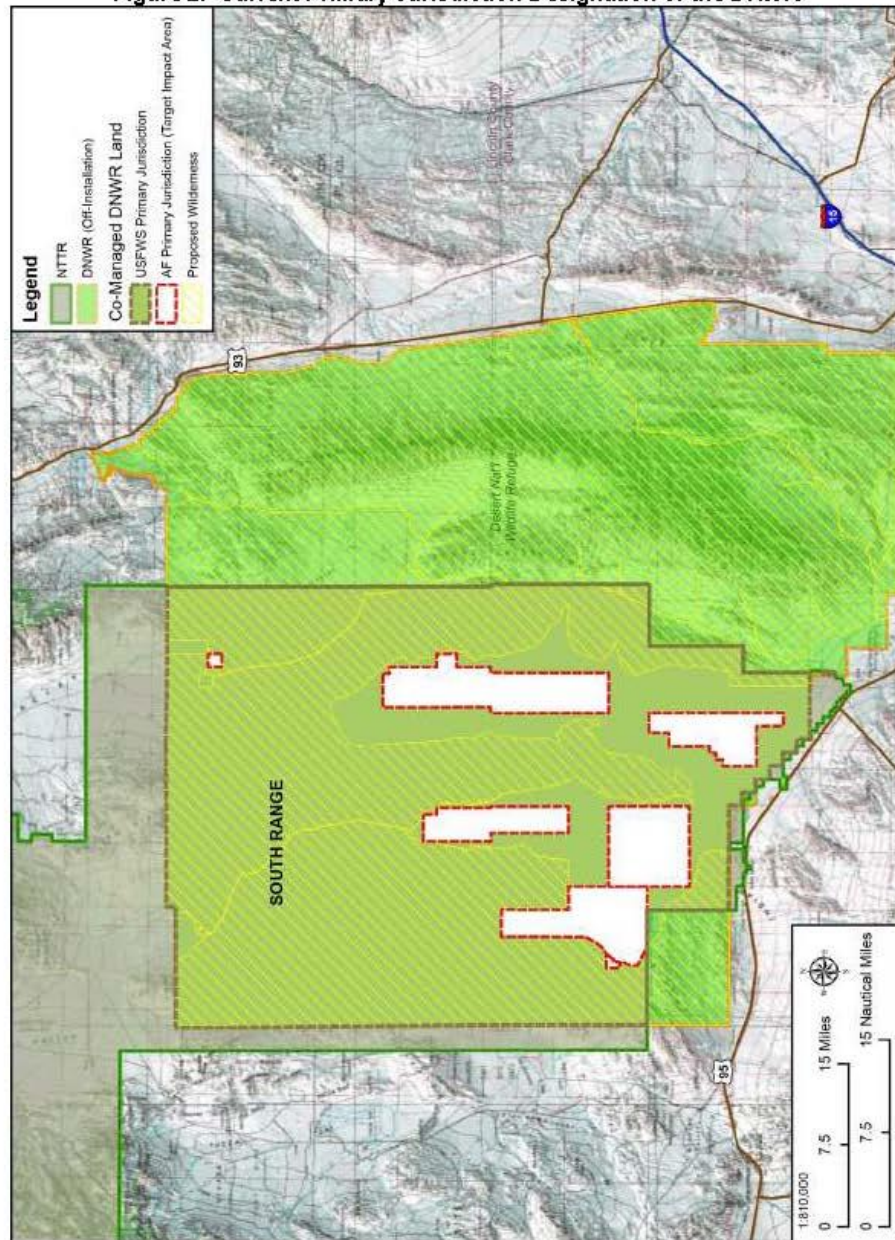
Enclosures

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The map displays the Nevada Test and Training Range (NTTR) with its various test cells and installations. The range is situated in southern Nevada, bordering California to the south and Utah to the east. Major roads shown include US-95, US-395, and US-374. Key locations marked include Tonopah, Pahrump, Primm, and the Nevada Test and Training Range (NTTR) itself. The map also shows county boundaries for Lincoln, Clark, and Esmeralda counties in Nevada, and Imperial and San Diego counties in California. A legend in the bottom right corner identifies the symbols used: NTTR (green outline), Installation (blue outline), County Boundary (black outline), State Boundary (red outline), and NTTR Airspace Boundaries (blue outline). A scale bar in the bottom right corner indicates distances in miles (0 to 30) and nautical miles (0 to 30). A north arrow is also present.

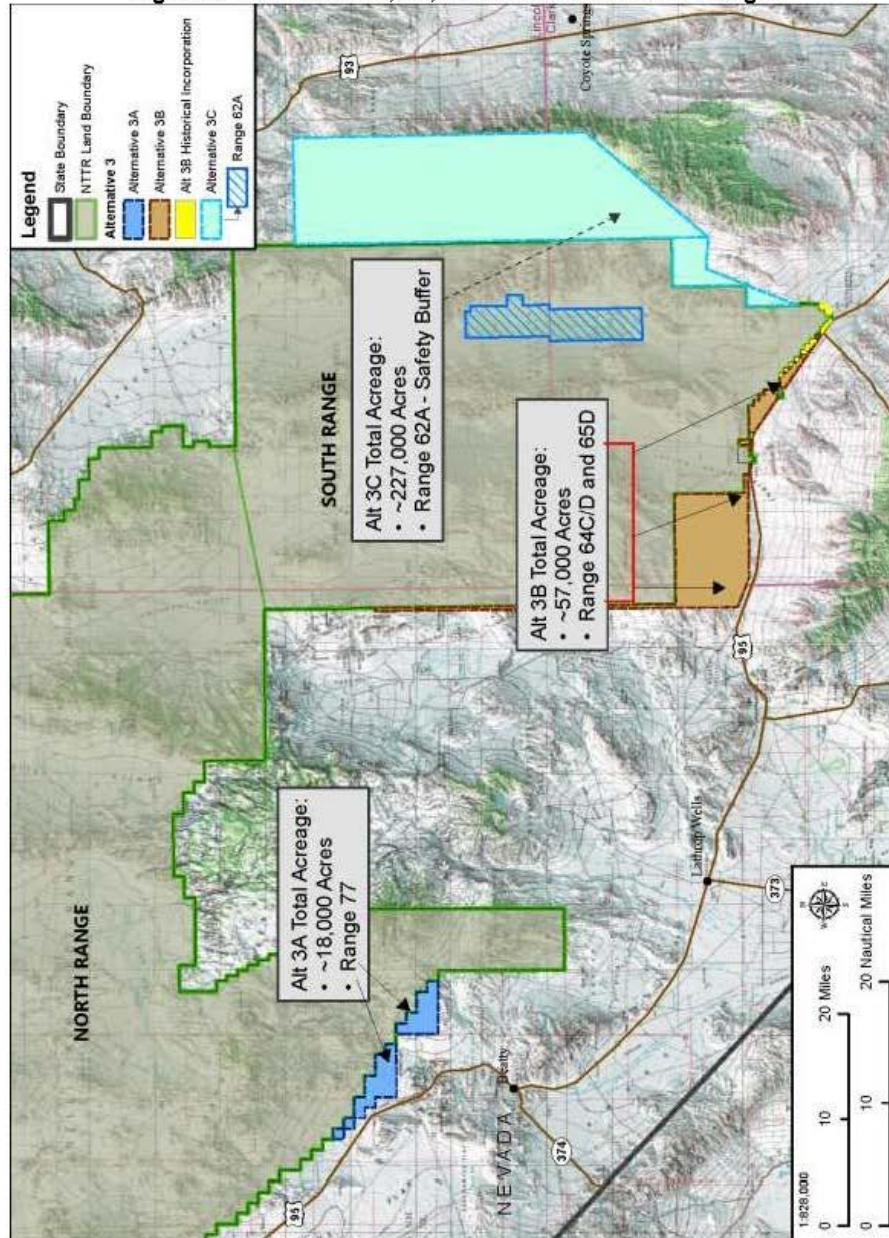
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Figure 2. Current Primary Jurisdiction Designation of the DNWR



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Figure 3. Alternative 3A, 3B, and 3C Locations and Acreages



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Notification of scoping meetings from State Clearinghouse to State Agencies: August 23, 2016

From: [Nevada Joint Military Affairs Committee](#) on behalf of [Skip Canfield](#)
To: JMAC@LISTSERV.STATE.NV.US
Subject: Nevada State Clearinghouse Notice E2017-023 (Scoping - LEIS - NTTR Military Land Withdrawal at Nellis AFB)
Date: Tuesday, August 23, 2016 11:51:29 AM

NEVADA STATE CLEARINGHOUSE

 Department of Conservation and Natural Resources, Division of State Lands
901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
(775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 08/23/2016

U.S. Air Force

Nevada State Clearinghouse Notice E2017-023

Project: Scoping - LEIS - NTTR Military Land Withdrawal at Nellis AFB

Follow the link below to find information concerning the above-mentioned project for your review and comment.

[E2017-023 - http://clearinghouse.nv.gov/public/Notice/2017/E2017-023.pdf](http://clearinghouse.nv.gov/public/Notice/2017/E2017-023.pdf)

- Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.
- Please reply directly from this e-mail and attach your comments.
- Please submit your comments no later than Thursday December 8th, 2016.

[Clearinghouse project archive](#)

Questions? Skip Canfield, Program Manager, (775) 684-2723 or
nevadaclearinghouse@lands.nv.gov

☐ No comment on this project ☐ Proposal supported as written

AGENCY COMMENTS:

Signature:

Date:

Requested By:

Distribution:

- 99ABW Nellis
- Division of Emergency Management
- Intermountain Range
- Adam Roney - Public Utilities Commission
- Alan Jenne - Department of Wildlife, Elko
- Alisa Huckle - UNR Library
- Alisanne Maffei - Department of Administration
- Alysa Keller - Legislative Counsel Bureau
- Angela Dykema - Nevada State Energy Office
- Anna Higgins - Nevada Division of Forestry
- Bert Bedeau - Comstock Historic District Commission
- Bette Hartnett - State Energy Office
- Bill Thompson - Department of Transportation, Aviation
- Birgit Henson - NDEP
- Bob Turner - Nellis AFB
- Brenda Hunt - CWSD
- Cayenne Engel - Nevada Division of Forestry
- Chris Anderson - Washoe County Health Department
- Chuck King - Hawthorne Army Depot
- Claudia Vecchio - Nevada Commission on Tourism
- Connie Lee - NDOW
- Connie Lucido - Department of Administration
- Cory Lytle - Lincoln County
- Craig Mortimore - Wild Nevada
- Cynthia Turiczek - Public Utilities Commission
- D. Bradford Hardenbrook - Department of Wildlife, Las Vegas
- Dagny Stapleton - NACO
- David David - UNR Bureau of Mines
- David Mouat - Desert Research Institute
- Deborah Stockdale - Nellis Air Force Base
- Denesa Johnston - Fire Marshal
- Ed Ryan - Smith and Mason Valleys Conservation District
- Ed Rybold - NAS Fallon
- Eddy Quaglieri - Division of Water Resources
- Elizabeth A. Harrison - Tahoe Resource Team - Division of State Lands
- Eloisa Hopper - Nellis Air Force Base
- Elyse Randles - State Land Office
- Gary Reese - Nevada Division of Forestry

Greg Lovato - NDEP
 Ian Kono - Nevada Division of Water Resources
 J Crandell - Colorado River Commission of Nevada
 James D. Morefield - Natural Heritage Program
 James Llinebaugh - Grazing Board District N-3
 Jane Freeman - US Forest Service
 Jeff Hardcastle - State Demographer
 Jennifer Celio - Sagebrush Ecosystem Technical Team
 Jennifer Newmark - NDOW - Wildlife Diversity
 Jered McDonald - Legislative Counsel Bureau
 Jim Balderson - NDEP
 Jim Baumann - Nevada State Grazing Boards - Central Committee
 Jim English - Washoe County
 Jim Olson - Lander County
 Jim Souba - City of Fallon Public Works
 Joe Freeland - Nevada Division of Forestry
 John Christopherson - Nevada Division of Forestry
 John Delong - Nevada State Grazing Boards - Central Committee
 John Estill - Nevada State Grazing Boards - Central Committee
 John Muntean - UNR Bureau of Mines
 John Tull - NDOW
 Jon Price - UNR Bureau of Mines
 Julie Hunter - Washoe County Health District
 Kacey KC - Nevada Division of Forestry
 Karen Beckley - State Health Division
 Kevin Hill - Nevada State Energy Office
 Kevin Verre - NDOT
 Kim Borgzinner - NDEP
 Kristin Szabo - Nevada Natural Heritage Program
 Kurt Haukohl - NDOT
 Larry Cruz - Hawthorne Army Depot
 Lee Bonner - NDOT
 Levi Kryder - Nye County
 Linda Cohn - National Nuclear Security Administration
 Lindsey Lesmeister - NDOW
 Lori M. Story - Attorney General
 Louis Groffman - Nevada Department of Transportation
 Lowell Price - Commission on Minerals
 Lynn Haarklau - Nellis Air Force Base
 Major Doug McEldowney - Nevada National Guard
 Mark Costa - NDOT
 Mark Enders - NDOW
 Mark Freese - Department of Wildlife
 Mark Harris, PE - Public Utilities Commission
 Marta Adams - Attorney General
 Matt Maples - NDOW
 Meghan Brown - Dept of Agriculture
 Michael J. Stewart - Legislative Counsel Bureau
 Michael Visser - Division of Minerals
 Michelle Langsdorf - Grazing Board District N-3

Mike Dang - Governor's Office on Economic Development
Mitch Ison - NDOT
Miteshell Lanham - Lander County
Moir Kolada - NDOW
Nancy Boland - Esmeralda County
Peggy Roefer - Colorado River Commission
Rachel Buzetti - Nevada State Grazing Boards - Central Committee
Rebecca Palmer - State Historic Preservation Office
Rich Perry - Nevada Division of Minerals
Richard Arnold - Nevada Indian Commission
Richard Huntsberger - Nevada State Grazing Boards - Central Committee
Rick Martin - Division of Emergency Management
Robert Halstead - Nevada Agency for Nuclear Project
Robert Rule - NAS Fallon
Rory Chetelat - Clark County
Ryan McGinness - Washington Office
Sandy Quilici - Department of Conservation & Natural Resources
Sheila Anderson - Governor's Office
Sherry Rupert - Indian Commission
Shimi Mathew - Nellis AFB
Shirley DeCrona - Nevada Division of State Parks
Skip Canfield - State Land Use Planning Agency
Stephen Foree - NDOW
Steve Boies - Nevada State Grazing Boards - Central Committee
Steve Endacott - City of Fallon
Susan Scholley - Legislative Counsel Bureau
Terry Rubald - Nevada Department of Taxation, Local Government, Centrally Assessed Property
Tim Mueller - Department of Transportation
Tim Rubald - Conservation Districts
Tod Oppenborn - Nellis Air Force Base
Tori Sundheim - NACO
Traci Pearl - Office of Traffic Safety
Tracy Kipke - NDOW
Valerie King - NDEP
Warren Turkett - Colorado River Commission of Nevada
Wayne Howle - Attorney General
Wes Henderson - Nevada League of Cities
Zip Upham - NAS Fallon

To unsubscribe from the JMAC list, click the following link:
JMAC@NVTN.org

B.9 NATIVE AMERICAN CONSULTATION AND COMMUNICATION

Notice of Tribal Coordination Meetings: [March 9, 2016]



DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE NEVADA

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Ave.
Nellis AFB NV 89191

Chairperson Tina Braithwaite
Benton Paiute Indian Tribe
25669 Highway 6, PMB I
Benton, CA 93512

Dear Chairperson Braithwaite

As part of the United States Air Force's (USAF) tribal consultation process under the National Historic Preservation Act (NHPA) the USAF would like to request your input to identify any Traditional Cultural Properties (TCPs), Sacred Sites, or historic properties of cultural or religious significance to Indian Tribes associated with the identified Area of Potential Effect (APE) for the proposed Nevada Test and Training Range (NTTR) military land withdrawal. The USAF invites any input or feedback from tribes to identify issues of tribal concern regarding the proposed undertaking.

Under the Military Lands Withdrawal Act of 1999 (Public Law 106-65) 2,919,890 acres were withdrawn from the Department of Interior for use by the NTTR; the current withdrawal (Attachment 1) will expire in 2021. As a result, the USAF seeks Congressional action to extend the currently withdrawn lands for the purpose of continuing the existing test and training activities and intends to submit the Legislative Environmental Impact Statement (LEIS), in accordance with the Federal Land Policy Management Act (FLPMA).

The USAF is also writing a proposal for Congress to expand lands withdrawn for the NTTR (Attachment 2) to provide additional security and safety while enhancing the functionality and capacity of the NTTR. The additional features associated with the proposed expansion are critical to meet increasing demands on the NTTR to satisfy national security requirements. Under this concept, the USAF proposes to expand the withdrawn lands associated with EC South on the west side of the range, 64C/D and 65D on the south side of the range and east of 62A/B, for a total potential increase of up to a maximum 301,507 acres. The Air Force may not pursue military land withdrawal of this acreage in its entirety, but rather may pursue withdrawal of portions of these lands based on mission needs and public and tribal access concerns. In order to effectively balance mission needs with public and tribal uses of potential military withdrawal lands, it is critical that the Air Force understand tribal concerns within the APE. Of the lands proposed for potential military land withdrawal expansion, approximately 260,000 acres are presently managed by the U.S Fish and Wildlife Service (USFWS) under the Desert National

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Wildlife Refuge, while the remaining acreage is managed by the Bureau of Land Management (BLM).

For consultation purposes, the USAF has identified the APE for the undertaking as an extension of the current withdrawal, as well as the proposed expansion of military withdrawal lands. Should the full extent of the proposed land withdrawal be approved through Congressional legislation, the USAF anticipates establishing additional radar and emitter sites on new withdrawal lands, establishing some limited infrastructure for these sites, proposes some small unit maneuver corridors, and potentially establishing a landing strip for equipment and military personnel insertion and extraction. No new target impact areas or bombing sites are proposed by the Air Force at this time; however, the proposed expansion would change the accessibility to these lands as the Air Force would need to control the access to any land withdrawal expansion areas when engaging in more realistic training or testing activities. Controlled access would be required to ensure public safety while conducting training activities at higher altitude and greater speeds.

The types of activities that are now taking place on existing withdrawn lands of the North Range of NTTR will not change under the withdrawal extension. Within the South Range of the existing NTTR, if primary jurisdiction for land management were granted to the Air Force, additional training activities might include establishment of additional radar and emitter sites, construction of access roads, creation of additional dismounted maneuver routes and establishment of new insertion/extraction points. While the USAF has identified the general types of activities that may take place in the proposed withdrawal expansion area, specific activities and their locations will not be defined until after enactment of any withdrawal legislation. Consequently, the USAF is preparing a programmatic Legislative Environmental Impact Statement (LEIS) that will more broadly discuss the types of activities the Air Force would pursue, if additional lands or greater jurisdiction of existing lands at the NTTR is provided to the Air Force. Specific future activities on any withdrawn lands would be subject to additional and appropriate National Environmental Policy Act (NEPA) and associated consultations. Initial requirements for planning and implementing these potential future activities would be addressed as part of an NHPA Programmatic Agreement or Memorandum of Understanding.

In support of effective tribal engagement and as part of NHPA Section 106 consultation efforts for this undertaking the USAF seeks information on historic properties of cultural and religious significance to Indian Tribes, and invites your input and comments regarding:

- Known historic properties of cultural and religious significance of tribal concern,
- Tribal concerns associated with the Proposed Action within the area of potential effect,
- Input on methods for data gathering, as well as perceived tribal historic property identification needs,
- Comments on the Historic Resource Inventory Plan (HRIP)
- Any other issues or concerns you request be considered during preparation of consultation documentation or the LEIS.

As the USAF develops the LEIS and works through the NHPA consultation process we look forward to effective tribal input as we work to preserve historic and tribal resources contained within the NTTR.

If you have any questions or comments regarding the information presented in this letter, please direct them to Ms. Kish La Pierre by e-mail at kish.lapierre@us.af.mil, or by phone at (702) 652-5813. Thank you for any inputs or information you can provide.

Sincerely



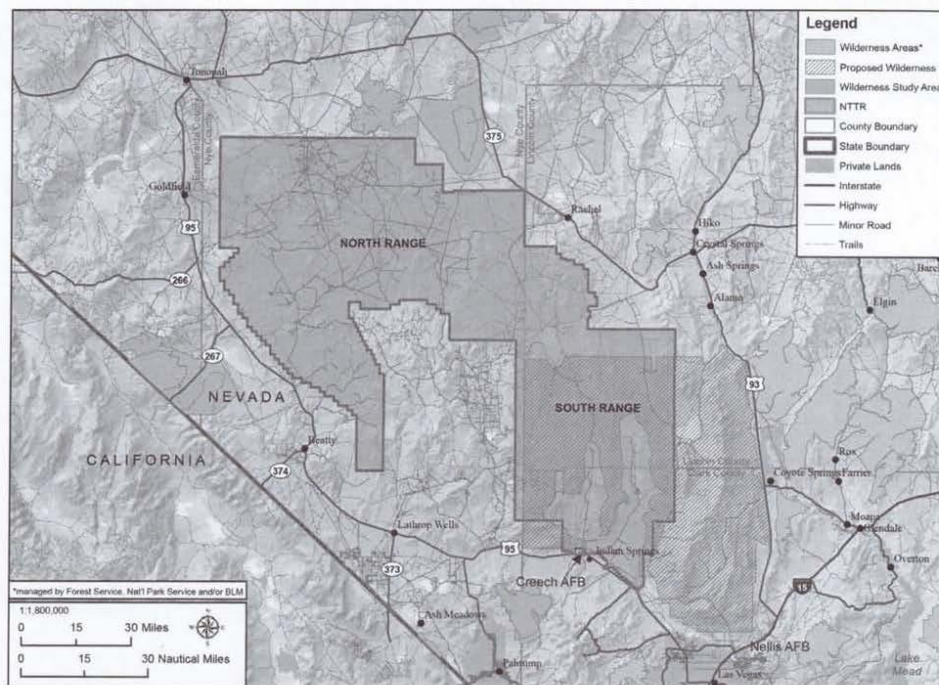
Michael A. Freeman, Lt. Col., USAF
Commander

Attachments:

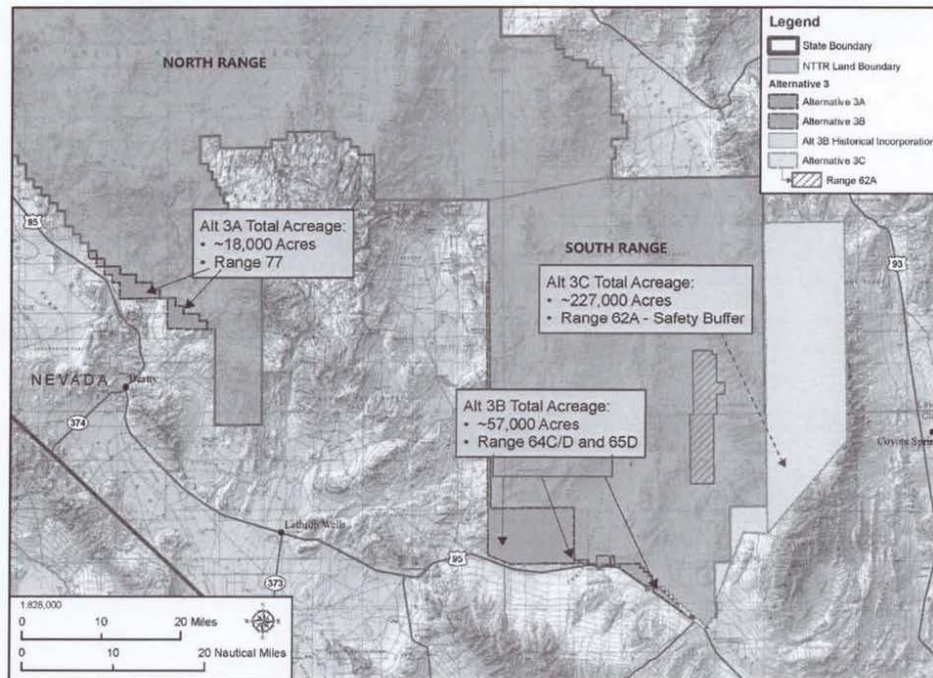
1. Location of the NTTR, Population Centers, Roadway Infrastructure, and Wilderness/Wilderness Study Areas
2. Alternative 3A, 3B, and 3C Locations and Acreages
3. Draft NTTR Land Withdrawal Historic Property Inventory Plan

cc:

Christy Smith, US Fish and Wildlife Service
Anan Raymond, US Fish and Wildlife Service
Spencer Lodge, US Fish and Wildlife Service
Rebecca Palmer, Nevada State Historic Preservation Office



Attachment 1- Location of the NTTR, Population Centers, Roadway Infrastructure, and Wilderness/Wilderness Study Areas



Attachment 2- Alternative 3A, 3B, and 3C Locations and Acreages

Letter from Air Force to Benton Paiute Tribe: [January 9, 2017]

**DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE NEVADA**

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Ave.
Nellis AFB NV 89191

Chairperson Tina Braithwaite
Benton Paiute Indian Tribe
25669 Highway 6, PMB I
Benton, CA 93512

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In support of effective tribal engagement and as part of NHPA Section 106 consultation efforts for this undertaking the USAF seeks information on historic properties of cultural and religious significance to Indian Tribes, and invites your input and comments regarding:

- Known historic properties of cultural and religious significance of tribal concern,
- Tribal concerns associated with the Proposed Action within the area of potential effect,
- Input on methods for data gathering, as well as perceived tribal historic property identification needs,
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If you have any questions or comments regarding the information presented in this letter, please direct them to Ms. Kish La Pierre by e-mail at kish.lapierre@us.af.mi, or by phone at (702) 652-5813. Thank you for any inputs or information you can provide.

Sincerely



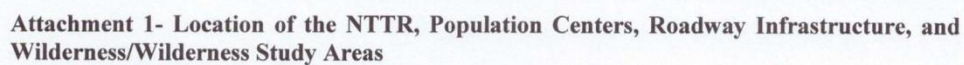
Michael A. Freeman, Lt. Col., USAF
Commander

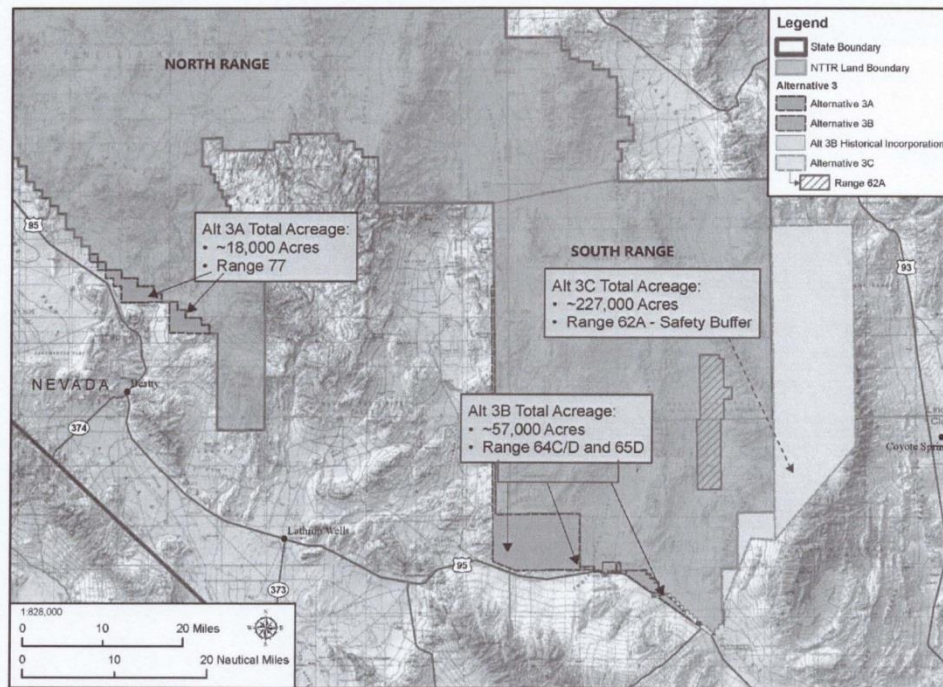
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3. Draft NTTR Land Withdrawal Historic Property Inventory Plan

cc:

Christy Smith, US Fish and Wildlife Service
Anan Raymond, US Fish and Wildlife Service
Spencer Lodge, US Fish and Wildlife Service
Rebecca Palmer, Nevada State Historic Preservation Office





Attachment 2- Alternative 3A, 3B, and 3C Locations and Acreages

Letter from Nuwuvi Working Group to Air Force: February 11, 2017

NUWUVI WORKING GROUP

February 11, 2017

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Avenue
Nellis AFB, NV 89191

Re: NTTR LEIS Military Land Withdrawal

Dear Col. Freeman:

The Nuwuvi Working Group is aware of the impending Nevada Test and Training Range Military Land Withdrawal proposed by the United States Air Force (USAF) in preparation of a Legislative Environmental Impact Statement to acquire 260,000 acres within the existing boundary of the Desert National Wildlife Refuge.

The proposed land expansion falls within the traditional homelands of culturally affiliated Southern Paiute and Chemehuevi Tribes located in Nevada, California, Utah and Arizona. These particular tribes formed the Nuwuvi Working Group (NWG) nearly a decade ago as a means of interfacing directly with FWS to enhance our longstanding government-to-government relationship relating to any and all activities impacting the precious resources on the Desert National Wildlife Refuge (DNWR).

The NWG comprised of key culturally knowledgeable individuals are appointed by their respective tribal governments and charged with the responsibility of engaging in meaningful interactions about resources on the DNWR while updating their respective tribes. NWG membership along with their leadership has demonstrated their extensive knowledge relating to our deep-rooted cultural ties to the Sheep Mountains that are considered culturally sensitive and vital to the perpetuation of our culture. Currently no other group of tribes other than Southern Paiute and Chemehuevi tribes possess the background knowledge and information that relates to the area and can truly recognize the gravity of the sensitive cultural and religious resources without understanding Southern Paiute/Chemehuevi epistemology.

It is our understanding USAF is intending to conduct archaeological evaluations for this National Historic Preservation Act (NHPA) Section 106 undertaking on a significant portion of the Desert National Wildlife Refuge. In turn, the Air Force NHPA Section 106 undertaking will ultimately turn a significant portion of the Desert National Wildlife Refuge Sheep Range into a bombing range under the jurisdiction of the Air Force and irrevocably adding the culturally important religious and ceremonial areas on the Sheep Range to the Nevada Test and Training Range. In our view, the proposed Sheep Range along with other culturally sensitive

area will be impacted by associated destruction, desecration and restriction that adversely impact our culture in perpetuity.

Due to the high degree of cultural sensitivity identified by Southern Paiute and Chemehuevi Tribes, the USAF NHPA Section 106 undertaking will without consideration have irreversible adverse effects on historic properties and most importantly the religious and cultural significance to Indian Tribes. As an active bombing range, access will diminish significantly and eliminate our frequent and sustained connection to our traditional and contemporary culture, sites, plants, animals and other important attributes vital to our existence.

We believe qualified and traditionally knowledgeable individuals be identified by the NWG with concurrence from their respective tribal governments to identify historic and ethnohistoric properties in compliance with NHPA Section 106. Further, full consideration must be given to surveying cultural resources, sites and identifying the cultural values attributed to those properties with religious and cultural significance to our affected tribes and/or bands who demonstrated cultural affiliation to the Sheep Range.

In examining the proposed undertaking including the Air Force Section 106 Historic Property identification plans and contractor evaluation are modeled after out-dated archaeological surveys and fail to consider the importance of identifying, addressing and mitigating cultural and religious tribal values associated with the proposed expansion area. Without adjustments, the proposed Section 106 survey will not consider our resources, culture and spiritual needs including but not limited to historic properties of religious and cultural significance to Indian Tribes.

Any proposed survey of this magnitude must include an appropriate ethnographic study of the area by a qualified ethnographer (not archaeologist) with knowledge and familiarity with culturally affiliated tribes and selected by the NWG. Such an ethnographic study must consider existing documentation including but not limited to existing or potential Traditional Cultural Property nominations and religious connections to the area by collecting and synthesizing important Nuwuvi traditional and spiritual knowledge.

In tandem with any ethnographic effort, tribal insight and concerns must be properly documented using appropriate ethnographic methods conducted by and with Nuwuvi equal to recent FWS and Forest Service efforts relating to four newly constructed Visitor's Centers. Moreover, tribal interactions must be conducted in a manner consistent with government-to-government relationship protocols modeled after tribal interactions adopted by both DNWR and culturally affiliated tribes.

Sincerely,

Nuwuvi Working Group

Letter from Kaibab Band of Paiute Indians: February 17, 2017

Kaibab Band of Paiute Indians



NUWUVI WORKING GROUP

February 17, 2017

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Avenue
Nellis AFB, NV 89191

Re: NTTR LEIS Military Land Withdrawal

Col. Freeman, Sir:

The Nuwuvi Working Group is aware of the impending Nevada Test and Training Range Military Land Withdrawal proposed by the United States Air Force (USAF), in preparation of a Legislative Environmental Impact Statement (LEIS) to acquire 260,000 acres within the existing boundary of the Desert National Wildlife Refuge (DNWR).

The proposed land expansion falls within the traditional homelands of culturally affiliated Southern Paiute and Chemehuevi Tribes located in Nevada, California, Utah and Arizona. These particular tribes formed the Nuwuvi Working Group (NWG) nearly a decade ago as a means of interfacing directly with Fish and Wildlife (FWS), to enhance our longstanding government-to-government relationship relating to any and all activities impacting the precious resources on the DNWR.

The NWG is comprised of key culturally knowledgeable individuals who are appointed by their respective tribal governments and charged with the responsibility of engaging in meaningful interactions about resources on the DNWR while simultaneously updating their respective tribes. NWG membership along with their leadership has demonstrated their extensive knowledge relating to our deep-rooted cultural ties to the Sheep Mountains that are considered culturally sensitive and vital to the perpetuation of our culture. Currently no other group of tribes other than Southern Paiute and Chemehuevi tribes possess the epistemology, background knowledge and specialized information that relates to the area and can truly recognize the gravity of the sensitive cultural and religious resources on the DNWR.

Tribal Affairs

HC 65 Box 2
Fredonia, Arizona 86022

Phone (928) 643-7245
Fax (888) 939-3777

It is our understanding that the USAF is intending to conduct archaeological evaluations for this National Historic Preservation Act (NHPA) Section 106 undertaking on a significant portion of the Desert National Wildlife Refuge. In turn, the Air Force NHPA Section 106 undertaking will ultimately turn a significant portion of the Desert National Wildlife Refuge Sheep Range into a bombing range under the jurisdiction of the Air Force. This process will irrevocably add the culturally important religious and ceremonial areas on the Sheep Range to the Nevada Test and Training Range. In our view, the proposed Sheep Range along with other culturally sensitive areas will be impacted by the associated destruction, desecration and restriction that will adversely impact our culture into perpetuity.

Due to the high degree of cultural sensitivity identified by Southern Paiute and Chemehuevi Tribes, the USAF NHPA Section 106 undertaking will without consideration have irreversible adverse effects on historic properties, and most importantly, on sites of religious and cultural significance to Indian Tribes. As an active bombing range, access will diminish significantly and eliminate our frequent use and sustained connection to our traditional and contemporary culture, sites, plants, animals and other important attributes vital to our existence.

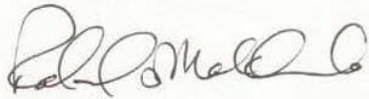
We believe qualified and traditionally knowledgeable individuals should be identified by the NWG with concurrence from their respective tribal governments to identify historic and ethnohistoric properties in compliance with NHPA Section 106 and E.O. 13175 and E.O. 13007. Further, full consideration must be given to surveying cultural resources, sites and identifying the cultural values attributed to those properties with religious and cultural significance to our affected tribes and/or bands who demonstrated cultural affiliation to the Sheep Range.

In examining the proposed undertaking including the Air Force's Section 106 process, identification plans and contractor evaluation are modeled after out-dated archaeological surveys and fail to consider the importance of identifying, addressing and mitigating contemporary cultural and religious tribal values associated with the proposed expansion area. Without adjustments, the proposed Section 106 survey will not consider our resources, culture and spiritual needs, including but not limited to, historic properties of religious and cultural significance to Indian Tribes.

Any proposed survey of this magnitude must include an appropriate ethnographic study of the area by a qualified ethnographer (not an archaeologist) with knowledge and familiarity with the culturally affiliated tribes and selected by the NWG. Such an ethnographic study must consider existing documentation, including but not limited to, existing or potential Traditional Cultural Property nominations and religious connections to the area by collecting and synthesizing important Nuwuvi traditional and spiritual knowledge.

In tandem with any ethnographic effort, tribal insight and concerns must be properly documented using appropriate ethnographic methods conducted by and with Nuwuvi equal to recent FWS and Forest Service efforts relating to four newly constructed Visitor's Centers in southern Nevada. Moreover, tribal interactions must be conducted in a manner consistent with government-to-government relationship protocols modeled after tribal interactions adopted by both DNWR and the culturally affiliated tribes.

Respectfully,



Roland Maldonado
Tribal Chairman
Kaibab Band of Paiute Indians
928/643/7125

Letter from the Nuwuvi Working Group: February 24, 2017

February 24, 2017

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Avenue
Nellis AFB, NV 89191

Re: NTTR LEIS Military Land Withdrawal

Dear Col. Freeman:

The Nuwuvi Working Group is aware of the impending Nevada Test and Training Range Military Land Withdrawal proposed by the United States Air Force (USAF) in preparation of a Legislative Environmental Impact Statement (LEIS) to acquire 260,000 acres within the existing boundary of the Desert National Wildlife Refuge (DNWR).

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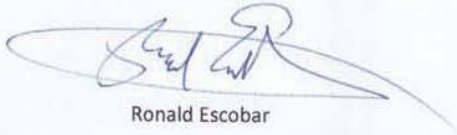
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In tandem with any ethnographic effort, tribal insight and concerns must be properly documented using appropriate ethnographic methods conducted by and with Nuwuvi equal to recent FWS and Forest Services effort relating to four newly constructed Visitor's Centers in southern Nevada. Moreover, tribal

interactions must be conducted in a manner consistent with government-to-government relationship protocols modeled after tribal interactions adopted by both DNWR and the culturally affiliated tribes.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ronald Escobar', with a large, sweeping flourish extending to the right.

Ronald Escobar

Nuwuvi Working Group Member

Chemehuevi Tribal Member

Letter from Chemehuevi Indian Tribe: February 25, 2017*Chemehuevi Indian Tribe*

P.O. Box 1976 • Havasu Lake, California 92363 • (760) 858-4219 • Fax: (760) 858-5400

February 25, 2017

Kevin DesRoberts, Deputy Project Leader
Fish and Wildlife Service
4701 North Torrey Pines Dr.
Las Vegas, NV 89130

Re: NTTR LEIS Military Land Withdrawal

Dear Mr. DesRoberts:

As you are aware, the Chemehuevi Indian Tribe of California is federally recognized and a founding member of the Nuwuvi Working Group (NWG). We support the concerns expressed by the NWG relating to the proposed Nevada Test and Training Range (NTTR) land expansion onto the Desert National Wildlife Refuge (DWNR).

Our Tribal Council along with the NWG is extremely concerned with any actions that adversely affect our culture, traditional homelands and the numerous culturally sensitive sites or resources managed by the U.S. Fish and Wildlife Service (USFWS). The proposed actions of the Air Force under the auspices of an active bombing range for the NTTR located within the DNWR will have irreparable impacts on our ability to regularly access our traditional sites for religious and ceremonial purposes. This undertaking will without a doubt inhibit our ability to sustain our culture for future generations.

The proposed Historic Property Identification Plan (HPIP) proposed by the Air Force is silent on tribal resources relating to our religious ties to the area and fails to consider the impacts upon our songscapes and storyscapes within the broader cultural landscape. Equally, the HPIP does not account for the religious and spiritual implications placed upon our people including those tribes represented by the NWG.

Archaeological surveys or other activities involving culturally affiliated tribes related to the proposed undertaking must be conducted in a manner consistent with the mutually agreed upon

collaborative processes established between culturally affiliated tribes represented by the NWG and USFWS.

We see no consideration given to addressing or mitigating cultural and religious values associated with the proposed expansion area. The Chemehuevi Indian Tribe is troubled by the proposed Section 106 surveys that will not properly account for our resources including the cultural needs relating to those historic properties vital to the spiritual continuity of our people.

The Chemehuevi Indian Tribe disagrees with the outdated methodology proposed by Far Western Anthropological Research Group (FWARG) and their attempt to use intuitive archaeological predictive modeling. This approach will no doubt achieve skewed results by using insufficient information and not considering tribal perspectives or incorporating traditional knowledge about the area. Ultimately the intuitive model will identify only those sites within pre-determined locations without tribal consideration or intentional avoidance of other culturally important locations. Most importantly, tribal input from knowledgeable tribal representatives will be totally absent.

For reasons unknown, the proposed site evaluations approved by the Air Force and planned by FWARG are unacceptable and non-inclusive. In our view, ethnographic studies are necessary for focusing on the traditional cultural resources present on DNWR lands. Tribal involvement will promote a fuller understanding of the cultural nuances paramount to our culture including the culturally perceived impacts upon the land in question.

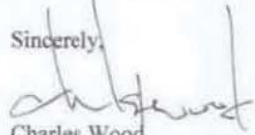
Clearly, a qualified trained ethnographer approved by the Nuwuvi Working Group in collaboration with USFWS is necessary to conduct proper ethnographic evaluations in accordance with NWG and USFWS government-to-government protocols.

Due to the nature of the proposed undertaking and the limited archaeological studies planned under Section 106 of the National Historic Preservation Act, the Air Force must provide sufficient funding to the USFWS to conduct such a cultural analysis using the NWG on a government-to-government basis. Accordingly, culturally knowledgeable tribal members approved by their respective Nuwuvi tribal governments must participate in this effort. This approach will support integral components of a more robust systematic ethnographic evaluation to ensure the integrity of the study.

Due to the highly religious significance of the DNWR and the urgency of the proposed Air Force undertaking, the Chemehuevi Indian Tribe cannot support the existing elements of the HPIP nor the flawed unconscionable analysis proposed by the Air Force. The antiquated archaeological modeling is inadequate and until significant changes are made to address these concerns the interests of our people, will not be represented nor can we engage in a deficient project. It is our

contention USFWS must thoroughly consider the implications of an inadequate NHPA Section 106 archaeological surveys associated with the Legislative Environmental Impact Statement before issuing a permit under the Archaeological Resources Protection Act.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles Wood", is written over the printed name.

Charles Wood
Tribal Chairman

DECEMBER 2017

Letter from Air Force to Kaibab Band of Paiute Indians, Chemehuevi Indian Tribe, and Nuwuvi Working Group: April 4, 2017



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE NEVADA



Lieutenant Colonel Michael A. Freeman
99 CES Commander
6020 Beale Ave.
Nellis AFB, NV 89191

APR 04 2017

Mr. Roland Maldonado
Tribal Chairman
Kaibab Band of Paiute Indians

Mr. Charles Wood
Tribal Chairman
Chemehuevi Indian Tribe

Mr. Ronald Escobar
Nuwuvi Working Group Member
Chemehuevi Tribal Member

SUBJ: NTTR LEIS – Military Land Withdrawal Response Letters (Ref: your February 17, 2017; February 24, 2017; and February 25, 2017 letters respectively)

Dear Mr. Maldonado, Mr. Wood, and Mr. Escobar,

The U.S. Air Force (USAF) appreciates the input you provided in your letters to me and to Mr. DesRoberts at the US Fish and Wildlife Service (USFWS) on behalf of the Kaibab Band of Paiute Indians and the Chemehuevi Indian Tribe in February, 2017 regarding the request for ethnographic studies, tribal engagement and participation, and feedback on the Historic Property Identification Plan (HPIP) submitted to the Nellis AFB Affiliated Tribes in January 2017. We received four letters that expressed shared concerns that are all attached to this response. Since the concerns were similar we are responding to you and your respective tribes with a single letter. As part of the USAF's continued government-to-government engagement and tribal consultation for the Nevada Test and Training Range (NTTR) military land withdrawal proposal, the USAF recognizes the concerns and issues raised by the Kaibab Paiute and Chemehuevi Tribes. In response the USAF would like to provide the following updates:

1) The USAF and our cooperating agency partners' value input from the Affiliated Tribes and are seeking to make modifications to our historic resource inventory approach to address some of the concerns raised by you and other Tribes. The Air Force will look to better integrate an ethnographic understanding into the tribal consultation, Section 106, and LEIS processes. The USAF understands the importance of ethnography and the integral role it plays in understanding

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the cultural landscape, particularly for tribes with historic ties to the NTTR and surrounding lands that could be affected by a future land withdrawal. To that end, the USAF has supported several ethnographic studies for the NTTR over the years. As part of the overall cultural characterization of the Area of Potential Effect for this undertaking the USAF intends to leverage those existing ethnographic studies to the extent possible and conduct an additional ethnographic study to supplement existing information in response to tribal comments received on the NTTR land withdrawal. The USAF will utilize a qualified ethnographer (not an archaeologist) to conduct the ethnographic study. Because of the number of Affiliated Tribes involved in this consultation effort, from a practical perspective the USAF cannot provide separate ethnographic studies for each tribe. The USAF therefore proposes one comprehensive ethnographic study, utilizing new tribal input as well as leveraging previously conducted studies to include existing or potential Traditional Cultural Property (TCP) nominations and religious connections to the area. With regards to the ethnographer, the USAF requests that the Nellis Air Force Base (AFB) Affiliated Tribes provide a list of qualified, preferred ethnographers that the Air Force could review in planning for the requested ethnographic study. Your support in providing a response to this request no later than 4 May 2017 is appreciated, to ensure there is adequate time to complete the study in conjunction with the land withdrawal process.

2) The USAF would also like to clarify the undertaking being considered as part of the proposed NTTR military land withdrawal. As part of the undertaking the USAF is considering an extension of the existing NTTR land withdrawal within the current NTTR boundary, as well as alternatives for potentially expanding the NTTR boundary by up to 301,507 acres in 3 distinct areas adjacent to the existing NTTR North and South range areas. The potential expansion areas were identified in previous tribal correspondence and meetings with potentially affected tribal groups. Under the Proposed Action and all alternatives considered, there would be no new target impact areas established in the Sheep Mountain Range or in any new expanded areas proposed for military land withdrawal. Additionally, at this time there are no site-specific land disturbance proposals included in the undertaking. The USAF has identified the general types of activities that would take place in the proposed withdrawal expansion areas in the future, if the withdrawal is approved by Congress. Some of these activities include establishment of radar and emitter sites, potential landing strips, and small team ground maneuvers. The impacts from these activities, if pursued in the future, are anticipated to impact only a small portion (less than 1%) of any new lands withdrawn by Congress. Specific activities and their locations would not be defined until after enactment of any future withdrawal legislation. At that time, any activities would be subject to additional appropriate National Environmental Policy Act (NEPA) analysis, National Historic Preservation Act (NHPA), and tribal consultation. As a result, the Affiliated Tribes will have multiple opportunities to consult and provide input on future site-specific activities in any new withdrawal areas prior to the occurrence of any activities which may impact cultural resources.

3) The USAF currently works with the tribes of the Nuwuvu Working Group (NWG) and other Affiliated Tribes under the Nellis AFB Native American Program to consult on NTTR activities and provide access to Historic Properties of Cultural and Religious Significance to Indian Tribes (HPCRSIT) affiliated with the NTTR. If any changes are made to the NTTR as a result of Congressional legislation in the future, it is the intention of the USAF to continue to consult and

provide opportunities for tribal access to HPCRSIT and other areas of tribal interest regardless of the alternative(s) selected. The USAF recognizes that tribal access to proposed military withdrawal areas would be reduced due to safety considerations when military activities are occurring, but the Air Force would work to balance desired access in new withdrawal areas with future military operations. Opportunities for access to USAF land areas would be identified and codified through the Section 106 consultation process and government-to-government coordination. If there are specific aspects of the protocols used between the NWG member tribes and the USFWS in the management of the Desert National Wildlife Refuge (DNWR) that you and your tribe would like to incorporate into the Nellis AFB Native American Program please let us know. Nellis AFB does not have a copy of any protocols or agreements between the USFWS and the NWG to help understand the concerns you addressed about following those protocols.

4) While the intent of the undertaking is to provide the land area necessary to meet current and future mission requirements, it is not the intent of the USAF to adversely impact HPCRSIT or negatively affect opportunities for the Affiliated Tribes to access these areas. In order to effectively balance mission needs with tribal uses of potential military withdrawal lands, the USAF understands that it is critical to receive input from the Affiliated Tribes on the proposed undertaking. The USAF has identified multiple methods that could be used to accomplish this in the HPIP provided in January 2017. The main components of the HPIP include literature review and summation (using existing information from NVCRIS and other published sources), an archaeology survey for the areas that the USAF has been provided access, and an ethnographic study. In response to input received, the USAF will plan to reduce the scope of archeological survey efforts, while increasing the focus on efforts to gather and understand ethnography of the area. Archaeological survey efforts that do occur will include Native American cultural experts to serve as monitors during field investigations, including representation the Nellis Affiliated Tribes with cultural ties to the areas being studied. These Native American cultural experts will assist the USAF in the identification and evaluation of HPCRSIT, as well as other aspects of the withdrawal that may impact Native Americans. The USAF is currently working with Mr. Richard Arnold as the Native American Coordinator (NAC) to coordinate the survey efforts over the next few weeks.

5) The USAF intends to provide an opportunity for tribal input on the LEIS and the withdrawal process. In addition to the extensive consultation and coordination efforts already conducted and planned for the future, the USAF is currently working with Mr. Arnold to identify members of a Native American Writers Subgroup (NAWS) to provide Native American perspectives on the land withdrawal proposal. The process for assembling the NAWS is ongoing at this time and the details will be coordinated with the Affiliated Tribes over the next few weeks.

The USAF will continue to communicate with all of the Affiliated Tribes throughout the land withdrawal process. The USAF hopes that the above information helps to address the issues and concerns presented in your letter. As the USAF develops the LEIS and works through the NHPA consultation process, we look forward to working to understand and address tribal concerns.

If you have any questions or comments regarding the information presented in this letter, please direct them to (Ms. Kish LaPierre) by e-mail at (kish.lapierre@us.af.mil), or by phone at (702) 652-5813. Thank you for any inputs or information you can provide.

Sincerely



Michael A. Freeman, Lt Col, USAF
Commander

Attachment:
Referenced Four Letters

cc:
Nellis Air Force Base Native American Program Affiliated Tribes
Nuwuvi Working Group
Nellis Native American Coordinator (Mr. Richard Arnold)
US Fish and Wildlife Service (Mr. Kevin DesRoberts, Ms Christy Smith,
Mr. Anan Raymond, and Mr. Spencer Lodge)
Nevada State Historic Preservation Office (Ms. Rebeca Palmer)

Enclosure

NUWUVI WORKING GROUP

February 11, 2017

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Avenue
Nellis AFB, NV 89191

Re: NTTR LEIS Military Land Withdrawal

Dear Col. Freeman:

The Nuwuvi Working Group is aware of the impending Nevada Test and Training Range Military Land Withdrawal proposed by the United States Air Force USAF) in preparation of a Legislative Environmental Impact Statement to acquire 260,000 acres within the existing boundary of the Desert National Wildlife Refuge.

The proposed land expansion falls within the traditional homelands of culturally affiliated Southern Paiute and Chemehuevi Tribes located in Nevada, California, Utah and Arizona. These particular tribes formed the Nuwuvi Working Group (NWG) nearly a decade ago as a means of interfacing directly with FWS to enhance our longstanding government-to-government relationship relating to any and all activities impacting the precious resources on the Desert National Wildlife Refuge (DNWR).

The NWG comprised of key culturally knowledgeable individuals are appointed by their respective tribal governments and charged with the responsibility of engaging in meaningful interactions about resources on the DNWR while updating their respective tribes. NWG membership along with their leadership has demonstrated their extensive knowledge relating to our deep-rooted cultural ties to the Sheep Mountains that are considered culturally sensitive and vital to the perpetuation of our culture. Currently no other group of tribes other than Southern Paiute and Chemehuevi tribes possess the background knowledge and information that relates to the area and can truly recognize the gravity of the sensitive cultural and religious resources without understanding Southern Paiute/Chemehuevi epistemology.

It is our understanding USAF is intending to conduct archaeological evaluations for this National Historic Preservation Act (NHPA) Section 106 undertaking on a significant portion of the Desert National Wildlife Refuge. In turn, the Air Force NHPA Section 106 undertaking will ultimately turn a significant portion of the Desert National Wildlife Refuge Sheep Range into a bombing range under the jurisdiction of the Air Force and irrevocably adding the culturally important religious and ceremonial areas on the Sheep Range to the Nevada Test and Training Range. In our view, the proposed Sheep Range along with other culturally sensitive

area will be impacted by associated destruction, desecration and restriction that adversely impact our culture in perpetuity.

Due to the high degree of cultural sensitivity identified by Southern Paiute and Chemehuevi Tribes, the USAF NHPA Section 106 undertaking will without consideration have irreversible adverse effects on historic properties and most importantly the religious and cultural significance to Indian Tribes. As an active bombing range, access will diminish significantly and eliminate our frequent and sustained connection to our traditional and contemporary culture, sites, plants, animals and other important attributes vital to our existence.

We believe qualified and traditionally knowledgeable individuals be identified by the NWG with concurrence from their respective tribal governments to identify historic and ethnohistoric properties in compliance with NHPA Section 106. Further, full consideration must be given to surveying cultural resources, sites and identifying the cultural values attributed to those properties with religious and cultural significance to our affected tribes and/or bands who demonstrated cultural affiliation to the Sheep Range.

In examining the proposed undertaking including the Air Force Section 106 Historic Property identification plans and contractor evaluation are modeled after out-dated archaeological surveys and fail to consider the importance of identifying, addressing and mitigating cultural and religious tribal values associated with the proposed expansion area. Without adjustments, the proposed Section 106 survey will not consider our resources, culture and spiritual needs including but not limited to historic properties of religious and cultural significance to Indian Tribes.

Any proposed survey of this magnitude must include an appropriate ethnographic study of the area by a qualified ethnographer (not archaeologist) with knowledge and familiarity with culturally affiliated tribes and selected by the NWG. Such an ethnographic study must consider existing documentation including but not limited to existing or potential Traditional Cultural Property nominations and religious connections to the area by collecting and synthesizing important Nuwuvi traditional and spiritual knowledge.

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Sincerely,

Nuwuvi Working Group

Enclosure

Kaibab Band of Paiute Indians



NUWUVI WORKING GROUP

February 17, 2017

Lt. Col. Michael A. Freeman
Commander, 99 CES
6020 Beale Avenue
Nellis AFB, NV 89191

Re: NTTR LEIS Military Land Withdrawal

Col. Freeman, Sir:

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Tribal Affairs

HC 65 Box 2
Fredonia, Arizona 86022

Phone (928) 643-7245
Fax (888) 939-3777

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Respectfully,



Roland Maldonado
Tribal Chairman
Kaibab Band of Paiute Indians
928/643/7125

Enclosure

February 24, 2017

Lt. Col. Michael A. Freeman

Commander, 99 CES

6020 Beale Avenue

Nellis AFB, NV 89191

Re: NTTR LEIS Military Land Withdrawal

Dear Col. Freeman:

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Due to the high degree of cultural sensitivity identified by Southern Paiute and Chemehuevi Tribes, the USAF NHPA Section 106 undertaking will without consideration have irreversible adverse effects on historic properties, and most importantly, on sites of religious and cultural significance to Indian Tribes. As an active bombing range, access will diminish significantly and eliminate our frequent and sustained connection to our traditional and contemporary culture, sites, plants, animals and other important attributes vital to our existence.

We believe qualified and traditionally knowledgeable individuals should be identified by the NWG with concurrence from their respective tribal governments to identify historic and ethnohistoric properties in compliance with NHPA Section 106. Further, full consideration must be given to surveying cultural resources, sites and identifying the cultural values attributed to those properties with religious and cultural significance to our affected tribes and who demonstrated cultural affiliation to the Sheep Range.

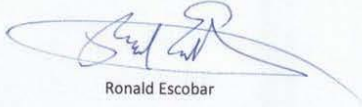
In examining the proposed undertaking including the Air Force's Section 106 process, identification plans and contractor evaluation are modeled after out-dated archaeological surveys and fail to consider the importance of identifying, addressing and mitigating contemporary culture and religious tribal values associated with the proposed Section 106 survey will not consider our resources, culture and spiritual needs, including but not limited to, historic properties of religious and cultural significance to Indian Tribes.

Any proposed survey of this magnitude must include an appropriate ethnographic study of the area by a qualified ethnographer (not archaeologist) with knowledge and familiarity with the culturally affiliated tribes and selected by the NWG. Such an ethnographic study must consider existing documentation, including but not limited to the area by collecting and synthesizing important Nuwuvi traditional and spiritual knowledge.

In tandem with any ethnographic effort, tribal insight and concerns must be properly documented using appropriate ethnographic methods conducted by and with Nuwuvi equal to recent FWS and Forest Services effort relating to four newly constructed Visitor's Centers in southern Nevada. Moreover, tribal

interactions must be conducted in a manner consistent with government-to-government relationship protocols modeled after tribal interactions adopted by both DNWR and the culturally affiliated tribes.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ronald Escobar', with a stylized flourish extending to the right.

Ronald Escobar

Nuwuvi Working Group Member

Chemehuevi Tribal Member

Enclosure

*Chemehuevi Indian Tribe*

P.O. Box 1976 • Havasu Lake, California 92363 • (760) 858-4219 • Fax: (760) 858-5400

February 25, 2017

Kevin DesRoberts, Deputy Project Leader
Fish and Wildlife Service
4701 North Torrey Pines Dr.
Las Vegas, NV 89130

Re: NTTR LEIS Military Land Withdrawal

Dear Mr. DesRoberts:

As you are aware, the Chemehuevi Indian Tribe of California is federally recognized and a founding member of the Nuwuvi Working Group (NWG). We support the concerns expressed by the NWG relating to the proposed Nevada Test and Training Range (NTTR) land expansion onto the Desert National Wildlife Refuge (DNWR).

Our Tribal Council along with the NWG is extremely concerned with any actions that adversely affect our culture, traditional homelands and the numerous culturally sensitive sites or resources managed by the U.S. Fish and Wildlife Service (USFWS). The proposed actions of the Air Force under the auspices of an active bombing range for the NTTR located within the DNWR will have irreparable impacts on our ability to regularly access our traditional sites for religious and ceremonial purposes. This undertaking will without a doubt inhibit our ability to sustain our culture for future generations.

The proposed Historic Property Identification Plan (HPIP) proposed by the Air Force is silent on tribal resources relating to our religious ties to the area and fails to consider the impacts upon our songscapes and storyscapes within the broader cultural landscape. Equally, the HPIP does not account for the religious and spiritual implications placed upon our people including those tribes represented by the NWG.

Archaeological surveys or other activities involving culturally affiliated tribes related to the proposed undertaking must be conducted in a manner consistent with the mutually agreed upon

collaborative processes established between culturally affiliated tribes represented by the NWG and USFWS.

We see no consideration given to addressing or mitigating cultural and religious values associated with the proposed expansion area. The Chemehuevi Indian Tribe is troubled by the proposed Section 106 surveys that will not properly account for our resources including the cultural needs relating to those historic properties vital to the spiritual continuity of our people.

The Chemehuevi Indian Tribe disagrees with the outdated methodology proposed by Far Western Anthropological Research Group (FWARG) and their attempt to use intuitive archaeological predictive modeling. This approach will no doubt achieve skewed results by using insufficient information and not considering tribal perspectives or incorporating traditional knowledge about the area. Ultimately the intuitive model will identify only those sites within pre-determined locations without tribal consideration or intentional avoidance of other culturally important locations. Most importantly, tribal input from knowledgeable tribal representatives will be totally absent.

For reasons unknown, the proposed site evaluations approved by the Air Force and planned by FWARG are unacceptable and non-inclusive. In our view, ethnographic studies are necessary for focusing on the traditional cultural resources present on DNWR lands. Tribal involvement will promote a fuller understanding of the cultural nuances paramount to our culture including the culturally perceived impacts upon the land in question.

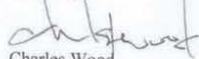
Clearly, a qualified trained ethnographer approved by the Nuwuvi Working Group in collaboration with USFWS is necessary to conduct proper ethnographic evaluations in accordance with NWG and USFWS government-to-government protocols.

Due to the nature of the proposed undertaking and the limited archaeological studies planned under Section 106 of the National Historic Preservation Act, the Air Force must provide sufficient funding to the UWFWS to conduct such a cultural analysis using the NWG on a government-to-government basis. Accordingly, culturally knowledgeable tribal members approved by their respective Nuwuvi tribal governments must participate in this effort. This approach will support integral components of a more robust systematic ethnographic evaluation to ensure the integrity of the study.

Due to the highly religious significance of the DNWR and the urgency of the proposed Air Force undertaking, the Chemehuevi Indian Tribe cannot support the existing elements of the HPIP nor the flawed unconscionable analysis proposed by the Air Force. The antiquated archaeological modeling is inadequate and until significant changes are made to address these concerns the interests of our people, will not be represented nor can we engage in a deficient project. It is our

contention USFWS must thoroughly consider the implications of an inadequate NHPA Section 106 archaeological surveys associated with the Legislative Environmental Impact Statement before issuing a permit under the Archaeological Resources Protection Act.

Sincerely,



Charles Wood
Tribal Chairman

**Letter from Native American Coordinator to Kaibab Paiute Tribe Chairman:
April 20, 2017**

CEVA

Mr. Roland Maldonado, Chairman
Kaibab Paiute Tribe
HC 65, Box 2
Fredonia, AZ 86022

April 20, 2017

Dear Roland,

As you are aware, the Air Force is developing a Legislative Environmental Impact Statement (LEIS) for their Land Renewal associated with the Nevada Test and Training Range. During the last withdrawal, tribal representatives served on an American Indian Writer's Subgroup (AIWS) for the purpose of developing tribal text for inclusion into the LEIS. Once again, Nellis Air Force Base (NAFB) has agreed to support this unique approach and use the AIWS consisting of 9 tribal members from various tribes. Bubar-Hall, LLC., will be supporting this effort and I have been tasked with facilitating these interactions. Your tribe has previously expressed interest in providing comments to the LEIS and I would like to extend an invitation for you to designate a representative from your tribe to work with us in developing tribal-specific text for various sections of the document.

Specifically, members of the AIWS will be responsible for reviewing draft sections of the LEIS and developing corresponding comments from a tribal and/or cultural perspective. Thereafter, the AIWS will work together to collectively synthesize the comments and write text that reflects our collective views. For their efforts, tribal representatives will receive honoraria in the amount of \$150 per day along with lodging, per diem and mileage when AIWS meetings are scheduled to synthesize text.

It is important to note that the AIWS effort is intended to provide collective tribal views and does not preclude any tribe from responding directly to the Air Force about the LEIS and/or expressing their respective views.

NAFB has announced plans to host their semi-annual Tribal Meeting in Beatty Nevada on May 10-11, 2017. In addition to regular updates, one key component of this meeting will be to discuss the LEIS. The session is expected to provide LEIS updates and further discuss the path forward.

I am hopeful that you or your designee will be able to assist with this important effort and participate in the systematic review of the LEIS. Currently we are planning on initiating our activities shortly after the Tribal Leaders meeting and I would respectively ask that you confirm your involvement as soon as possible. If you have any questions or would like to discuss this activity further, I can be reached at (702) 339-7200 or rwarnold@hotmail.com.

Sincerely,

/S/

Richard Arnold, Native American Coordinator
P.O. Box 3411
Pahrump, NV 89041-3411

cc: Col. Paul Murray
Kish LaPierre, NAFB
Ron Hall, Bubar-Hall, LLC.

Letter from Native American Coordinator to Moapa Band of Paiutes Chairman: April 20, 2017

Mr. Darren Daboda, Chairman
Moapa Band of Paiutes
P.O. Box 340
Moapa, NV 89025

April 20, 2017

Dear Darren,

As you are aware, the Air Force is developing a Legislative Environmental Impact Statement (LEIS) for their Land Renewal associated with the Nevada Test and Training Range. During the last withdrawal, tribal representatives served on an American Indian Writer's Subgroup (AIWS) for the purpose of developing tribal text for inclusion into the LEIS. Once again, Nellis Air Force Base (NAFB) has agreed to support this unique approach and use the AIWS consisting of 9 tribal members from various tribes. Bubar-Hall, LLC., will be supporting this effort and I have been tasked with facilitating these interactions. Your tribe has previously expressed interest in providing comments to the LEIS and I would like to extend an invitation for you to designate a representative from your tribe to work with us in developing tribal-specific text for various sections of the document.

Specifically, members of the AIWS will be responsible for reviewing draft sections of the LEIS and developing corresponding comments from a tribal and/or cultural perspective. Thereafter, the AIWS will work together to collectively synthesize the comments and write text that reflects our collective views. For their efforts, tribal representatives will receive honoraria in the amount of \$150 per day along with lodging, per diem and mileage when AIWS meetings are scheduled to synthesize text.

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I am hopeful that you or your designee will be able to assist with this important effort and participate in the systematic review of the LEIS. Currently we are planning on initiating our activities shortly after the Tribal Leaders meeting and I would respectfully ask that you confirm your involvement as soon as possible. If you have any questions or would like to discuss this activity further, I can be reached at (702) 339-7200 or rwarnold@hotmail.com.

Sincerely,

/S/

Richard Arnold, Native American Coordinator
P.O. Box 3411
Pahrump, NV 89041-3411

cc: Col. Paul Murray
Kish LaPierre, NAFB
Ron Hall, Bubar-Hall, LLC.

Letter from Colorado River Indian Tribe: May 18, 2017**COLORADO RIVER INDIAN TRIBES***Tribal Historic Preservation Office*

26600 Mohave Road

Parker, Arizona 85344

Telephone: (928)-669-5822 Fax: (928) 669-5843

May 18, 2017

Department of the Air Force
99 CES Commander
6020 Beale Ave.
Nellis AFB, NV 89191

RE: NTTR LEIS Military Land Withdrawal Response Letters

Dear Ms. Kish LaPierre:

The Colorado River Indian Tribes' Tribal Historic Preservation Office ("CRIT THPO") has received your letter dated April 04, 2017, regarding the *Nevada Test and Training Range (NTTR) military land withdrawal proposal*.

As a preliminary matter, the Colorado River Indian Tribes are a federally recognized Indian tribe comprised of over 4,200 members belonging to the Mohave, Chemehuevi, Hopi and Navajo Tribes. The almost 300,000 acre Colorado River Indian Reservation sits astride the Colorado River between Blythe, California and Parker, Arizona. The ancestral homelands of the Tribe's members, however, extend far beyond the Reservation boundaries. Significant portions of public and private lands in California, Arizona and Nevada were occupied by the ancestors of the Colorado River Indian Tribes' Mohave and Chemehuevi members since time immemorial. These landscapes remain imbued with substantial cultural, spiritual and religious significance for the Tribes' current members and future generations. For this reason, we have a strong interest in ensuring that potential cultural resource impacts are adequately considered and mitigated.

In particular, the Colorado River Indian Tribes are concerned about the removal of artifacts from this area and corresponding destruction of the Tribes' footprint on this landscape. As such, the Tribes request that all prehistoric cultural resources, including both known and yet-to-be-discovered sites, be avoided if feasible. If avoidance of the site is infeasible, then the Tribes request that the resources be left in-situ or reburied in a nearby area, after consultation. This language should be incorporated into enforceable mitigation measures.

In addition, we respond as follows:

_____ Given the potential impact of the project on important cultural resources, the Colorado River Indian Tribes request in-person government-to-government consultation. Please contact the CRIT THPO to discuss our concerns and schedule a meeting with Tribal Council.

CRIT THPO
Project Name: NTTR LEIS Project
Date: May 18, 2017
Page 2

_____ In the event any human remains or objects subject to provision of the Native American Graves Protection and Repatriation Act, or cultural resources such as sites, trails, artifacts are identified during ground disturbance, please contact the CRIT THPO within 48 hours.

_____ The Colorado River Indian Tribes request tribal monitoring of any ground disturbing activity as a condition of project approval. The Tribes request notification of any opportunities to provide tribal monitoring for the project.

_____√ The Colorado River Indian Tribes do not have any specific comment on the proposed project and instead defer to the comments of other affiliated tribes.

Thank you for your consideration. Please contact the undersigned if you have any questions or concerns.

Sincerely,

**COLORADO RIVER INDIAN TRIBES
TRIBAL HISTORIC PRESERVATION OFFICE**

/s/**David Harper, Director**
26600 Mohave Road
Parker, AZ 85344
Phone: (928) 669-5822
E-mail: david.harper@crit-nsn.gov
critthpo@crit-nsn.gov

B.10 AGENCY CONSULTATIONS

B.10.1 National Historic Preservation Act Section 106 Consultation

Letter from Air Force to SHPO notification of random sample surveys: April 14, 2016



DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

Lt Col Michael A. Freeman
Commander
99 Civil Engineer Squadron
6020 Beale Ave.
Nellis AFB NV 89191

APR 14 2016

Ms. Rebecca Palmer
State Historic Preservation Officer
State Historic Preservation Office
Department of Conservation and Natural Resources
901 South Stewart Street, Ste. 5004
Carson City NV 89701-5248

Subject: Cultural & Paleontological Resources Survey Plan (Draft) (#02-2016-NTTR)

Dear Ms. Palmer

Nellis Air Force Base (NAFB) is forwarding this letter in compliance with 36CFR800. This letter is to notify the State Historic Preservation Office (SHPO) of NAFB plans to conduct random sample surveys of 14,000 acres plus 1,000 non-random surveys on proposed expansion lands that total approximately 300,000 acres. These lands under consideration are currently managed by US Fish & Wildlife Service (USFWS) and Bureau of Land Management (BLM) and could become part of the Nevada Test and Training Range (NTTR) footprint. Descriptions of this proposal and methods for study are further outlined in the attached Draft Cultural & Paleontological Resources Survey Plan dated 5 Apr 2016.

We ask your office to review the survey plan and provide comment. Tribal notification has consisted of forwarding copies of this letter and the attachment to NAFB affiliated Tribal offices. A consultation introduction with the Tribes took place in November 2015 at the Annual Leadership Meeting in Las Vegas, Nevada.

Should you or your staff have any questions about the project, please contact our tribal liaison/archaeologist, Ms. Kish La Pierre, 99 CES/CEIEA, at (702) 682-5813 or at kish.lapierre@us.af.mil.

Sincerely

MICHAEL A. FREEMAN, Lt. Col., USAF
Commander

Attachment:
Cultural & Paleontological Resources Survey Plan (Draft) (#02-2016-NTTR) (1 hardcopy & 1 DVD)

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cc:

Katherine R. Kerr Advisory Council on Historic Preservation (ACHP)
Danelle Gutierrez, Tribal Historic Preservation Officer, Big Pine Paiute Tribe
Raymond Andrews, Tribal Historic Preservation Officer, Bishop Paiute-Shoshone Tribe
Billie G. Saulque, Chairperson, Benton Utu Utu Gwaitu Paiute Tribe
Stephanie Arman, Tribal Historic Preservation Officer, Fort Independence Paiute Tribe
Barbara Durham, Tribal Historic Preservation Officer, Timbisha Shoshone Tribe
Janice Aten, Environmental Director, Lone Pine Paiute-Shoshone Reservation
Perline Thompson, Chairperson, Duckwater Shoshone Tribe
Wayne Dyer, Chairperson, Yomba Shoshone Tribe
Alvin Marques, Chairperson, Ely Shoshone Tribe
Charles Wood, Chairperson, Chemehuevi Indian Tribe
Roland Maldonado, Chairperson, Kaibab Band of Southern Paiutes
Benny Tso, Chairperson, Las Vegas Paiute Tribe
Robert Tom, Chairperson, Moapa Band of Paiutes
Richard Arnold, Native American Coordinator NAFB, Pahrump Paiute Tribe
Corrina Bow, Chairperson, Paiute Indian Tribes of Utah
Dennis Patch, Chairperson, Colorado River Indian Tribes
Timothy Williams, Chairperson, Ft. Mojave Tribe

Letter from U.S. Fish and Wildlife Service to Air Force, regarding resource study plans: April 27, 2016



United States Department of the Interior
FISH AND WILDLIFE SERVICE
Anan Raymond, Regional Archaeologist
Region 1+ Region 8 Cultural Resource Team
20555 Gerda Lane, Sherwood, OR 97140
phone: 503-625-4377, fax: 503-625-4887, cell: 503-803-7913
email: anan_raymond@fws.gov



April 27, 2016

Mike Ackerman
AFCEC/CZN, Bldg 1
2261 Hughes Ave, Ste 155
Joint Base San Antonio, TX 78236
email: michael.ackerman.2@us.af.mil phone 210- 925-2741

Dear Mr. Ackerman,

I write regarding the cultural resource study plan for the Legislative Environmental Impact Statement (LEIS) for the expansion lands under consideration for withdrawal from US Fish & Wildlife Service (FWS) into the Nevada Test and Training Range (NTTR). In previous emails with your contractor Leidos I have shared my concern on the proposed archaeological sample survey. Rather than exploring for the unique distribution and character of cultural resources in the expansion area, the survey appears to be designed to prove that the archaeological record in the expansion area is the same as the record already documented in existing NTTR lands. While my concern still stands, this letter is not about that problem. Rather, I call your attention to two fundamental flaws in your process for identifying cultural resources and evaluating adverse impacts to them: 1) lack of compliance with Section 106 the National Historic Preservation Act (NHPA), and 2) lack of meaningful Tribal consultation.

NHPA Section 106 Applies

We recognize that the LEIS is an appropriate procedure to examine natural and cultural impacts for the withdrawal of FWS lands into the NTTR expansion areas. However, the LEIS (and the NEPA process in general) are insufficient tools to address impacts to contemporary cultural sites and historic properties. Section 106 of the National Historic Preservation Act is the correct tool, but we are unaware how the NTTR will use Section 106 for the withdrawal.

It is not enough for the LEIS to assert that when specific on-the-ground disturbance projects are proposed in the withdrawn lands, NHPA Section 106 will be implemented. By then it will be too late. The lands will have been withdrawn, the expansion fulfilled, and the resources lost to the NTTR.

Consider the NTTR undertaking: 300,000 acres of Desert National Wildlife Refuge (NWR) lands will be withdrawn from their present public use and access. The proposed withdrawal lands contain hundreds of cultural sites and cultural landscapes managed and protected by the FWS. The sites and landscapes are actively and appropriately visited and used by Tribal members, scientists, and the public. Not only will the withdrawal eliminate access and deny use, it will also put the cultural resources under perpetual threat by a host of military activities. A strict focus on the material record overlooks the human-environment relationships that the culturally affiliated Native American Nations embody with the lands considered for withdrawal. These indigenous peoples consider the land alive and a living relative.

The proposed withdrawal is a new and significant land use program that constitutes an undertaking as defined by Section 106 of the National Historic Preservation Act (NHPA). We urge the NTTR to declare that its proposed withdrawal is an undertaking under NHPA and begin Section 106 compliance by identifying appropriate consulting parties, and consulting with those parties to describe and map the undertaking's areas of potential effect (APE). Then it will be appropriate for NTTR, in consultation with others, to consider historic property identification efforts in the APE. Until then, NTTR's proposed cultural resource survey for the LEIS is premature and ill-advised. In fact, upon initiating the Section 106 process, NTTR will realize that the presently proposed cultural resource survey for the LEIS is not relevant; the proposed survey doesn't address the unique resources of the withdrawal area and it doesn't address the concerns of Southern Paiute tribes.

Meaningful Tribal Consultation

As you know, NHPA Section 106 requires that the federal agency responsible for an undertaking will consult with affected Indian Tribes. We understand that NTTR is planning to do so for the LEIS, but we are unaware if the NTTR will engage in meaningful consultation with Tribes for the land withdrawal under Section 106 of the NHPA.

For the past 7 years the FWS and Nuwuvi or Southern Paiute tribes have engaged in productive consultation at Desert NWR. We have learned that Southern Paiutes are connected to the land, resources, and specific sites throughout Desert NWR. They also have place-based spiritual values specific to the areas being considered for withdrawal. These areas include roasting pits, caves, residential sites, tool and raw material collection locations, rock writings, camps, sacred places, traditional cultural properties, hunting locations, cultural landscapes, water sources, travel corridors, and food and medicine collection areas. Many of these sites, landscapes, and associated resources are historic properties under the NHPA. The significance and integrity of the sites is contained not only by their content and physical condition, but also by Nuwuvi relationships with and connections to the sites. The NTTR expansion undertaking has the potential to adversely affect historic properties by impacting their physical content and integrity, and by impacting the Tribes' connection to them.

As you also know, Tribal consultation under Section 106 of the NHPA is more than just considering potential affects to the physical properties of cultural sites. Consultation also includes identification of historic properties of religious and cultural significance (a.k.a. traditional cultural properties or places) to Indian Tribes. We hope that your Section 106 process for the withdrawal will collect and consider the contemporary perspective of Southern Paiute governments and individuals on the location, content, and importance of cultural resources in the proposed withdrawal area. The FWS cannot fulfill its federal Trust responsibility to the Southern Paiute Tribes or effectively participate in the NTTR LEIS unless the NTTR meaningfully consults with the Tribes and exercises the NHPA Section 106 process

Requested action

The FWS looks forward to being notified that the NTTR is initiating the NHPA Section 106 process with a description of the withdrawal undertaking and a discussion and map of the APE. We anticipate to your invitation to consult alongside the SHPO, Southern Paiutes, and other interested parties on the undertaking, APE, and historic property identification effort. We also look forward to consultation with NTTR before receiving a permit application under the Archaeological Resources Protection Act from your contractor to conduct historic property identification in the withdrawal APE. You may contact me at the address on the letterhead but please include Christy Smith (christy_smith@fws.gov) project leader at Desert NWR Complex on all correspondence.

Sincerely,



Anan Raymond
Regional Historic Preservation Officer

CC: Christy Smith, NV SHPO.

DECEMBER 2017

Letter from SHPO to Air Force, regarding Draft Cultural Survey Plan: May 16, 2016

NEVADA
**STATE HISTORIC
PRESERVATION OFFICE**

Department of Conservation and Natural Resources

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Rebecca L. Palmer, SHPO

May 16, 2016

Lt. Col. Michael A. Freeman
Commander
99 Civil Engineer Squadron
Department of the Air Force
6020 Beale Ave
Nellis Air Force Base, Nevada 89191

Re: 300,000 Acres NTTR Land Withdrawal from BLM and FWS
#02-2016-NTTR/Undertaking # 2016-4330

Dear Lt. Col. Freeman:

The Nevada State Historic Preservation Office (SHPO) acknowledges receipt of the Cultural and Paleontological Resources Survey Plan (Draft) from the Department of the Air Force – Nellis Air Force Base, Nevada (Air Force).

The SHPO notes that this plan only accounts for prehistoric era archaeological resources and paleontological resources. As currently written this plan does not acknowledge or account for the larger spectrum of potential historic properties within the 300,000 acres area. Thus, this plan is incomplete as presented.

Should you have any questions concerning this correspondence, please contact Jessica Axsom at (775)684-3445 or by e-mail at jaxsom@shpo.nv.gov.

Sincerely,


Rebecca Lynn Palmer
State Historic Preservation Officer
21550

cc: Ms. Katharine Kerr, ACHP Program Analyst

901 S. Stewart Street, Suite 5004 ✦ Carson City, Nevada 89701 ✦ Phone: 775.684.3448 Fax: 775.684.3442

www.shpo.nv.gov

Letter from Air Force to SHPO regarding project notification: July 18, 2016

**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE NEVADA**

Lieutenant Colonel Michael A. Freeman
Commander
6020 Beale Ave.
Nellis AFB NV 89191

JUL 18 2016

Ms. Rebecca Palmer
State Historic Preservation Officer
State Historic Preservation Office
Department of Conservation and Natural Resources
901 South Stewart Street, Ste. 5004
Carson City NV 89701-5248

Dear Ms Palmer

The United States Air Force (USAF) is now preparing a *Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR) Land Withdrawal* extension and proposed expansion. Because the current NTTR land withdrawal (Attachment 1) will expire in 2021, the USAF seeks Congressional action to extend the currently withdrawn lands for the purpose of continuing the existing test and training activities. The USAF is also considering a proposal for Congress to expand lands withdrawn for the NTTR (Attachment 2) to provide additional security and safety while enhancing the functionality and capacity of the NTTR. The additional features associated with the proposed expansion are critical to meet increasing demands on the NTTR to satisfy national security requirements. Under this concept, the USAF proposes to expand the withdrawn lands associated with EC South on the west side of the range, 64C/D and 65D on the south side of the range and east of 62A/B, for a total of approximately 310,000 acres.

While Congress and the President ultimately make the decision with respect to legislative withdrawals such as this one, the USAF anticipates engaging in undertakings in the future, should the withdrawal be enacted. In addition, the proposed expansion would change the accessibility of these lands depending upon the alternative means of implementing these features as determined by Congress. Therefore, in accordance with Section 106 of the National Historic Preservation Act (NHPA) and 36 C.F.R. §800.1(c), the USAF seeks to consult with you early in the planning process in order to take into account any historic preservation concerns you may have as it formulates these undertakings.

The types of activities that are now taking place on existing withdrawn lands will not change under the withdrawal extension. While the USAF has identified the general types of activities that will take place in the proposed withdrawal expansion area, specific activities and their locations cannot be defined until after enactment of any withdrawal legislation. As a result, the USAF is preparing an LEIS which is programmatic in nature. The LEIS will identify cultural resources within proposed withdrawal areas, and to the extent possible address impacts to those

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resources based on the types of activities that may occur in the future in these areas. Specific future activities would be subject to additional and appropriate NEPA analysis and NHPA consultation.

To develop the LEIS and meet NHPA obligations, the USAF would use existing cultural resource information for the current NTTR lands. It plans to initiate a Cultural Resources Study of 15,000 acres of land within the proposed withdrawal expansion areas to identify and characterize resources that may be present. Because the proposed expansion areas consist of over 300,000 acres and the results of the land withdrawal process may not be known until 2021, the Air Force has developed a draft plan to characterize cultural resources through a random-sample survey strategy in these areas. The plan will be supplemented by any previous studies in these areas and associated available data; all identified cultural resources 50 years or older will be recorded as part of the survey (including historical structures). This survey will also serve to supplement and test a successful probabilistic model developed for work conducted previously on the adjacent NTTR property. The USAF has included the proposed plan to address characterization of historic properties as Attachment 3 to this letter.

Sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, that have an interest in the NTTR Land Withdrawal LEIS have been contacted and offered an opportunity to partner in cultural resource studies and participate as consulting parties. Tribes affiliated with Nellis AFB (NAFB) include: the Benton Paiute Tribe, Fort Independence Paiute Tribe, Duckwater Shoshone Tribe, Timbisha Shoshone Tribe, Yomba Shoshone Tribe, Ely Shoshone Tribe, Big Pine Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, Bishop Paiute Tribe, Fort Mojave Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Kaibab Band of Southern Paiutes, Las Vegas Paiute Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah (Tribes). The USAF initiated discussions with these Tribes by visiting tribal offices and informally discussing the NTTR land withdrawal project in February/March of 2015.

In November of 2015, the USAF held a second informational meeting on NAFB, where the tribes were invited to comment on the project and provide feedback on issues important to them. As a result of this meeting, the tribes requested that four additional meetings be held at locations around Nevada and California that were more conveniently located for tribal members to attend. These meetings were held from April 25-29 at the Bishop Paiute Tribe Reservation, the Ely Shoshone Tribal Reservation, the Mojave Tribal Reservation, and at the Las Vegas Paiute Tribal Reservation. A government-to-government letter initiating formal consultations to all seventeen federally recognized tribes was sent to all tribes on June 22, 2016. In addition to these interactions, the tribes are providing input on special studies associated with the LEIS. The attached Cultural and Paleontological Survey Plan (Duke, 2016) was submitted to the NAFB affiliated tribes for review and input in March 2016. So far, the Tribes have not requested any modifications to the survey strategy.

For consultation with your office, the USAF identifies the Area of Potential Effect as the extended and potentially expanded withdrawn NTTR lands. The USAF invites your comments regarding the following:

- Outstanding cultural and/or tribal resources.
- The potential for irresolvable management conflicts, such as areas where it would be difficult or impossible to avoid, minimize, or mitigate impacts from future actions.
- Any other issues or concerns you request be considered during preparation of the LEIS.

As the USAF develops the LEIS, it will continue consulting with you under Section 106 and provide the necessary information and determinations for established procedures under NHPA. We look forward to the NV SHPO's valuable contributions as we work collaboratively for the preservation of the historic resources entrusted to the stewardship of the USAF on the withdrawn NTTR lands.

If you have any questions or comments regarding the information presented in this letter, please contact the NAFB cultural resource manager and tribal liaison Ms. Kish LaPierre, 702-652-5813 or kish.lapierre@us.af.mil.

Sincerely



MICHAEL A. FREEMAN, Lt Col, USAF
Commander

Attachments:

1. Location of the NTTR, Population Centers, Roadway Infrastructure, and Wilderness/Wilderness Study Areas
2. Alternative 3A, 3B, and 3C Locations and Acreages
3. Cultural and Paleontological Survey Plan (Duke, 2016)

cc:

Mr. Michael Ackerman (AFCEC/CZN)
Mr. Skip Canfield (Nevada State Clearinghouse)

E-mail from Air Force to SHPO regarding clarification on tribal consultations: July 20, 2016

From: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN [REDACTED]
Sent: Wednesday, July 20, 2016 9:57 AM
To: 'Rebecca Palmer'
Cc: LAPIERRE, KISH D GS-12 USAF ACC 99 CES/CEIEA
Subject: RE: Nevada Test and Training Range Land Withdrawal Consultation Request Letter
Attachments: SHPO LEIS Consultation.pdf
Signed By: [REDACTED]

Dear Ms. Palmer,

I wanted to send one clarification/correction on the AF NHPA consultation request letter to your office. On the last paragraph of page 2 of the letter we state that we sent a government-to-government consultation request letter to all 17 Federally recognized tribes. As a point of clarification, there were 16 Federally recognized tribes as stated and identified in the prior paragraph. One of the 17 tribes listed in the prior paragraph is not Federally recognized. Apologies for any confusion.

If you have any questions on the letters or meetings, please let me know.

Sincerely,

-Mike

Mike Ackerman
Air Force Civil Engineer Center
NEPA Division (AFCEC/CZN)
[REDACTED]

-----Original Message-----

From: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN
Sent: Tuesday, July 19, 2016 2:24 PM
To: 'Rebecca Palmer' [REDACTED]
Cc: LAPIERRE, KISH D GS-12 USAF ACC 99 CES/CEIEA [REDACTED]
Subject: Nevada Test and Training Range Land Withdrawal Consultation Request Letter (Hard Copy to Follow)

Ms. Palmer,

I wanted to provide you with these electronic files as a courtesy before you receive the hard copies in the mail. You should be receiving a hardcopy

consultation request letter for the Nevada Test and Training Range land withdrawal in the next few days. We'll provide additional material with more

details on the proposal and alternatives leading up to our 5 August discussion. We'll provide read-ahead material no later than 1 August as requested. Also you will be receiving an updated copy of the Air Force's cultural survey plan (listed as Attachment 3 in the letter) prior to 1 August, so that we can obtain any additional thoughts or input you may have on the survey approach.

If you have any questions, please just let me know.

Sincerely,

-Mike

Mike Ackerman
Air Force Civil Engineer Center
NEPA Division (AFCEC/CZN)

DECEMBER 2017

E-mail from Air Force to BLM regarding surveys: August 5, 2016

From: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN <[REDACTED]>
Sent: Friday, August 05, 2016 5:04 PM
To: Raymond, Anan; srowe@blm.gov; Lodge, Spencer; Akstulewicz, Kevin D.
Cc: Christy Smith; Kevin DesRoberts; Amy Sprunger; LAPIERRE, KISH D GS-12 USAF ACC 99 CES/CEIEA; McLaurine, Henry C.
Subject: RE: NHPA Consultation Coordination
Attachments: NTTR Land Withdrawal NV SHPO Consultation Brief (5 Aug 16).pdf

Anan / Susan / Spencer,

I wanted to follow up with you on our call with SHPO. We went through the slide presentation attached. We are standing by to hear back from SHPO on their thoughts with respect to NHPA consultation approach. There was no initial guidance provided regarding consultation, and they requested time to review some of the materials we provided last month.

If you are available, I would like to set up an NHPA / cultural survey discussion next week. Would next Wednesday work for you both? Just let me know if there is a good time that would work.

Sincerely,

-Mike

Mike Ackerman
 Air Force Civil Engineer Center
 NEPA Division (AFCEC/CZN)
 [REDACTED]

-----Original Message-----

From: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN
 Sent: Wednesday, August 03, 2016 10:21 AM
 To: 'Raymond, Anan' <anan_raymond@fws.gov>
 Cc: Christy Smith <christy_smith@fws.gov>; Kevin DesRoberts <kevin_desroberts@fws.gov>; Amy Sprunger <Amy_Sprunger@fws.gov>; Lodge, Spencer <spencer_lodge@fws.gov>; LAPIERRE, KISH D GS-12 USAF ACC 99 CES/CEIEA <[REDACTED]>; HENRY.C.MCLAURINE <[REDACTED]> 'Akstulewicz, Kevin D.' <[REDACTED]> <KEVIN.D.AKSTULEWICZ@[REDACTED]> srowe@blm.gov
 Subject: NHPA Consultation Coordination

Anan,

We do plan on reaching out to you and BLM staff after this 5 August call with SHPO to discuss the way forward and make sure we understand what you need in advance of surveys. I actually wanted to have you and BLM's cultural POC on the call with us on the 5th so we could discuss the consultation process together, but SHPO wants to have a direct discussion with the AF first to discuss the consultation process.

I do want to see if we can schedule a call early next week with FWS and BLM cultural resources POCs so we can follow up with you and talk about the way forward. Is there a good time that would work for you Mon, Tues or Wed?

We are committed to making sure the cultural resource survey effort provides good information and supports effective future management of the resources.

Thanks for your thoughts below,

-Mike

Mike Ackerman
Air Force Civil Engineer Center
NEPA Division (AFCEC/CZN)
[REDACTED]

-----Original Message-----

From: Raymond, Anan [mailto:anan_raymond@fws.gov]
Sent: Tuesday, August 02, 2016 7:01 PM
To: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN <[REDACTED]>
Cc: Christy Smith <christy_smith@fws.gov>; Kevin DesRoberts <kevin_desroberts@fws.gov>; Amy Sprunger <Amy_Sprunger@fws.gov>; Lodge, Spencer <spencer_lodge@fws.gov>
Subject: Fwd: brief for Congressionals

Dear Mike,

Christy forwarded to me your ppt. The ppt is a helpful overview. The ppt identifies a dedicated NHPA Section 106 consultation process with Tribes. Excellent!

But, the ppt does not identify a NHPA Section 106 consultation process with the FWS. The FWS has not yet received a Section 106 undertaking or APE letter from NTTR. I assume you will be sending this to FWS (Christy) after you have clarified things with SHPO later this week?

The ppt also indicates that NTTR plans to survey thousands of acres of FWS land in the fall of 2016. As we have indicated in earlier correspondence, the present NTTR survey plan for FWS land needs to better address the unique cultural resources of the FWS "Alamos" section of the proposed expansion. Your ppt has a slide that hints strongly you will do that. Thank you. We look forward to learning about that and working with you on a first-class CR survey plan.

Spencer Lodge, our Desert NWR archaeologist will be your principal contact for this

As you also know, NTTR needs an ARPA permit from FWS before you survey FWS land. We also look forward to working with you on that.

Sincerely,
Anan

----- Forwarded message -----

From: Smith, Christy <christy_smith@fws.gov <mailto:christy_smith@fws.gov> >
Date: Tue, Aug 2, 2016 at 1:49 PM
Subject: Fwd: brief for Congressionals
To: Leanne Abel <leanne_abel@fws.gov <mailto:leanne_abel@fws.gov> >, Kevin DesRoberts <kevin_desroberts@fws.gov <mailto:kevin_desroberts@fws.gov> >, Anan Raymond <anan_raymond@fws.gov

<mailto:anan_raymond@fws.gov> >, Amy Sprunger <Amy_Sprunger@fws.gov <mailto:Amy_Sprunger@fws.gov> >, Polly Wheeler <polly_wheeler@fws.gov <mailto:polly_wheeler@fws.gov> >, Curtis McCasland <curtis_mccasland@fws.gov <mailto:curtis_mccasland@fws.gov> >

This is the presentation the AF will give to SHPO - I will pull info from this for the Congressional briefing...
C

Christy Smith, Project Leader

Desert National Wildlife Refuge Complex

4701 North Torrey Pines Drive
Las Vegas, NV 89130

christy_smith@fws.gov <mailto:christy_smith@fws.gov>

A Guiding Principal of the National Wildlife Refuge System:
Wild lands and the perpetuation of diverse and abundant wildlife are essential to the quality of American life.

----- Forwarded message -----

From: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN [REDACTED]
<mailto:michael.ackerman.2@us.af.mil> >
Date: Tue, Aug 2, 2016 at 1:20 PM
Subject: RE: brief for Congressionals
To: "Smith, Christy" <christy_smith@fws.gov <mailto:christy_smith@fws.gov> >

Christy,

I would add that AF is looking at a range of options and that the LEIS will be programmatic in nature. In other words, no specific ground disturbance proposals are being put forward at this time, and that we have been working together to figure out best approaches for generating good management data.

If you want to pull anything from this brief to SHPO (just finished it last evening), I can send that power point or select slides to you.

Just let me know.

Thanks Christy.

-Mike

Mike Ackerman
Air Force Civil Engineer Center
NEPA Division (AFCEC/CZN)
[REDACTED]

-----Original Message-----

From: Smith, Christy [mailto:christy_smith@fws.gov <mailto:christy_smith@fws.gov>]

Sent: Tuesday, August 02, 2016 10:06 AM

To: ACKERMAN, MICHAEL D CIV USAF AFMC AFCEC/AFCEC/CZN [REDACTED]

<mailto:[REDACTED]>

Subject: brief for Congressionals

Hi Mike - I've been given about 5 minutes to brief congressionals on our cooperation on the LEIS - I'm going to present the potential alternatives - is there anything specific you'd like to add?

Christy

Christy Smith, Project Leader

Desert National Wildlife Refuge Complex

4701 North Torrey Pines Drive

Las Vegas, NV 89130



christy_smith@fws.gov <mailto:christy_smith@fws.gov> <mailto:christy_smith@fws.gov>
<mailto:christy_smith@fws.gov> >

A Guiding Principal of the National Wildlife Refuge System:

Wild lands and the perpetuation of diverse and abundant wildlife are essential to the quality of American life.

--

Anan Raymond, Archaeologist, Regional Historic Preservation Officer Region 1 + Region 8 Cultural Resource Team US

Fish and Wildlife Service

20555 Gerda Lane, Sherwood, OR 97140

email: anan_raymond@fws.gov <mailto:anan_raymond@fws.gov>

Letter from Advisory Council on Historic Preservation to Air Force and SHPO regarding project notification: August 17, 2016



Preserving America's Heritage

August 17, 2016

Lieutenant Colonel Michael A. Freeman
Commander
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base, NV 89191

Ms. Rebecca Palmer
State Historic Preservation Officer
Historic Preservation Office
901 S. Stewart Street
Suite 5004
Carson City, NV 89701-4285

*REF: Nevada Test and Training Area Land Withdrawal by Nellis Air Force Base
Clark, Lincoln, and Nye County, Nevada
ACHPConnect Log Number: 010399*

Dear Lt Col Freeman and Ms. Palmer:

The Advisory Council on Historic Preservation (ACHP) understands that the Military Lands Withdrawal Act of 1999 (Public Law 106-65) withdrew 2,919,890 acres from the Department of Interior (DOI) for military use in the State of Nevada, primarily for use within the Nevada Test and Training Range (NTTR). The Department of the Air Force intends to submit, in accordance with the Federal Land Policy Management Act (FLPMA), a Land Withdrawal Case File renewal request to continue the withdrawal, and a separate Land Withdrawal Case File for a request to withdraw 300,000 additional acres by November 2018. We have been asked whether the act of land withdrawal itself constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). The ACHP has been consistent in stating that the transfer of property from one federal agency to another federal agency is not an undertaking subject to Section 106, because a federal agency still has responsibilities under Sections 106 and 110 of the NHPA for the land it controls. However, how a federal agency plans to utilize the land once transferred may be subject to Section 106 review.

We are aware that the 99th Civil Engineer Squadron (99CES), with support from the Air Force Civil Engineer Center's National Environmental Policy Act Center (AFCEC/NEPA Center), is preparing a Legislative Environmental Impact Statement (LEIS) to be included in the recommendation to Congress on the withdrawal proposal. A LEIS does not require a Record of Decision, as the decision on whether or not to approve the Land Withdrawal Case Files is made by Congress. However, we believe it is in the best interest of the 99CES to be considering effects to historic properties for the proposed use of the land proposed for withdrawal as early as possible in the process.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

On July 26, 2016, the ACHP received a copy of the correspondence the 99CES sent to the Nevada State Historic Preservation Office (SHPO) for the extension and proposed expansion of the withdrawal, and the initiation of the Section 106 process. We applaud this proactive outreach to the SHPO, even though they do not have a regulatory role in the development of the LEIS. As the ACHP is assisting both the SHPO and the 99CES in improving its working relationship under Section 106, we wish to provide both parties with the following initial suggestions and recommendations as this discussion continues:

- The undertaking should be clearly defined as the *consideration* of the use of acquired withdrawal land for the purposes of meeting the mission of the NTTR. This means that the 99CES focuses consultation on the mission of the NTTR, how the newly acquired land could assist that mission, and how historic properties may be affected by mission activities on the land.
- The Section 106 regulations do not require a federal agency to identify every single historic property within an Area of Potential Effects (APE), but to make a “reasonable and good faith effort” to identify historic properties. A strategy to survey a sample of the proposed withdrawal land should be developed in consultation with the SHPO, federally recognized Indian tribes, and other applicable federal agencies (it is our understanding this includes the Bureau of Land Management (BLM) and the United States Fish and Wildlife Service (USFWS) currently managing the land) to identify historic properties. It is recommended that the 99CES should first complete a grey literature search of survey work completed by the BLM and the USFWS for the proposed withdrawal land and using that as a base line for a new survey.
- The 99CES has presented a draft Cultural Resources Study (CRS) to the SHPO for review and comment. The current draft CRS is intended to characterize cultural resources through a random-sample survey strategy.
 - After completing the grey literature search, the 99CES should update the CRS accordingly to meet the goal of a phased approach to the identification of historic properties within the proposed withdrawal land.
 - This phased approach should include a model for the initial survey and define a process for continuing the identification effort within areas of the proposed withdrawal land once designated for NTTR mission use.
 - The CRS should include a time frame for when the survey work will be completed and when consulting parties will be given the opportunity to review the findings.
- Once the 99CES and the SHPO have a working knowledge of the range of potential historic properties within the proposed withdrawal land, and before you begin to assess effects of the proposed undertaking, we would appreciate an update on the status of the consultation and survey results.

Should you have any questions regarding our recommendations or require additional assistance, please contact Ms. Katharine R. Kerr at (202) 517-0216 or by e-mail at kkerr@achp.gov and reference the ACHPConnect Log Number.

Sincerely,

A handwritten signature in dark ink, appearing to read "Tom McCulloch", written over a light blue horizontal line.

Tom McCulloch, Ph.D., R.P.A.
Assistant Director
Office of Federal Agency Programs
Federal Property Management Section

Letter from SHPO to Air Force: September 12, 2016

NEVADA
**STATE HISTORIC
PRESERVATION OFFICE**

Department of Conservation and Natural Resources

Brian Sandoval, Governor
Kay Scherer, Interim Director
Rebecca L. Palmer, SHPO

September 12, 2016

Lt. Col. Michael A. Freeman
Commander
99 Civil Engineer Squadron
Department of the Air Force
6020 Beale Ave
Nellis Air Force Base, Nevada 89191

Re: 300,000 Acres NTTR Land Withdrawal from BLM and FWS
#02-2016-NTTR/Undertaking # 2016-4330

Dear Lt. Col. Freeman:

The Nevada State Historic Preservation Office (SHPO) acknowledges receipt of the *Cultural and Paleontological Resources Survey Plan (Draft)* and *Nevada Test and Training Range Prehistoric and Ethnographic Synthesis: Technical Data Summary* from the Department of the Air Force – Nellis Air Force Base, Nevada (Air Force).

The SHPO notes that the *Cultural and Paleontological Resources Survey Plan* only accounts for prehistoric era archaeological resources and paleontological resources. As currently written this plan does not acknowledge or account for any other types of potential historic properties within the 300,000, including listed properties located in the expansion area. This plan is incomplete.

Furthermore, the *Nevada Test and Training Range Prehistoric and Ethnographic Synthesis: Technical Data Summary*, which provides the foundational data and research used to develop *Cultural and Paleontological Resources Survey Plan*, only accounts for and uses existing Air Force cultural resource inventories. How will the Air Force incorporate information from the gray literature completed by other federal agencies (e.g., the Bureau of Land Management and the U.S. Fish and Wildlife Service) into these documents as noted in the Advisory Council on Historic Preservation's (ACHP) letter, dated August 17, 2016?

Should you have any questions concerning this correspondence, please contact Jessica Axsom at (775) 684-3445 or by e-mail at jaxsom@shpo.nv.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rebecca", is written over a circular stamp. The stamp contains the text "Rebecca Lynn Palmer" and "State Historic Preservation Officer".

Rebecca Lynn Palmer
State Historic Preservation Officer

cc: Ms. Katharine Kerr, ACHP Program Analyst

901 S. Stewart Street, Suite 5004 ♦ Carson City, Nevada 89701 ♦ Phone: 775.684.3448 Fax: 775.684.3442

www.shpo.nv.gov

National Historic Preservation Act Consultation request from Air Force to U.S. Fish and Wildlife Service, Region 8: October 18, 2016



DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE NEVADA

OCT 18 2016

Lieutenant Colonel Michael A. Freeman
Commander
4430 Grissom Ave., Ste. 101
Nellis AFB NV 89191-6520

Mr. Paul Souza
U.S. Fish and Wildlife Service
Regional Director – Pacific Southwest (Region 8)
2800 Cottage Way
Sacramento, CA 95825

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation Request; Nevada Test and Training Range (NTTR) Land Withdrawal at Nellis Air Force Base, Nevada

Dear: Mr. Souza,

The United States Air Force (USAF) is now preparing a Legislative Environmental Impact Statement (LEIS) for the Nevada Test and Training Range (NTTR) Military Land Withdrawal. The Military Lands Withdrawal Act of 1999 (Public Law 106-65) withdrew 2,919,890 acres from the Department of Interior for use by the Department of Defense. The current withdrawal will expire in 2021. As a result, the USAF is working with the Department of the Interior (DoI) to support Congressional legislation to extend and possibly expand the current footprint of the NTTR to support military training and testing requirements.

In addition to extending the current existing land withdrawal, USAF alternatives being evaluated in the LEIS include 3 sub-alternatives that involve NTTR expansion by up to 301,507 acres. Options include withdrawing ~18,000 additional acres on the South side of the North Range, withdrawal of an additional ~57,000 acres on the South side of the NTTR South range, and withdrawal of ~227,000 acres of land overlapping the Desert National Wildlife Refuge (DNWR) to the East of the NTTR.

In furtherance of meeting requirements of Section 106 and other provisions of the National Historic Preservation Act (NHPA), the USAF has identified the USFWS as an appropriate NHPA consulting party to this action due to the nature of the proposal and the ownership/management of identified land areas. The USAF has also identified lands within Attachment 1 as the Area of Potential Effect, or APE, for the NTTR land withdrawal proposal.

The types of activities that are now taking place on existing withdrawn lands will not change under the withdrawal extension. The USAF has identified the general types of activities that may take place in the proposed withdrawal expansion area. New activities in proposed withdrawal expansion areas would include establishment of electronic emitter and radar sites, overland movement by small tactical teams of 10-12 military personnel, establishment of an airstrip, limited road and trail construction, fencing, and establishment of controlled access to ensure public safety during military operations. Specific locations for

these activities cannot be defined until after enactment of any withdrawal legislation. The USAF is not proposing any site-specific activities that would involve ground-disturbance at this time. Accordingly, the USAF is preparing a programmatic LEIS that will identify cultural resources within proposed withdrawal areas, and to the extent possible address impacts to those resources based on the types of activities that may occur in the future in these areas. Specific future activities on any withdrawn lands would be subject to the appropriate level of future NEPA review and associated supporting consultations at the time they are proposed. The Air Force anticipates completing a Programmatic Agreement (PA) to meet its Section 106 consultation requirements and, with this letter, invites the USFWS to participate as a consulting party in the formulation of the PA.

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and 36 CFR 800.1(c), the USAF initiated consultation with the Nevada State Historic Preservation Office (NVSHPO) in July 2016 for the NTTR military land withdrawal proposal. Nellis Air Force Base (NAFB) also initiated discussions with affiliated Native American tribes early in the planning process in order to take into account tribal concerns. With this letter, the USAF is also formally requesting the initiation of NHPA consultation with the US Fish and Wildlife Service for the NTTR military land withdrawal proposal given that the APE under consideration may impact your agency and cultural resource management programs.

Sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, that have an interest in the NTTR Land Withdrawal LEIS have been contacted and offered an opportunity to partner in cultural resource studies and participate as consulting parties. Tribes affiliated with NAFB include: the Benton Paiute Tribe, Fort Independence Paiute Tribe, Duckwater Shoshone Tribe, Timbisha Shoshone Tribe, Yomba Shoshone Tribe, Ely Shoshone Tribe, Big Pine Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, Bishop Paiute Tribe, Fort Mojave Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Kaibab Band of Southern Paiutes, Las Vegas Paiute Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah (Tribes). The Air Force initiated discussions with these Tribes by visiting tribal offices and informally discussing the NTTR land withdrawal project in February/ March of 2015.

In November of 2015, the Air Force held a second informational meeting on NAFB, where the tribes were invited to comment on the project and provide feedback on issues important to them. As a result of this meeting, the tribes requested that four additional meetings be held at locations around Nevada and California that were more conveniently located for tribal members to attend. These meetings were held from April 25-29 at the Bishop Paiute Tribe Reservation, the Ely Shoshone Tribal Reservation, the Mojave Tribal Reservation, and at the Las Vegas Paiute Tribal Reservation. A government-to-government letter initiating formal consultations was sent to all sixteen federally recognized tribes, as well as the Pahrump Paiute Tribe, on June 22, 2016. In addition to these interactions, the tribes are providing input on special studies associated with the LEIS. The attached Cultural and Paleontological Survey Plan (Duke, 2016) was submitted to the NAFB affiliated tribes for review and input in March 2016. So far, the Tribes have not requested any modifications to the survey strategy.

As discussed, on 18 July 2016 the USAF initiated NHPA Section 106 consultation with the NVSHPO regarding this proposed action (copy of letter provided as Attachment 2); the Air Force held a discussion with the NVSHPO on 5 August 2016 to provide additional background information on the proposed project.

The Air Force plans to initiate a Cultural Resources Study within the proposed withdrawal expansion areas to identify and characterize resources that may be present. The Air Force has coordinated the survey plan with USFWS, and has updated the plan to include USFWS recommendations for Phase I cultural surveys in these areas. The USAF coordinated this plan with Mr. Anan Raymond (Regional Historic Preservation Officer for Regions 1 and 8) and Mr. Spencer Lodge Staff Archaeologist) in August 2016. USFWS input has been incorporated into the updated plan which has been provided back to these POCs and is available upon request. The plan will be supplemented by any previous studies in these areas and any available data

from the NVSHPO and partner agencies. All identified cultural resources 50 years or older will be recorded as part of the survey (including historical structures).

In support of NHPA consultation efforts for this undertaking the USAF seeks information from the USFWS on historic property sites and concerns within the area of potential effect, input on methods for data gathering, as well the USFWS' perceived historic property identification needs. The USAF also invites your comments regarding:

- Any outstanding cultural and/or tribal resources.
- The potential for irresolvable management conflicts, such as areas where it would be difficult or impossible to avoid, minimize, or mitigate impacts from future actions.
- Any other issues or concerns you request be considered during preparation of consultation documentation or the LEIS.

As the USAF develops the LEIS and works through the NHPA Section 106 consultation process with the NVSHPO, tribes, and other consulting parties, we look forward to the USFWS' contributions as we work collaboratively for the preservation of the historic resources entrusted to the stewardship of the USAF on the withdrawn NTTR lands.

If you have any questions or comments regarding the information presented in this letter, please direct them to Ms. Kish Lapierre by e-mail at kish.lapierre@us.af.mil or by phone at (702) 652-5813. Thank you for your attention to this matter.

Sincerely,



Michael A. Freeman
Lieutenant Colonel, USAF
Commander

Cc:

Polly Wheeler, Assistant Regional Director for Refuges, Pacific SW Region
Christy Smith, Desert National Wildlife Refuge Complex
Anan Raymond, USFWS Cultural Resources Management
Spencer Lodge, USFWS Cultural Resources Management
Rebecca Palmer, NV State Historic Preservation Office

B.10.2 Endangered Species Act Section 7 Consultation



BIOLOGICAL ASSESSMENT FOR THE NEVADA TEST AND TRAINING RANGE AND PROPOSED EXPANSION ALTERNATIVES

The Nevada Test and Training Range
Nellis Air Force Base



November 2017

Prepared for:
United States Air Force
Nellis Air Force Base

BIOLOGICAL ASSESSMENT FOR THE NEVADA TEST AND TRAINING RANGE AND PROPOSED EXPANSION ALTERNATIVES

Prepared for the
U.S. Air Force
Through the
U.S. Army Corps of Engineers
Contract # W9126G-14-D-0014
Delivery Order No. DS01
Leidos Subcontract No.: P010176987

November 2017

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Acronyms and Abbreviations

ACEC	Areas of Critical Environmental Concern
ATV	All-Terrain Vehicles
BA	Biological Assessment
BLM	Bureau of Land Management
BiOp	Biological Opinion
CAFB	Creech Air Force Base
CWA	Clean Water Act
DNWR	Desert National Wildlife Range
DOD	U.S. Department of Defense
DOI	U.S. Department of the Interior
DT	Desert Tortoise
DU	Depleted Uranium
EMR	Electromagnetic Radiation
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAARP	Forward Area Arming and Refueling Points
GIS	Geographic Information Systems
GPS	Global Positioning System
INRMP	Integrated Natural Resources Management Plan
MOU	Memorandum of Understanding
LEIS	Legislative Environmental Impact Statement
MPH	Miles per Hour
MSL	Mean Sea Level
NAFB	Nellis Air Force Base
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NNRP	Nellis Natural Resources Program
NPBO	NTTR Programmatic Biological Opinion
NRCS	Natural Resources Conservation Service
NTTR	Nevada Test and Training Range. Also, the new name for 98th Range Wing
OHV	Off Highway Vehicle
STATSGO2	U.S. General Soil Map
TSPI	Time-Space-Position Information
USAF	United States Air Force
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance

Introduction

The United States Air Force (USAF) is in the process of renewing the withdrawal of land for military operations and training on the Nevada Test and Training Range (NTTR). The current withdrawal will expire on November 6, 2021, unless Congress enacts legislation to extend it. In accordance with Section 3016 of the Military Land Withdrawal Act (MLWA), the USAF, in coordination with Department of Defense (DoD), has notified Congress of a continuing military need for the NTTR withdrawal. Furthermore, the USAF plans to submit a Legislative Environmental Impact Statement (LEIS) that supports a legislative proposal through the Department of the Interior (DOI) to extend the withdrawal. The Endangered Species Act of 1973 (ESA), as amended, provides for the protection of plants and animals that are in danger of becoming extinct. The ESA is administered by the U.S. Fish and Wildlife Service (USFWS) and requires federal agencies to consult with the USFWS to determine if an action will adversely impact a threatened or endangered species. This consultation, formally called a Section 7 Consultation, requires the federal agency requesting the withdrawal to prepare a Biological Assessment (BA) of potentially impacted federally listed threatened and endangered species. After the USAF initiates formal consultation with the USFWS, the USFWS reviews the BA, determines that adequate information is provided in the BA, and prepares a programmatic Biological Opinion (BiOp). The BiOp is to be provided as part of the LEIS submission package to Congress.

As part of coordination with the USFWS, the USAF scheduled a meeting with the USFWS Ecological Services at the Las Vegas Office of the USFWS on February 9, 2017 to discuss the species to be included in the BA prepared for the renewal and expansion of the land withdrawal for the NTTR. An official list of potentially impacted special status species was also requested via <https://ecos.fws.gov/ipac/>. It was determined that the only listed species potentially impacted by the land withdrawal was the Mojave desert tortoise (*Gopherus agassizii*) (DT), which is currently listed as “Threatened”. Therefore, the DT was designated as the species to be addressed by the BA for the actions associated with the NTTR land withdrawal renewal and expansion.

PURPOSE AND OBJECTIVES OF THE BIOLOGICAL ASSESSMENT

The purpose of this BA is to provide the information required by the USFWS to formulate a BiOp of the implementation of the renewal and potential expansion of the land withdrawal for the NTTR and its impacts on the DT. This is a BA for the preparation of a programmatic BiOp, and does not preclude the need for further consultation for site-specific actions on the Action Area in the future. A programmatic BA addresses the general actions by the military that may potentially impact DT populations and habitat and provides guidelines to formulate and design plans that will minimize impacts to DT and its habitat. Analysis of the proposed action primarily focuses on the proposed use of the Action Area from a conceptual and qualitative perspective, and site-specific consultation will be required in the future for specific action locations and access routes once a decision on the withdrawal has been made and detailed planning has been initiated. In general, the USAF will avoid or minimize impacts to DT habitat for any development activities and military actions on the withdrawn land as is current practice.

The objectives of this BA are the following:

- Review the history of the USFWS consultation on the NTTR to date
- Describe the USAF mission and operations programs and actions resulting from those programs
- Describe the Action Area
- Discuss the biology and habitat of the DT
- Describe the historic and current status of the DT on the Action Areas

- Present a DT Habitat Suitability Model to determine habitat in the Action Area that could support DT populations
- Describe potential impacts imposed on the DT by the Proposed Action
- Propose measures to avoid, minimize, and mitigate impacts imposed by the Proposed Action

SCOPE OF THE BIOLOGICAL ASSESSMENT

The BA presents the proposed action by the USAF and its potential impacts on the DT population and habitat on the Action Area. The intent of the BA is to provide sufficient information to allow the USFWS to prepare a programmatic BiOp for the protection and conservation of the DT on the Action Area. The Action Area for this BA includes the South Range of the current NTTR which is approximately 1,005,891 acres in Lincoln, Clark, and Nye counties in Nevada. The USAF is also proposing to expand the current withdrawn lands to include three additional alternative areas shown in Figure 1. Expansion Alternative 3A is 17,906 acres lying along the southwest boundary of the North Range of the NTTR, northeast of Beatty, Nevada. Range 77, currently located in the North Range of the NTTR, is included as part of the Western Action Area. Expansion Alternative 3B is 56,501 acres located immediately south of the South Range of the NTTR both east and west of Indian Springs, Nevada. Alternative 3C is 227,027 acres immediately east of the South Range of the NTTR and west of the Sheep Mountain Range in the Desert National Wildlife Refuge (DNWR). Figure 2 shows the Action Area that potentially supports DT populations that will be discussed in this BA. Based on the conclusions of the previous BiOp, the North Range Study Area is not in the habitat range of the DT and will not be included in this BA (U.S. Fish and Wildlife Service, 2003). For the purposes of this BA, the Action Area is divided into the Eastern Action Area comprised of the South Range of the NTTR, Alternative 3B, and Alternative 3C, and the Western Action Area comprised of Alternative 3A and Range 77 (Figure 2). The latest version of the DT habitat model shows some scattered areas of habitat north of the boundary of Range 77 which are included in this analysis, but are not in the Action Area proper. All recommendations to protect DT include these scattered North Range areas. Access to the Action Area by wheeled vehicles will only be allowed via improved or gravel roads or trails already established outside of the Action Area through controlled entry areas or locked gates that are carefully monitored by security personnel or surveillance equipment. Personnel can also access the Action Area by foot, helicopter or parachute drop. The Action Area as mapped in Figure 2 includes all areas potentially impacted by the proposed action including staging areas, borrow pits, waste disposal, etc.

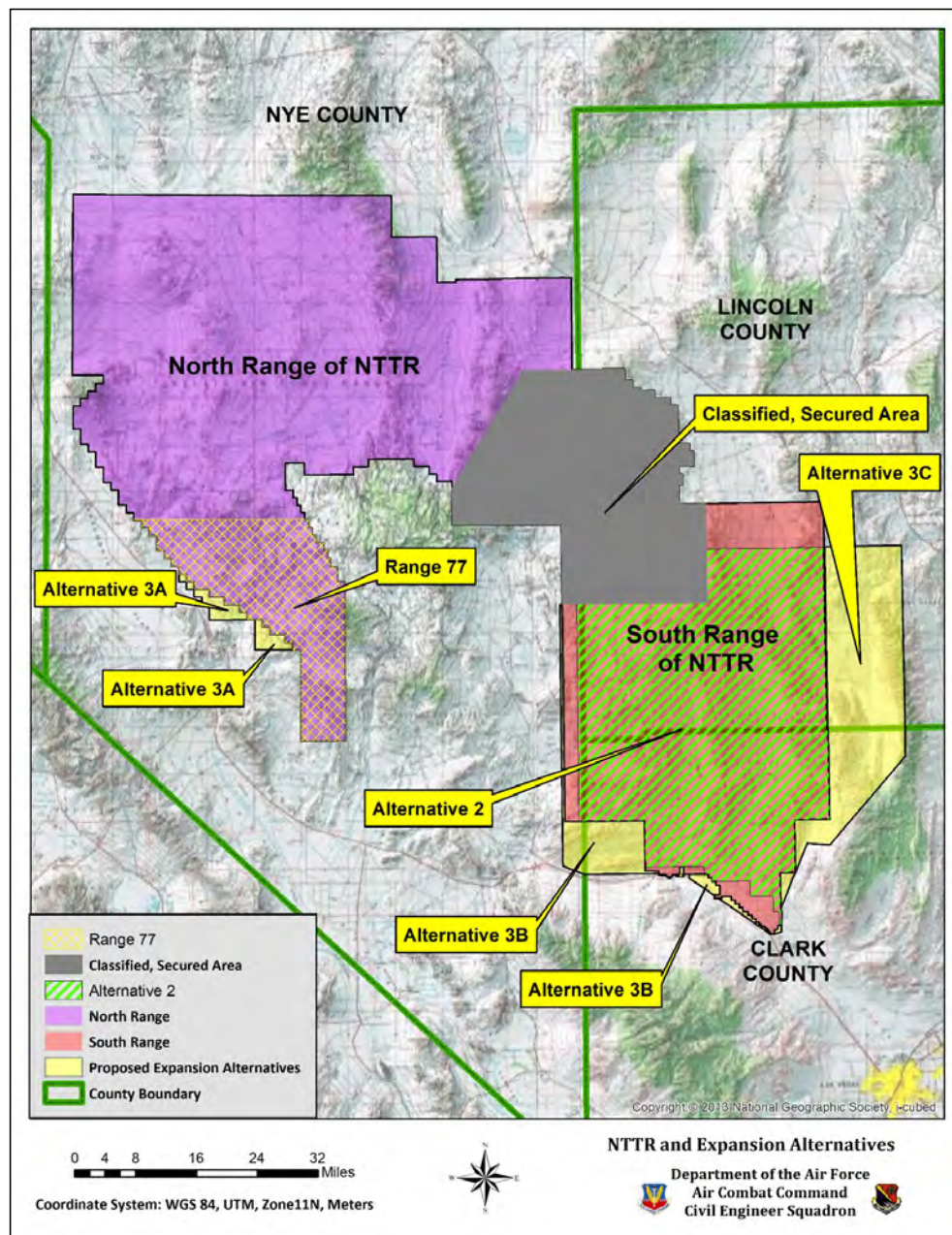


Figure 1. The current boundaries of the NTTR and proposed expansion alternatives for the withdrawn land.

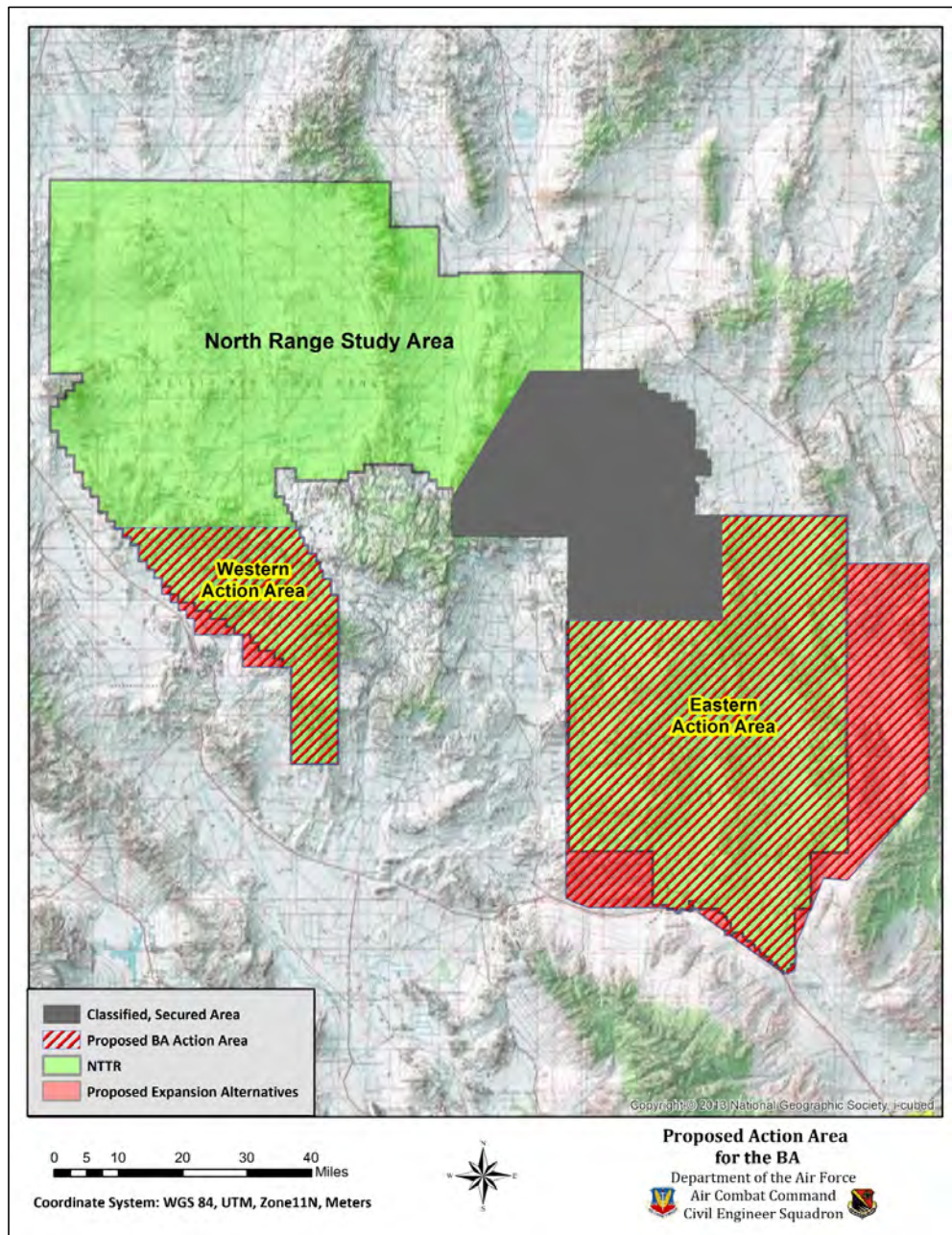


Figure 2. The proposed Action Area for the BA. For the purposes of this BA, the Action Area is divided into the Eastern Action Area and the Western Action Area.

HISTORY OF SECTION 7 FORMAL CONSULTATION

The Endangered Species Act of 1973 (ESA), as amended, is administered by the USFWS and provides for the protection of plants and animals that are in danger of becoming extinct. The ESA requires that all federal agencies shall seek to conserve endangered and threatened species and shall utilize their authorities to further the purpose of this Act. During 1995 and 1996, the USFWS was directed by Congress to assess the legal protection levels provided by the ESA. The evaluation process led to a set of new protection policies for rare plants and animals in the United States. The current protection status for each of these species can be found in detail on the Federal Register.

Section 9 of the ESA explicitly restricts the “taking” of a listed species. “Take” is defined in the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. In addition to the protection of actual species of concern, the ESA provides protection for the habitats necessary for the viability of listed species. Incidental takes are permissible under Section 7 of the ESA through: 1) formal consultation with the USFWS; 2) issuance of an incidental take permit (as in conjunction with issuance of a BiOp); or 3) issuance of a scientific collecting permit under Section 10 of the ESA.

Section 7(a)(2) provides an administrative mechanism for a federal agency to consult with the USFWS to determine whether a proposed action is likely to adversely impact listed threatened and endangered species either directly or through destruction or modification of its habitat. The USAF has consulted with the USFWS under Section 7 of the ESA for several projects that potentially impacted the DT on the NTTR. A BA and a programmatic BiOp were prepared for the current activities on the NTTR as part of the previous land withdrawal. Formal and informal consultations with the USFWS concerning the NTTR and proposed expansion areas are discussed below.

Formal and Informal Section 7 Consultations for the NTTR

U.S. Fish and Wildlife Service. July 19, 1994. *Biological Opinion for Continuing Current Weapons Testing/Training on the U.S. Department of the Air Force Weapons and Tactics Center Range Complex.*

On December 30, 1993, the USAF requested formal consultation with the USFWS pursuant to Section 7 of the Endangered Species Act of 1973 regarding the continuation of weapons training/testing on the USAF’s Weapons and Tactics Center Range Complex (WTCRC) located on the DNWR. Specifically, this request outlined the possible impacts to potential DT populations and habitat within the WTCRC. Additionally, the USAF requested that formal consultation for development of the new Cluster Bomb Unit (CBU) target area be included under the scope of the BiOp. Mitigation efforts to minimize impacts to DT populations and habitat in WTCRC/DNWR, proposed by the USAF, included prohibiting off-road vehicle use within these areas; except for those activities necessary to clear and dispose of ordnance; developing a reclamation plan for unused or retired weapons delivery areas and roads within DT habitat restricting all traffic to roads (paved, gravel, or dirt) and a maximum speed limit of 25 mph.

The USFWS determined that an estimated 12 DT would be affected each year from continued operations in the WTCRC/DNWR, and that these operations would further degrade approximately 971 acres of previously disturbed DT habitat. However, the USFWS noted that the mitigation efforts proposed by the USAF to offset these losses would minimize these impacts.

The USFWS’ resulting BiOp indicated that the continued operations in WTCRC/DNWR would not likely jeopardize the DT population, and no critical habitat would be impacted. The BiOp authorized the incidental take of DT (2 killed per year and 10 captured, removed, or displaced) if appropriate measures were implemented to minimize the potential for incidental takes. These measures included: 1) measures to minimize mortality or injury due to weapons training and testing operations; 2) measures

taken to minimize destruction of DT habitat due to weapons training and testing operations; and 3) measures taken to ensure compliance with prudent measures outlined in the BiOp (i.e. reporting requirements).

U.S. Fish and Wildlife Service, January 9, 1995. *Biological Opinion for Continuing Current Weapons Testing/Training on the U.S. Department of the Air Force Weapons and Tactics Center Range Complex (Amendment Letter). Response to USAF comments on the first amendment and the changing of design for the DT proof fence.*

The USFWS issued BiOp Number 1-5-94-F-162 to the USAF on July 19, 1994. This BiOp amendment letter summarizes the results of a November 14, 1994, meeting between the USFWS and the USAF personnel to amend the July 19, 1994 BiOp. During the meeting, an alternate fence design differing from that described in the original BiOp was proposed by the USAF and supported by the USFWS. The letter constituted written concurrence from the USFWS that the new fence design was approved.

U.S. Fish and Wildlife Service, June 5, 1995. *Biological Opinion for Continuing Current Weapons Testing/Training on the U.S. Department of the Air Force Weapons and Tactics Center Range Complex (Second Amendment Letter).*

The USFWS issued a second amendment letter for BiOp Number 1-5-94-F-162 to the USAF on July 19, 1994. Term and Condition No. 2 of the BiOp required that the USAF submit a written vegetative rehabilitation plan for approval by the USFWS by July 19, 1995. However, it was later determined that review of the plan, as well as the implementation of a pilot study and monitoring program, would require more time than the deadline. Therefore, it was determined that this deadline should be adjusted. The USFWS concurred with the USAF opinion, and this amendment letter served as a revision to Term and Condition No. 2. Under the revised Term and Condition, the vegetative rehabilitation plan would be due October 31, 1995, and the pilot study would begin June 1996 to end in December 2001. All other terms and conditions of the original BiOp were to remain in effect.

U.S. Fish and Wildlife Service, June 7, 1995. *Comments on the Draft Revegetation and Monitoring Plan, Nellis Air Force Base.*

In January 1995, the USAF submitted the draft revegetation and rehabilitation plan to meet Term and Condition No. 2 of BiOp Number 1-5-94-F-162. The USFWS responded with comments in a letter dated June 7, 1995. The comments, both general and specific, were minor as the USFWS was in general agreement with the overall plan.

U.S. Fish and Wildlife Service, February 1997. *Biological Opinion on the Re-initiation of Formal Consultation for Continuing Current Weapons Testing and Training on U.S. Department of the Air Force Weapons and Tactics Center Range Complex.*

On July 8, 1996, the USAF requested formal consultation with the USFWS, pursuant to Section 7 of the Endangered Species Act of 1973, regarding the continuation of weapons training/testing for a five-year period on the USAF WTCRC located on the DNWR. Specifically, this request outlined the possible impacts to potential DT populations and habitats within the WTCRC/DNWR.

The BiOp summarized the previous formal consultations between USFWS and USAF concerning the project location, specifically the BiOp issued July 19, 1994 (File No. 1-5-94-F-162), and the amended BiOp issued February 14, 1995 (File No. 1-5-94-F-162.AMD). Additionally, the BiOp noted that innovations in

electronic guidance equipment have refined ordnance delivery and reduced impact areas within WTCRC/DNWR by 10 percent, and DT information was issued to all new WTCRC personnel, increasing DT awareness of on-site staff.

The USFWS BiOp stated that the continued operations in WTCRC/DNWR would not likely jeopardize the DT population, and no critical habitat would be impacted. The BiOp authorized the incidental take of DT (2 killed per year and 10 captured, removed, or displaced) if appropriate measures were implemented to minimize the potential for incidental takes. These measures included: 1) measures to minimize mortality or injury due to weapons training and testing operations; 2) measures taken to minimize destruction of DT habitat due to weapons training and testing operations; 3) a transfer of \$50,000 into the DT Habitat Conservation Fund Number 730-9999; and 4) measures taken to ensure compliance with prudent measures outlined in the BiOp (reporting requirements).

U.S. Fish and Wildlife Service, December 3, 1999. *Request to amend the Biological Opinion for Weapons Testing/Training on the Weapons and Tactics Center Range Complex (Amendment Letter).*

The USFWS issued BiOp Number 1-5-94-F-278R to the USAF in February of 1997. This BiOp amendment letter summarized the request of the USAF to place 11 borrow pits (four of which were in DT habitat) within the complex as outlined in the Final Environmental Assessment for Borrow Pits on the Nellis Air Force Range, Nevada. The pits were to be used to supply base material for road improvements. The Service responded that maintenance of the roads was consistent with the 1997 BiOp and was covered in that opinion. The letter constituted written concurrence from the USFWS that the request was approved and the 1997 BiOp was amended to cover the four borrow pits in DT habitat.

U.S. Fish and Wildlife Service, January 2, 2002 File No. 1-5-02-I-455. Informal Consultation Requesting Formal Consultation for Construction of the 64-10 By-Pass Road.

The USFWS requested that the USAF initiate formal consultation for the construction of the Target 64-10 by-pass road because five DT burrows were found during surveys of the area and the USFWS did not concur with the USAF determination that the proposed project would not likely adversely affect the DT at the site.

U.S. Fish and Wildlife Service, January 16, 2002. *Request to Extend the Term of the Biological Opinion for Activities on the Air Force's Weapons and Tactics Center Range Complex.*

This concurrence letter granted the USAF request to extend the term of the February 1997 BiOp for six months to allow the USAF additional time to develop the Nevada Training Initiative and determine the needs of the NTTR for a 10-year period. The USFWS concurred with the request and extended the BiOp term from February 5, 2002 until August 5, 2002.

U.S. Fish and Wildlife Service. January 2, 2002. *Biological Opinion for Dogbone Lake/Target 62-1 Bypass Road, Lincoln County, Nevada.*

On July 2, 2002, the USAF requested concurrence through informal consultation with the USFWS that DT studies conducted in association with the proposed construction of three bypass roads (62-1, Dogbone Lake, and 64-10 bypass roads) would not adversely affect DT populations. Construction of these bypass roads were proposed to increase safety and reduce road degradation of existing facilities. No DT or DT sign were identified during the 64-10 survey, and the USFWS concurred that construction of this bypass

road was “not likely to adversely affect” DT at this site. However, the USFWS did not issue concurrence with a “not likely to adversely affect” decision for the 62-1 and Dogbone Lake bypasses because DT sign were identified during their surveys. In summary, the USFWS recommended formal consultation of the 62-1 and Dogbone Lake bypass roads to address the direct and indirect effects to DT that may occur due to project implementation. The BiOp summarized the previous formal consultations between the USFWS and the USAF concerning the project area, specifically BiOp No. 1-5-97-F-251 and No. 1-5-98-F-053.

Based on a review of information available for the project site, the USFWS concluded the following in the BiOp: “After reviewing the status of the DT, the environmental baseline for the action area, the effects of the proposed road re-alignment, and the cumulative effects; it is the Service’s biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the DT. Critical habitat for the DT has been designated in portions of the Paiute and El Dorado Valleys, Mormon Mesa, Gold Butte, and Beaver Dam Slope areas of Nevada; however, this action does not affect those areas and no destruction or adverse modification of that critical habitat is anticipated.”

The BiOp authorized the following amount of take: 1) No DT may be incidentally injured or killed by project activities; 2) No DT eggs were anticipated to be destroyed during construction activities; 3) No DT were anticipated to be taken in the form of indirect mortality through predation by ravens drawn to trash in the project area; and 4) an unknown number of DT may be taken indirectly in the form of harm through increased noise and ground vibrations associated with construction, use of heavy equipment, and other project activities.

The BiOp outlined reasonable and prudent measures to reduce the amount of take associated with DT on the project site. These measures included: 1) implementing measures to minimize injury or mortality of DT due to project-related activities; 2) implementing measures to minimize predation on DT by predators drawn to project areas; 3) implementing measures to minimize destruction of DT habitat, such as soil compaction, erosion, or crushed vegetation due to construction activities; and 4) implementing measures, terms and conditions, reporting requirements, and re-initiation requirements in this BiOp. Terms and conditions consistent with best management practices were also described in the BiOp.

U.S. Fish and Wildlife Service. June 17, 2003. File No. 1-5-02-F-522. Programmatic Biological Opinion for Activities on the South Range of Nellis Air Force Base, Nevada Test and Training Range, and the Nevada Training Initiative, Clark and Lincoln Counties, Nevada.

This programmatic BiOp was prepared and based on a review of programmatic and project specific activities proposed by the USAF on the South Range of the NTTR over a 16-year period. Specifically, this BiOp addressed the potential effect of mission activities on DT populations. The term of the BiOp terminates on March 1, 2019, which coincides with the NTTR land withdrawal from Bureau of Land Management (BLM) control.

Based on a review of information available for the coverage area, the USFWS concluded the following: “After reviewing the current status of the DT, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the USFWS’ BiOp that implementation activities on the South Range as described in the January 2003 BA, are not likely to jeopardize the continued existence of the threatened Mojave population of the DT. Critical habitat for this species has been designated within 14 Critical Habitat Units in Nevada, California, Arizona, and Utah; however, the proposed action does not affect any of those areas and no destruction or adverse modification of that critical habitat is anticipated.”

This decision was based on the following reasons: “1) The South Range does not include any areas designated for recovery of the DT; 2) few DT are likely to be killed or injured by the USAF actions which would be minimized by measures proposed by the USAF; and 3) no new actions will proceed under this programmatic biological opinion until the USAF submits required information on each project that may adversely affect the DT and a response has been received from the USFWS in accordance with the USFWS’s protocol for programmatic biological opinions.”

The USFWS BiOp stated that based on the minimization efforts employed on the South Range of the NTTR and an analysis of potential impacts, the following take of DT may occur:

1. To ensure that the protective measures were effective and were being properly implemented, the USAF shall contact the USFWS immediately if a DT is killed or injured. Upon locating a dead or injured DT within the action area, notification must be made to the Ecological Services Division of the USFWS. At that time, the USFWS and the USAF shall review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided the protective measures and any appropriate terms and conditions of this BiOp have been and continue to be fully implemented. It was estimated that no more than one DT may be killed or injured on the South Range of the NTTR, per year. For the Nevada Training Initiative (NTI) project, the USFWS estimated that no more than two DT may be killed or injured as a result of project activities.
2. All DT found in harm’s way in work areas may be captured and moved to a safe location. Based on the incidental take associated with prior activities, no more than five DT will be taken on the South Range of the NTTR through capture and movement, per year. No more than 20 DT will be captured or moved during the NTI project.
3. An unknown number of DT eggs may be disturbed or destroyed during surface-disturbing activities on the South Range. However, the number of nests and eggs affected by the project would be no more than one over the term of the proposed action, including the NTI project.
4. An unknown number of DT may be taken in the form of indirect mortality through predation by ravens drawn to trash in the project area. The level of raven or subsidized predator predation on DT will be greater as a result of programmatic activities than the existing baseline conditions.

The BiOp outlined reasonable and prudent measures to reduce the amount of take associated with DT on the project site. These measures included: 1) implementing measures to minimize the incidental take of DT resulting from weapons testing and training activities, including minimizing attraction of DT predators to activity sites; 2) implementing measures to minimize harm to DT as a result of impacts to DT habitat such as soil compaction, vegetation damage and destruction, and erosion; 3) implementing measures to minimize the incidental take of DT that may result from project and road construction projects; and 4) implementing measures to minimize the incidental take of DT that may result from capture, handling, and relocation of DT, as required or authorized in this BiOp. Terms and conditions consistent with best management practices are also described in the BiOp.

US Fish and Wildlife Service. June 30, 2004. *Amendment to the Programmatic Biological Opinion for Activities on the South Range of Nellis Air Force Base, Nevada Test and Training Range (NTTR), and the Nevada Training Initiative, Clark and Lincoln Counties, Nevada.*

This amendment, File No. 1-5-02-F-522.AMD1, granted the USAF permission to implement DT monitoring and clearing on NAFB, NTTR, and NTI in-lieu of constructing and maintaining DT barriers. The reasoning behind this change in techniques is that DT barriers were being rendered ineffective by target range impacts. The USFWS determined that a monitoring and clearing strategy would be equally or more effective than DT barriers. As such, Term and Condition 1.a and 1.d, were amended to reflect monitoring and clearing activities in accordance with Term and Condition 3.b as quoted below:

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Nevada Test and Training Range and Proposed Expansion Alternatives

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The Nevada Training Initiative Project (640 acres), Target 62-6, and new proposed projects that would involve surface disturbance will be cleared of DTs in accordance with Term and Condition 3.b. In addition to the project site clearance, on a case-by-case basis, a perimeter around the project area will also be cleared as determined by the Nellis AFB Natural Resources Manager and Service. The determination to conduct perimeter clearance will be based on the quality of DT habitat in the project area and/or likelihood of DTs appearing on the project site. DTs found and removed from the project site may be fitted with radio telemetry devices as determined on a case-by-case basis. Telemetered tortoises will be monitored and data collected at least until project construction is completed to determine if tortoises return to the area of capture. Telemetry data will be provided to the Service within 30 days of the conclusion of telemetry monitoring activities. Tortoises that return will be moved out of harm's way in accordance with Terms and Condition 3.b. Tortoises that are found in harm's way shall continue to be captured, moved, and released until surface disturbance ceases. Tortoises may be moved up to 1 mile from point of capture. A tortoise monitor will be present on the project sites during all project construction/earthmoving activities until the project is completed.

Additionally, the USFWS acknowledged and commended the USAF for its efforts to delineate and map all DT habitats on the NTTR and to develop a DT management plan as part of the INRMP.

Request for Concurrence with DT Habitat Delineation on the Nevada Test and Training Range, Clark and Lincoln Counties, Nevada (August 27, 2009)

This document is a letter from the USFWS, File No. 1-5-02-F-522, approving the DT habitat map for use as a guide to identify areas where clearance surveys and monitoring would be required on the South Range of the NTTR. The map only serves as a guide because desert tortoise habitat delineations can only provide an estimate of such areas, it is likely that areas mapped as potential habitat are not occupied at this time by desert tortoises and tortoises may occur outside areas identified as potential desert tortoise habitat on the map. The USFWS specified four measures in the programmatic BiOp that applied towards activities in DT habitat:

1. Provide DT awareness training. The training should be provided to anyone working in or traveling through potential DT habitat.
2. Impose a speed limit of 25 miles per hour in DT habitat. The USFWS recommended that speed limit signs be posted on roads that enter DT habitat and ensure that these speed limits are enforced.
3. Rehabilitate disturbances of DT habitat and/or pay a per-acre remuneration fee.
4. Conduct clearance surveys for DTs or construct DT exclusionary fencing for actions in potential DT habitat.

Figure 3 is the DT habitat map approved by the USFWS for the NTTR and the current withdrawn land.

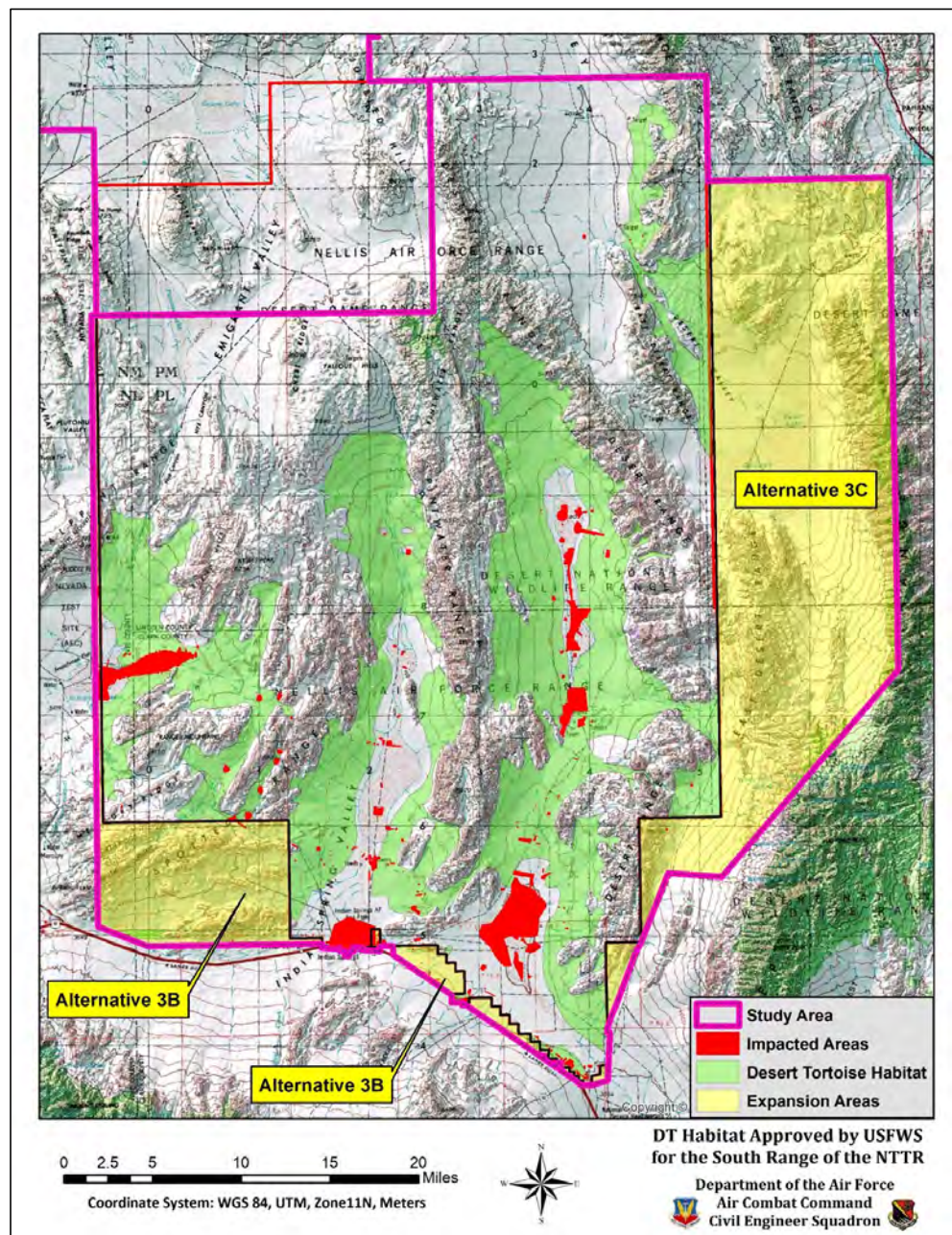


Figure 3. Desert Tortoise habitat map approved for NTTR by the USFWS on August 27, 2009. Impacted Areas indicates those areas that have been impacted by target use or infrastructure construction during or before the current BiOp was implemented.

Alternative 2

Alternative 2 involves a “ready access” component for the South Range that would allow increased training opportunities in the South Range. Currently, approximately 590,000 acres of the NTTR’s South Range overlaps the Desert National Wildlife Range (DNWR), which are designated as proposed Wilderness and managed as de facto wilderness by virtue of USFWS land management policy. Generally, areas that were proposed for wilderness in the South Range correspond to elevations above 4,000 feet above mean sea level. Existing roads (mountain roads/passages) other than those used below 4,000 feet are off limits, as is troop movement, ground disturbance and the development of new locations such as emitter sites and communication sites. Previously used targets that are located in areas that were proposed as wilderness in 1971 are also off limits.

Alternative 3A

Alternative 3A is located northeast of Beatty, Nevada in Nye County on the northern extent of DT habitat range. The land is undeveloped and only used for cattle grazing and recreation. Nye County is preparing a Habitat Conservation Plan (HCP) for the DT and it will only include private lands in Alternative 3A if Alternative 3A is not included in the expansion of the withdrawn land. According to the BLM, this area falls under the programmatic BiOp for the BLM and no surveys have been conducted on the area to date (Personal communication with Gregory Brooks, Sept. 20, 2017, BLM).

Alternative 3B

Alternative 3B includes land between the south boundary of NTTR and U.S. Highway 95. The western part of this area is located in the DNWR, while the remainder is managed by the BLM under their programmatic BiOp. DT surveys have not been conducted in these areas (Personal communication with Gregory Brooks, Sept. 20, 2017, BLM).

Alternative 3C

Alternative 3C lies within the DNWR. No USFWS consultation has occurred in this area, but would be required if impacts to DT are imposed by any federal actions. Critical habitat has been designated for the DT in the vicinity of the DNWR, but none has been designated within the boundaries of the DNWR. The nearest critical habitat lies in Pahranaagat Valley about 4 miles east of the eastern boundary of Alternative 3C and separated from Alternative 3C by the Sheep Mountain Range. Critical habitat has not been designated for any of the land lying within the DNWR because as a wildlife refuge, it affords full protection for the species within its management area boundaries. However, under the INRMP for NAFB, NTTR, and CAFB, an exemption of critical habitat designation under Section 4(a)(3)(B)(i) under the Endangered Species Act may be enforced. Such an exemption would preclude the need for critical habitat designation as long as the Secretary of the Interior determines in writing that the INRMP provides sufficient benefit to the species for which the critical habitat is being proposed.

Biological Opinions in the Vicinity of the Action Area

U.S. Fish and Wildlife Service. May 12, 1993. Formal Section 7 Consultation for the Issuance of a Right-of-Way Permit for the Southwest Intertie Project. File No. 1-5-93-F-91. This BiOp was issued for a transmission line running from Shoshone Idaho to Las Vegas Nevada. The last 53.2 miles of the transmission line impacted DT habitat. This habitat was located east of the east boundary of the DNWR. Impacts to DT were not anticipated. An extensive list of mitigative measures were included in the BO.

Recovery Plans

1994 DESERT TORTOISE (MOJAVE POPULATION) RECOVERY PLAN

The 1994 DT (Mojave Population) Recovery Plan (U.S. Fish and Wildlife Service, 1994B) presents conservation strategies for recovery of the DT population from the endangered status to delisting. Under the

plan, six evolutionary groups, or recovery units, were identified and targeted for DT recovery efforts (within the Mojave population). Recovery units were established based on differences in population genetics, ecology, and/or behavior. Management zones where DT populations would be allowed to recover were established in each recovery unit and classified as Desert Wildlife Management Areas (DWMAs). Additionally, Critical Habitat was established under the authority of the ESA, with portions of the established DWMAs overlapping with DT Critical Habitat. No Critical Habitat has been designated on the NTTR. According to this recovery plan, the NTTR and the study area lie within the Northeastern Mojave Recovery Unit. No DWMA are located within the boundaries of the study area.

Five criteria are stipulated by the 1994 Desert Tortoise (Mojave Population) Recovery Plan (USFWS 1994) that the species must meet to be eligible for delisting:

- The population must exhibit a statistically significant upward trend or remain stationary for at least 25 years (one DT generation); trends must be measured using a scientifically credible monitoring plan, with population estimates taken at five-year intervals.
- Sufficient habitat must be protected within a recovery unit (at least one DWMA of >1,000 miles²) or, in unusual circumstances, the DT populations must be managed intensively enough to ensure long-term population viability.
- At each DWMA, population growth rates must be maintained at or above 1.0 into the future.
- Regulatory mechanisms, or land management commitments, must be implemented to ensure long-term protection of DT and their habitats.
- The population in the recovery unit should not need protection under the ESA in the foreseeable future (as determined by detailed genetic, demographic, physiological, behavioral, and environmental analyses).

Once populations meet all five criteria within a DWMA, the species may be considered recovering and possibly delisted for that area. Once all populations have recovered in the DWMAs, the species would be eligible for delisting on a national level.

2011 DESERT TORTOISE (MOJAVE POPULATION) REVISED RECOVERY PLAN

In 2011, the 1994 Desert Tortoise Recovery Plan was revised to accommodate impacts caused by the implementation of renewable energy development (U.S. Fish & Wildlife Service, 2011). These impacts could potentially cause habitat fragmentation, isolation of DT conservation areas, and subsequent possibility of restricted gene flow between conservation areas. Some of the recommendations included in the revised recovery plan included the following:

- Locate solar project facilities outside of DWMAs and ACECs (Areas of Critical Environmental Concern).
- Conserve and protect sensitive areas that potentially connect functional habitat or improve management capability of surrounding areas that may be open to renewable energy development.
- Connect blocks of DT habitat to maintain gene flow between populations.
- Quantify the lost or restoration of habitat as it relates to renewable energy and other projects.
- Evaluate the effects of corridors and barriers imposed by energy development and other infrastructure on DT movement and recovery.

According to the 2011 Desert Tortoise Revised Recovery Plan, the study area was moved into the Eastern Recovery Unit. No DWMAs were established within the boundaries of the study area. DT critical habitat has not been designated within the boundaries of the Action Area (Figure 4). However, the DNWR is located within the boundaries of the study area and is important for the conservation of the species. The DNWR has not been designated as critical habitat due to the fact that, as a refuge, it inher-

ently protects endangered species inhabiting the area. However, actions potentially impacting the DT on the DNWR still require formal consultation.

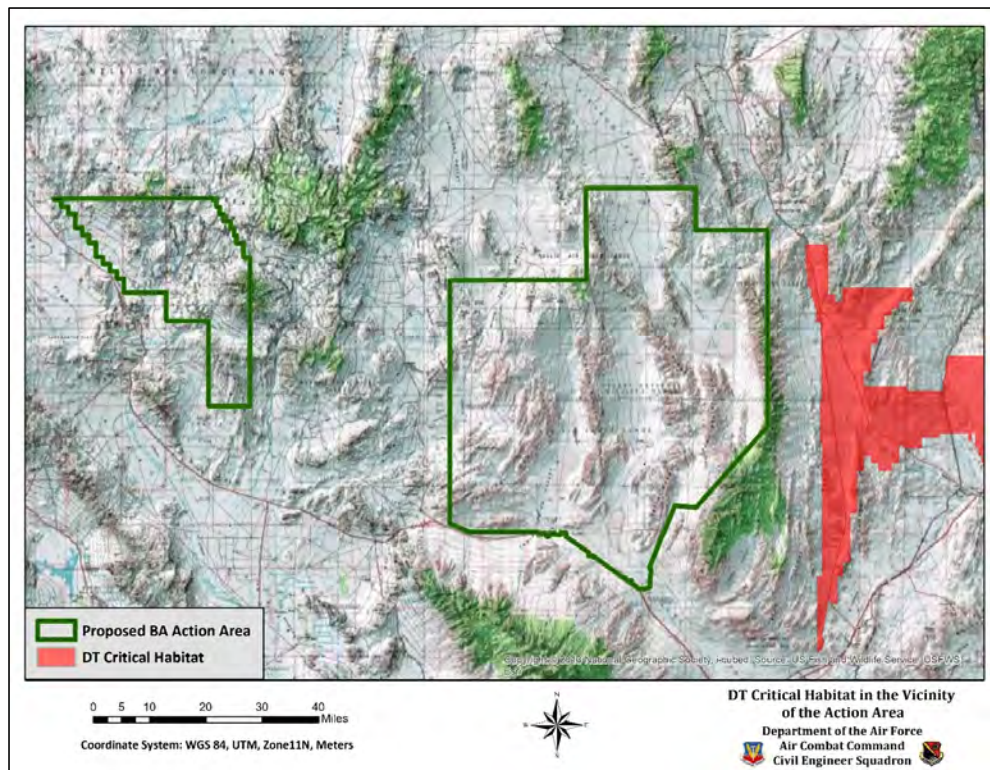


Figure 4. DT critical habitat located in the vicinity of the Action Area.

DESCRIPTION OF ACTIONS POTENTIALLY TAKEN BY THE USAF ON THE ACTION AREA

In the paragraphs that follow, actions potentially undertaken by the USAF in the Action Area on the current withdrawn land (NTTR South Range and Range 77) and potentially occurring under Alternative 2, and Expansion Alternatives 3A, 3B, and 3C will be described in sufficient detail to allow evaluation of potential effects and to identify minimization measures. Please note that the Action Area does not include most of the North Range of NTTR because it does not contain DT habitat per the previous programmatic BiOp (U.S. Fish and Wildlife Service, 2003). Habitat extending beyond the northern boundary of the Eastern Action Area falls in an area that is secure and classified and is not included in the Action Area. The small area of habitat lying north of the Western Action Area is included as part of this analysis and is subject to any recommendations for protection of the DT in those areas.

Baseline and Alternative 2 NTTR South Range Actions

Actions to be implemented on the current withdrawn land on the South Range of the NTTR will remain the same as described in the current BiOp, but volume, frequency, and duration of activity on existing target impact areas will increase, and infrastructure development and ground training activities will po-

tentially occur over a larger area. Details on the estimated acreage of impacts is described in the Direct Impacts section of this BA. Congress reserved the current withdrawn land for use by the Secretary of the Air Force for the following military uses:

- An armament and high-hazard testing area;
- Training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support;
- Equipment and tactics development and testing; and
- Other defense-related purposes.

The NTTR provides a premium location to test weapon systems and tactics to meet nationally directed missions. It also offers a secure environment where testing and training can be conducted free from outside interference. Actions on the South Range of the NTTR potentially impacting the desert tortoise are discussed below.

BASELINE OF CURRENT DISTURBED AREAS

Prior to the preparation of this BA, the Action Area has experienced soil disturbing activities caused by infrastructure construction and target use. These activities occurred under the current BiOp, past BiOps, or prior to listing of the DT under the ESA. Total acres of disturbed land in DT habitat, including roads currently found on the South Range is 12,252 acres (8,874 acres of disturbed or developed land and 3,378 acres of roads and trails) (Figure 5). Table 1 lists the current total acreages and DT habitat acreages of the South Range and expansion alternatives and those acreages further refined to roads and disturbed areas.

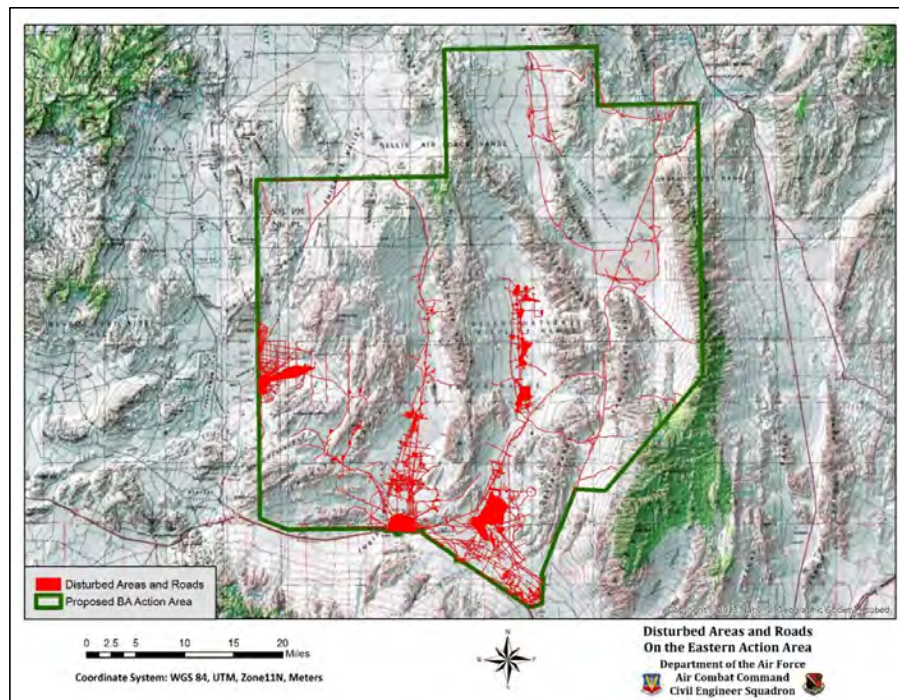


Figure 5. Disturbed Areas including roads and trails on the Eastern Action Area.

Table 1. Total acreages and DT habitat acreages of South Range and Expansion Alternatives, including roads and disturbed areas.

Action	Total Area (Acres)	Area in DT Habitat (Acres)	Total Linear miles	Linear miles in DT Habitat
Acres of DT Habitat				
South Range of NTTR	1,005,891	627,051	N/A	N/A
Expansion Alternative 3A	17,906	7,913	N/A	N/A
Expansion Alternative 3B	56,501	44,537	N/A	N/A
Expansion Alternative 3C	227,027	135,388	N/A	N/A
Range 77 + Northern Area*	244,203	54,290	N/A	N/A
Total	1,538,495	866,260	N/A	N/A
Disturbed Areas Minus Roads				
South Range of NTTR	16,167	8,874	N/A	N/A
Expansion Alternative 3A	0.10	0	N/A	N/A
Expansion Alternative 3B	819	474	N/A	N/A
Expansion Alternative 3C	7.65	7.38	N/A	N/A
Range 77 + Northern Area*	231	56	N/A	N/A
Total	17,225	9,411	N/A	N/A
Roads and Trails				
South Range of NTTR	4,285	3,378	1,371	1,122
Expansion Alternative 3A	177	64	29	14
Expansion Alternative 3B	296	252	98	89
Expansion Alternative 3C	444	370	149	105
Range 77 + Northern Area*	1,099	417	213	80
Total	6,301	4,481	1,860	1,410

*Includes Range 77 plus DT habitat located beyond the northern boundary of Range 77

READY ACCESS (Alternative 2)

Ready access is required for the desired implementation of the military mission on the Action Area. Ready access allows the USAF to have primary jurisdiction over lands within its boundary and the ability to access land and schedule activities at its discretion. It opens the entire range to use for military activities and operations. The North Range currently has Ready Access. The South Range is restricted by the current Memorandum of Understanding (MOU) with the USFWS. Under the MOU, the majority of the South Range is within the DNWR and managed by the USFWS as proposed wilderness. As a result, the USAF cannot access the areas of the South Range outside target impact areas for purposes of military training without permission of the USFWS. Placing the South Range Study Area under Ready Access would allow the same activities as the North Range Study Area. Thus, troops could conduct ground activities anywhere on the area. However, vehicles would be restricted to roads and trails. Bombing and live munitions would be restricted to existing weapons delivery areas and no new weapons delivery areas are being planned. Any soil disturbing activities in DT habitat would be avoided or minimized as is current USAF practice.

Ready access will mostly be occurring in the interstitial areas, which are areas located outside of target impact areas. These activities generally involve squads of Special Operations Forces (SOFs) or regular service personnel, conducting ground training in support of the military mission. These activities would typically involve groups of no more than twelve personnel. Ready access may include use of fixed- and rotary-wing aircraft to insert or extract troops and equipment or conduct personnel drops (paradrops) onto established drop zones or landing zones. Training would not involve large forces.

Airdrops (ADs) involve the insertion of personnel via release of troops or equipment over land-based drop zones. This activity would support training activities. Aircraft would fly at 1,250 ft. above ground level (AGL) for static line drops and up to 25,000 ft. AGL for free fall drops depending on personnel and

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equipment type or requirements. During a paratroop, the aircraft typically makes first contact at the drop zone, flying between 500 to 1,000 ft. AGL, conducts the drop, and then moves to orbit at 5,000 ft. AGL, typically offset from the drop zone by about 5 to 10 miles with run-in typically at 130 knots indicated air speed. Items dropped may include approximately 15 cubic foot container of water (about 300 lbs.) and/or containerized delivery systems (about 500 lbs.).

As is its current practice, the USAF would strive to avoid direct impacts to DT and DT habitat. Impacts could be minimized by not establishing drop zones or landing zones in DT habitat. However, ready access would allow the USAF to manage all of the land area and evaluate potential uses for military training. This would not preclude the need to comply with regulatory requirements of the National Environmental Policy Act (NEPA), Clean Water Act (CWA), ESA, National Historic Policy Act (NHPA), or other regulations. As a result, uses involving ground disturbing activities could occur, but these would be limited to minor disturbances associated with emitter pad construction, existing road and trail improvements, and non-mechanized ground troop movements over land (any mechanized troop movements would occur on existing roads and trails). Under the current proposal for the land withdrawal, no new weapons delivery areas/live fire areas will be developed. Any actual site-specific, ground disturbing or construction activities would require additional formal or informal consultation with the USFWS, environmental assessment as required by NEPA, and compliance with the CWA, NHPA, and other regulations. Under the purview of this BA, and as with the previous BiOp, the direct impacts associated with incidental DT takes would likely be associated with non-mechanized ground troop movement over land as well as mechanized troop movement over roads and trails. These impacts will be minimized by compliance with the conservation measures discussed later in this BA.

For the purpose of analyzing the potential impacts associated with ready access and the increase in overall range utilization, a projected 30 percent increase is estimated for test and training activities. On the South Range Study Area, the 30% increase relates to aircraft activity only as compared to the current level. Therefore, aircraft operations, munitions expenditures, and motorized vehicular activity are projected to be 30 percent greater than current levels. The only new roads being proposed are those required for accessing new emitters. However, existing road use would increase by 30%. It is presumed that munitions usage and other operational equipment would increase at a level consistent with aircraft operations. Ground activity will be a new potential impact because it is currently not allowed on the South Range outside of existing target impact areas. Most of the activities will be foot traffic associated with small troops (less than 12 soldiers) and impacts are anticipated to be minimal with proper DT awareness training. Vehicular traffic will be restricted to roads and trails and is anticipated to significantly increase on the wilderness area of the DNWR and the expansion alternatives, since it is currently at minimal levels. Take of DT will be minimized by implementation of the conservation measures described later in this BA.

WEAPONS DELIVERY AREAS

Weapons delivery areas are targets that are used for live ordnance and munitions. The South Range of the NTTR contains five weapons-delivery target impact areas, which are subdivided into 74 target complexes containing approximately 1,363 targets. These areas were previously covered by the current BiOp for NTTR and will remain the same because no new target impact areas are being proposed for the renewal of the land withdrawal. The location of weapons delivery systems will remain the same, but the number of bombs dropped may increase by 30% over current baseline levels. The majority of weapons delivery areas in the South Range are located in playas (dry lakebeds) within the Indian Springs Valley and Three Lakes Valley outside of DT habitat and accommodate ground-disturbing military testing or training activities including live and inert ordnance. A full range of weapons including unguided ordnance, laser-guided bombs, air to ground missiles, small arms munitions, and self-protection devices

(flares and chaff) are used at targets. Targets range from airfields, bridges, command and control bunkers, weapons storage facilities, mobile air defenses, tactical missile systems, tanks, armored vehicles, and troop concentrations. These targets impact the DT mostly by ground disturbing actions caused by exploding and non-exploding ordnance and small arms bullets. Clearing, excavation, and construction of targets also entails soil disturbing actions. Target impact areas, totaling 111,291 acres, have been designated on the South Range and include all areas that could potentially be impacted by weapons delivery actions (Figure 6). These areas were designated as areas under the jurisdiction of the USAF according to the MOU. The amount of this acreage in DT habitat is discussed in the Direct Impacts section of the BA.

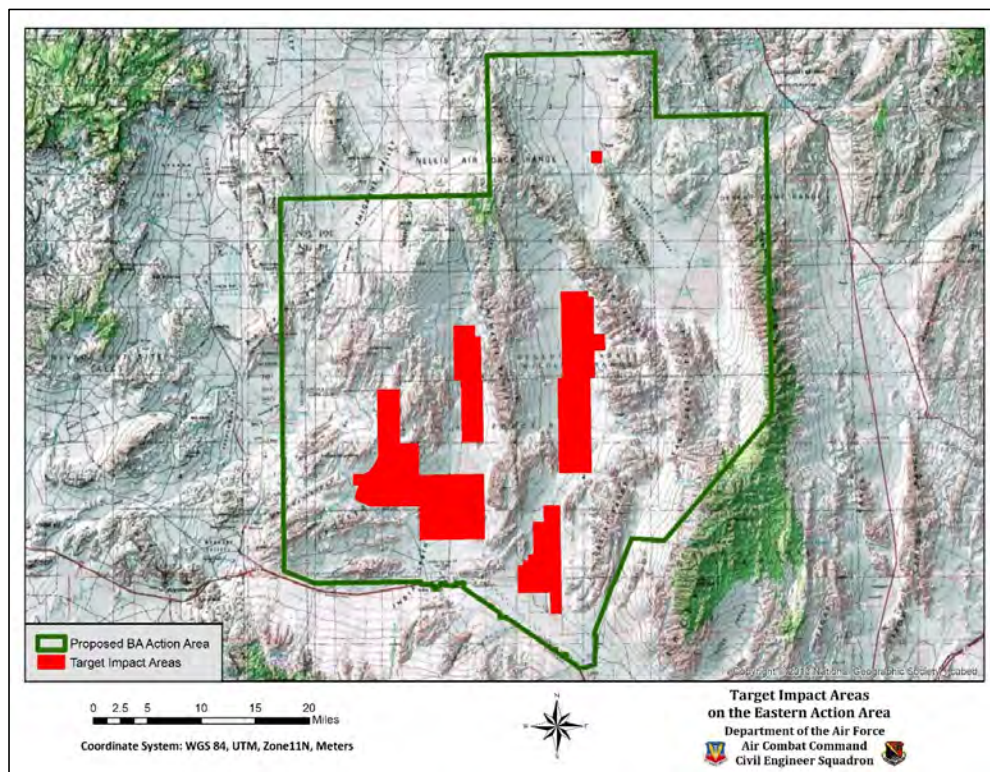


Figure 6. Target impact areas located on the Eastern Action Area.

Weapons used on the South Range on the NTTR include various caliber hand guns, rifles and machine guns, grenades, incendiary devices, shoulder-launched missiles, and light vehicle mounted weapons. Ammunitions include depleted uranium rounds, dummy bombs, live bombs, explosive incendiary rounds, and bullets.

Targets include the following items or structures:

- Enemy items: Trucks, tanks, heavy equipment, vehicles (Fuel removed as well as lubricants, fluids, glass, and gauges)

- Cities, houses, air fields, and factories usually constructed of wood, aluminum, or stacked Conex storage units
- Roads, runways, and tarmacs usually constructed by blading areas to represent their use
- Simulated railroads, scud and other missile launchers, radar and antenna sites, and other launching devices
- Moving targets simulating convoys and other enemy troop equipment movement

The current BiOp estimates that 971 acres of DT habitat would be impacted by target activity. No new targets are anticipated to be installed on the South Range or expansion alternatives as part of the land withdrawal action. If a new target is installed in the future, separate consultation with the USFWS would be required. Discussion of the anticipated impacts of ordnance on DT will be discussed later in the BA.

WEAPONS DELIVERY AREAS CLEANUP

Weapons delivery areas are periodically cleaned and repaired or removed. This requires personnel to remove unexploded ordnance and debris from the weapons delivery areas on foot and in vehicles. Heavy equipment is used to remove larger material and to grade the target site. Live and spent munitions are removed and unexploded ordnance is detonated. Destroyed targets are removed from the area. If depleted uranium rounds were employed, spent rounds are located and properly disposed. The weapons delivery areas are cleaned, graded and targets are usually replaced and/or rebuilt. All of these actions involve soil disturbance and concentrated vehicular/heavy equipment activity. The original BiOp estimated 971 acres of DT habitat would be impacted by target use and cleanup in the South Range. No new weapons delivery areas are currently being planned for live ordnance use on the Action Area.

THREAT EMITTERS

The USAF has specific selection standards for the placement of conceptual threat emitters. Threat emitters (e.g., radars) must be located within topography that will permit advanced detection to the east and north, which is required to implement the two-axis concept. To reduce overall impacts, the USAF would, to the extent possible, locate threat emitters along existing roads or unpaved two-tracks to minimize the need to construct new access roads. New emitters would only be placed in the South Range and potentially in alternative 3C. Soil disturbance would involve clearing an area approximately 150 ft. by 150 ft. Up to 15 emitters are anticipated to be constructed on the Action Area on the South Range or Alternative 3C. This, coupled with up to four acres of road improvements, would cause up to 11.5 acres of DT habitat being destroyed if all emitter pads and roads were placed in DT habitat. However, emitters and roadway construction/disturbance will be located outside of DT habitat where possible. Each emitter requires a 1.5 kilovolt generator to operate. Electromagnetic radiation (radio waves), microwaves, or lasers may be emitted by some of the emitters.

INFRASTRUCTURE CONSTRUCTION AND MAINTENANCE

Buildings, roads, and equipment staging/storage areas require periodic maintenance or re-configuration (change in the design or layout within existing developed areas and weapons delivery areas in the South Range). New facilities may be constructed. At the present time, the type or location of such facilities is not known, but any new facilities constructed in DT habitat would require formal consultation with the USFWS. The goal would be to locate new facilities in previously developed areas or outside of DT habitat. Improved roads may require repair and the shoulders must be periodically graded to remove invasive weeds and to provide a level surface. Unimproved roads also require periodic grading and repair, especially after significant storm events. Buildings and other infrastructure may require maintenance and even replacement. Other infrastructure requiring maintenance and installation include:

- Scoring towers
- Siting and measurement devices
- Security equipment, fencing, and buildings
- Communication Towers
- Emitters and antennas
- Electrical lines (above and below ground)
- Communication Lines (above and below ground)
- Wells (Ground water)
- Generators
- Convoy turn points

NTTR manages invasive plants in developed areas and along improved roads by periodic mowing, grading and herbicide application. Manual cutting and stump treatment with herbicides is the common method used for controlling salt cedar (*Tamarix ramosissima*). Currently, cleaning of equipment after soil disturbing activities before moving to another site is not required on NTTR.

BORROW PITS

Borrow pits are areas that are excavated to obtain fill material and gravel to maintain roads and support infrastructure. Borrow pits may be installed in various locations on the South Range of the NTTR, but none are currently being planned. These areas tend to be relatively small in area, but involve extensive excavation and heavy equipment movement. The Action Area has 25 borrow pits totaling 536 acres and ranging in size from 1.5 to 130 acres in size (Average of 21 acres) (Figure 7). Of those borrow pits, 21 are in the South Range impacting a total of 494 acres. Soil disturbance and vehicular movements are the major activities involved with this action.

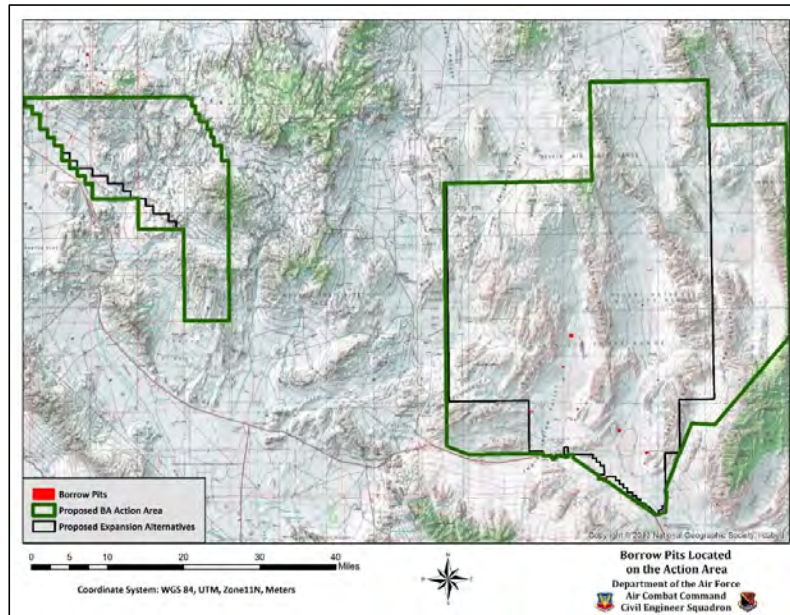


Figure 7. Location of borrow pits on the Action Area.

TEST AND EVALUATION (T&E)

T&E tests and evaluates equipment to determine whether the equipment meets the specifications outlined by government contracts. T&E also determines how the equipment can be used and the environment and tactics best suited for the equipment. These T&E capabilities include an electromagnetic environment that is free of interference, test infrastructure available to measure critical Time-Space-Position Information (TSPI) of weapons and various platforms, and the ability to measure and reproduce T&E environments. Depending on the equipment being reviewed, impacts can vary from soil disturbances to electromagnetic emissions. Most of these activities would be staged in areas that have already been cleared for specific use (emitters, radar, targets, etc.).

BATTLEFIELD TRAINING

Typical battlefield training includes both ground training with the use of air and vehicle operations support. Ground training includes a number of activities, but is generally the movement of small groups of soldiers through interstitial areas (areas between roads, infrastructure, and targets). Troop movements are typically stealthy as units transition from one objective to another. These troops are usually Special Forces teams operating in groups of one to twelve soldiers. To increase the realism of the training events, some training ammunition (blank small-arms), hand flares, smoke grenades, or other training munitions (such as paint balls) are expended during certain operations. In almost all cases, ground training on foot involves movement under covert, clandestine conditions without leaving any evidence of troop presence. Troop movement is usually in small groups and large troop movements impacting large areas would not occur. Land navigation training may occur during daytime or nighttime and usually involves the use of a compass, maps, and GPS. Troop movement on foot may also be used for training in search and rescue, personnel recovery, and reconnaissance. Personnel movement usually occurs on established roads, along mountainous terrain, and washes. Movements would occur in such limited frequency over the same area that the physical impact on the ground would be negligible. All troops potentially encountering DT during movements and operations in DT habitat receive DT awareness training prior to those activities.

Typical troop movement activity includes the following:

- Road march (conducted on existing roads for extended lengths of travel)
- Six-to-twelve-man team insertion/extractions from varying methods (parachute, airplane insertion, and helicopter). Insertions are clandestine activities and regardless of how an insertion is accomplished, personnel would most often walk out of the insertion area
- Clandestine movement by foot to training objective sites (most often culminating at an Urban Operations Complex (UOC))
- Foot movement to an UOC through the interstitial areas and on existing roads

Ground support vehicles are occasionally integrated into the training to deliver and retrieve the participating troops or provide support and logistics. Ground vehicle movement is normally restricted to the existing road and trail network, but some training integrates the use of all-terrain vehicles (ATVs).

INSERTION/EXTRACTION (DROP ZONE/LANDING ZONE) AND OVERLAND NAVIGATION

As part of battlefield training, troop insertion and extraction points and overland navigation in level, rolling and mountainous terrain is required. Insertion points are established for user groups that conduct training and testing that integrate ground and air operations. Overland navigation between insertion/extraction points may be conducted with or without unmanned aerial systems. Insertion/extraction points are usually unimproved surfaces or clearings located for inserting/extracting paratroops or para-

dropping equipment or palletized supplies. These equipment or supplies are palletized and rigged with multiple automatically deploying parachutes.

Airborne operations associated with these activities include the use of rotary or fixed-wing aircraft for the insertion, extraction, movement, or supplying of ground troops. This could include the delivery or extraction of special forces via an aircraft to an insertion/extraction point or para-drops (delivery of equipment or supplies using parachutes). Some insertion points are used for touchdown and takeoff of fixed-wing and rotary military aircraft. Under the proposed action in Alternative Area 3C this would involve one runway that would be a mockup location to provide special operations personnel a location to practice tactics, while a second runway would be an austere (i.e., unpaved) active runway, providing more realistic insertion training. Each runway would be 6,000 feet long and 90 feet wide. It is anticipated that ground disturbance activities associated with construction of the runways would be less than 13 acres. The mockup runway would not be used for aircraft operations. However, it is anticipated that the active runway would be a dirt runway. The training activities would be associated with various aircraft conducting Forward Area Arming and Refueling Points (FAARP) during the training activities. As the name indicates, FAARP consists of two training activities (refueling and munitions loading of aircraft) that occur in austere areas. Current plans are for runways to be located on playas outside of DT habitat, thus impacts to DT and DT habitat are highly unlikely.

Insertion and extraction activities cannot be conducted safely in areas that may contain UXO, so those impact areas on the South Range of the NTTR cannot be used for insertion/extraction activities. Thus, active targets cannot be used for insertion and extraction areas. Areas opened by allowing ready access will allow for these activities to be conducted on the South Range of the NTTR and would potentially occur in DT habitat.

FIRE SUPPRESSION

All of the Action Area is subject to wildland fires ignited by natural or artificial sources. Regardless of the cause of fires, the fires will be suppressed as soon as possible. A wildland fire management plan was prepared by the NTTR which includes a discussion of constraints for fire suppression with respect to the DT (99 Civil Engineering Squadron, 2011). These will be summarized in the Conservation Measures section of this BA.

Alternative 3A

Actions proposed for Alternative 3A (not including Range 77) that could potentially impact DT populations include the following:

- Surface area currently impacted by roads and trails is 177 acres of which 64 acres is in DT habitat (Figure 8, Table 1). Less than 0.1 acres of the alternative has been impacted by other disturbances.
- Construction of up to 25 miles (30.3 acres) of fencing on the proposed boundaries that do not abut the current NTTR boundary. The fencing would be constructed to meet BLM fencing requirements dependent on the topography and wildlife present as outlined in BLM's H-1741-1 Fencing Manual, and the objective of the fencing would be to provide a physical barrier to prevent public access while allowing wildlife passage. For example, if the topography in an area supports bighorn sheep predominantly, fencing would be constructed using BLM H-1741-1 Fencing Manual conducive to bighorn sheep passage. In order to conduct programmatic analysis, the following fencing specifications were used. The fencing would consist of four strands of wire. The bottom strand would be smooth while the three upper wires would be barbed. The maximum fence height would 40 inches. Wire spacing from the ground up would be 16 inches and then spacing between wires would be 6 inches, 6 inches, and 12 inches (i.e., 16 inches, 22 inches, 28 inches,

and 40 inches above ground level) which is the standard for BLM antelope fencing. This action would involve soil disturbance associated with moving equipment to the boundary to install the fence and clearing areas for fence installation, where required. The level of soil disturbance would likely be minimal. The fence would not impede movement of DT. This is the only construction anticipated for this alternative.

- Munitions would not be used in the area
- Road construction and maintenance
- Safety buffer for live weapons deployment on the interior of Range 77
- Ready access as described for the South Range of the NTTR
- Battlefield training as described for the South Range of the NTTR
- Insertion and extraction activities as described for the South Range of the NTTR

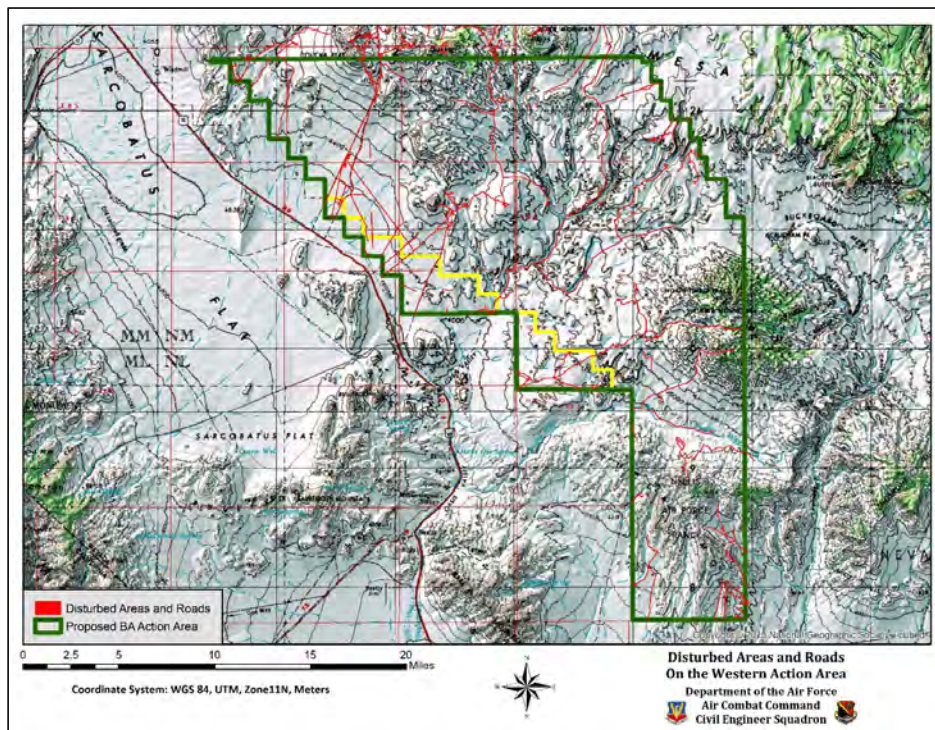


Figure 8. Disturbed areas and roads on the Western Action Area

Range 77

Actions occurring in Range 77 that could potentially impact DT populations include the following:

- Infrastructure maintenance and construction, including monitoring wells, roads, and detention basins. Currently, approximately 473 acres of DT habitat are disturbed in Range 77 of which 417 acres are roads and trails, and 56 acres are other soil disturbances (Figure 8, Table 1).
- Live munitions may be used in the area
- Ready access as described for the South Range of the NTTR

- Threat emitters as described for the South Range of the NTTR
- Test and evaluation as described for the South Range of the NTTR
- Battlefield training as described for the South Range of the NTTR
- Insertion and extraction activities as described for the South Range of the NTTR

Alternative 3B

Actions occurring in Alternative 3B that could potentially impact DT populations include the following:

- Currently, approximately 726 acres of DT habitat are impacted by soil disturbance of which 252 acres are impacted by roads and trails and 474 acres are impacted by other soil disturbances (Figure 8, Table 1).
- Depending on topography, construction of up to 30 miles (36.4 acres) of fence along the proposed boundaries of Alternative 3B that do not abut the current NTTR boundary, similar to that described for Alternative 3A. This action would involve soil disturbance associated with clearing areas for fence installation, where required, and a DT monitor would be required if the activity occurred in DT habitat. Holes for the fence posts would be excavated using augers. If the holes remain open overnight or during times when a DT monitor is not present, covers will be placed on them to prevent DT from falling in the hole. Equipment will be transported to the boundary to install the fence via established roads and trails, where possible. Otherwise, off highway vehicles (OHV) would be used. If OHV were required in area supporting DT habitat, applicable avoidance or minimization measures would be used. The level of soil disturbance would likely be minimal. The fence would not impede movement of DT because the first strand of wire is at least 16 in. above the ground surface. This is the only construction anticipated for this alternative.
- Live munitions would not be used in the area
- This alternative will serve as a safety buffer for live weapons deployment on the South Range of the NTTR
- Ready access as described for the South Range of the NTTR
- Battlefield training as described for the South Range of the NTTR
- Road construction and maintenance
- Insertion and extraction activities as described for the South Range of the NTTR

Alternative 3C

Actions occurring in Alternative 3C that could potentially impact DT populations include the following:

- Currently, approximately 2,322 acres are impacted by soil disturbance of which 370 acres are impacted by roads and trails and 7.38 acres are impacted by other soil disturbances (Figure 8, Table 1).
- Depending on topography, construction of up to 60 miles (72.7 acres) of fence along the proposed boundaries of Alternative 3C that do not abut the current NTTR boundary, similar to that described under Alternative 3A. This action would involve soil disturbance associated with moving equipment to the boundary to install the fence and clearing areas for fence installation, where required. The level of soil disturbance would likely be minimal. The fence would not impede movement of DT. This is the only construction anticipated for this alternative.
- Insertion and Extraction as described for the South Range of the NTTR. The insertion point would include one runway that would be a mockup location to provide special operations personnel a location to practice tactics, while a second runway would be an active runway, providing more realistic insertion training. Each runway would be 6,000 feet long and 90 feet wide. It is anticipated that ground disturbance activities associated with construction of the runways would be less than 13 acres. The mockup runway would not be used for aircraft operations.

However, it is anticipated that the active runway would be a dirt runway and operational levels would occur at a tempo of 520 take-offs and landings annually. The runway will likely be located outside of DT habitat in a dry lake.

- Road construction and maintenance
- Ready access as described for the South Range of the NTTR
- Battlefield training as described for the South Range of the NTTR. Additionally, the training activities would be associated with various aircraft to include: A-10, C-17, C-130, CV-22, HH-60, and AH-64. FAARP would be used during the training activities. FAARP consists of two training activities (refueling and munitions loading of aircraft) that occur in austere areas such as a dry lake bed.
- Up to 15 threat emitters (as described previously) may be placed in the South Range Action Area, including in Alternative 3C, resulting in an impact of up to 11.5 acres if all emitters and roadways are constructed within DT habitat. As with other actions, an emphasis will be made to place emitters outside of DT habitat.
- Live munitions would not be used in this alternative.

Action Area Description

Topography

The Action Area lies in the Basin and Range physiographic region consisting of a series of north-south trending mountain ranges and intervening basins (Fenneman, 1931). Most of the Eastern Action Area lies in the Mojave Desert with most of the Western Action Area falling in the southern Great Basin Desert (Figure 9). The basins and valleys between the mountain ranges increase in elevation from south to north such that elevation as well as latitude contributes to the decline in thermal regimes to the north and the consequent vegetation change along the basins. This is evident across the entire Action Area where plants communities are dominated by creosote bush (*Larrea tridentata*) in the southern basins and Joshua tree (*Yucca brevifolia*)/blackbrush (*Coleogyne ramosissima*) in the northern basins. General landforms are found within the Action Area and include playas, valleys or basins, foothills or bajadas, and mountain ranges.

The South Range and Alternatives 3B and 3C are found in topography characterized by mountains and valleys running in a north-south direction (Figure 10). Mountain ranges include the Buried Hills, Spotted Range, Pintwater Range, Desert Range, East Desert Range, and Sheep Range. Basins or valleys found in these areas include Frenchman Flat, Indian Spring Valley, Three Lakes Valley, Tikaboo Valley, and Desert Valley. Most of the valleys and bajadas in this portion of the action area support potential DT habitat with the exception of playas and dry lakes. Most notable of the playas in this area include Dry Lake in Alternative 3C, Dogbone Lake and Frenchman Lake in the South Range.

Elevations range from 3,000 ft. MSL in the valleys to over 6,000 ft. MSL in the mountains. Most of Alternative 3A lies in the Sarcobatus Flats. Oasis Valley cuts through the middle of Alternative 3A and Beatty Wash flows southeast of the southern boundary (Figure 11). Major topographic features found in Range 77 include Thirsty Canyon, the Timber Mountains, and the Yucca Mountain Range. Sarcobatus Flats lies along the western edge of Range 77 and Beatty Wash flows through the southern part of Range 77 just north of the Yucca Mountain Range. Most of this area is not topographically attractive to the DT, but potential habitat may be found in Sarcobatus Flats, the Oasis Valley, and Beatty Wash.

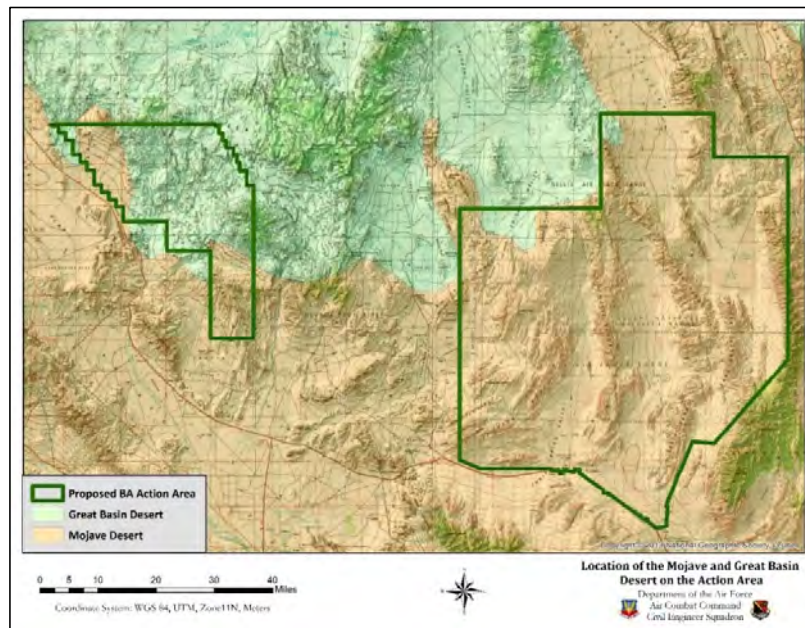


Figure 9. Location of the Mojave Desert and Great Basin Desert on the Action Area

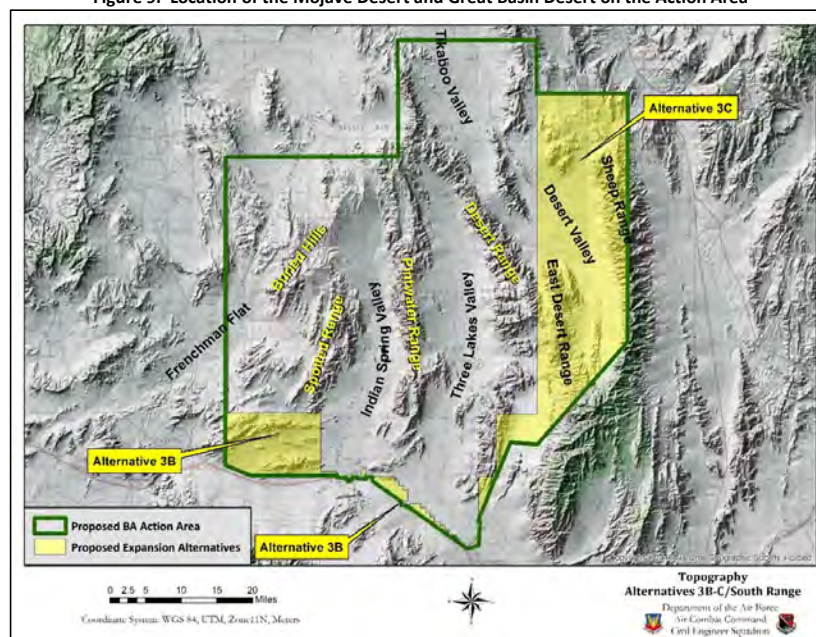


Figure 10. Topographic features found in Alternative 3B, 3C, and the South Range of the Action Area.

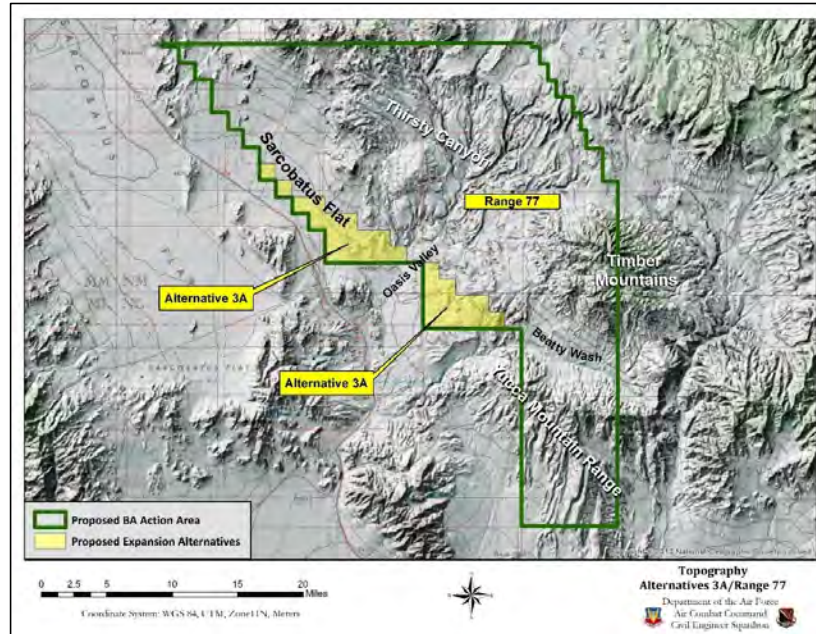


Figure 11. Topographic features found in Alternative 3A and Range 77 of the Action Area.

Climate

Indian Springs (average over 1961-1990) had average high temperatures that range from a 58.5°F in December to a high of 102.6°F in July (Desert Research Institute, 2017). Lows ranged from 21.8°F in December to 65.0°F in July (Figure 12). Alternative 3A and Range 77 are more characteristic of Beatty, which has a mean annual temperature of 59°F. Daily maximum temperatures in the valleys or basins across the Eastern and Western Action Areas often exceed 100°F in the summer months. The project area is very dry with humidity generally ranging from 10-20%.

Precipitation is limited throughout the Action Area (Figure 8). At Indian Springs, the average annual precipitation is about 3.9 in. (Desert Research Institute, 2017). As shown in Figure 8 the mountains receive significantly more precipitation than the valley floors. Annual precipitation ranges from 0-4 in. in the valleys to 14-16 in. on the upper elevations of the mountains. About half of the rainfall occurs in April through September (U.S. Air Force, 2002A). Thunderstorms can be highly concentrated with heavy rainfall and rapid runoff causing excessive erosion, especially on the alluvial fans or bajadas. Regular, strong winds, combined with low relative humidity, yield an annual evaporation rate that exceeds precipitation by as much as 10 times.

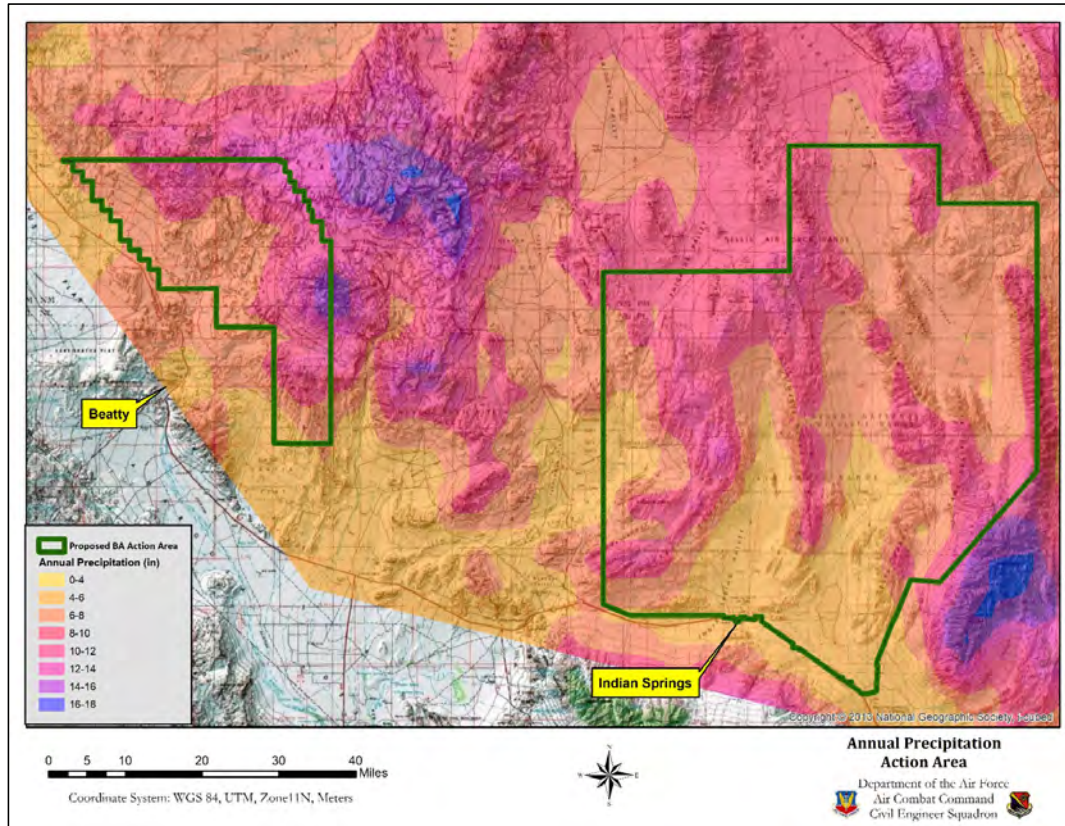


Figure 12. Annual precipitation on the Action Area.

Soils

In general, soils on the Action Area are predominantly alluvial soils derived from carbonate parent material. The B horizons, or subsoils, have a cumelic character due to the substantial influx of silt and clay-sized particles. The soils on the Action Area have not been mapped in detail; however, soils associations have been mapped by the NRCS using satellite photography and other sources and are shown in Figures 13 and 14.

On the Eastern Action Area, soil associations potentially supporting DT populations included the following:

- Cave-Ajo-Cave Family
- Tencee-Weiser-Colorock
- Keefa-Leo-Univega
- Canutio-Cave-Weiser

In the Western Action Area, soil associations that are likely to support DT populations based on their topographic location and structure include the following:

- Yerm-Gynelle-Greyeagle

- Rock Outcrop-St. Thomas-Tecopa
- Zibate-Zalda-Longjim
- Lower elevations of Stewval-Rock Outcrop-Gabbvally
- Handpah-Zadvar-Rattleflat

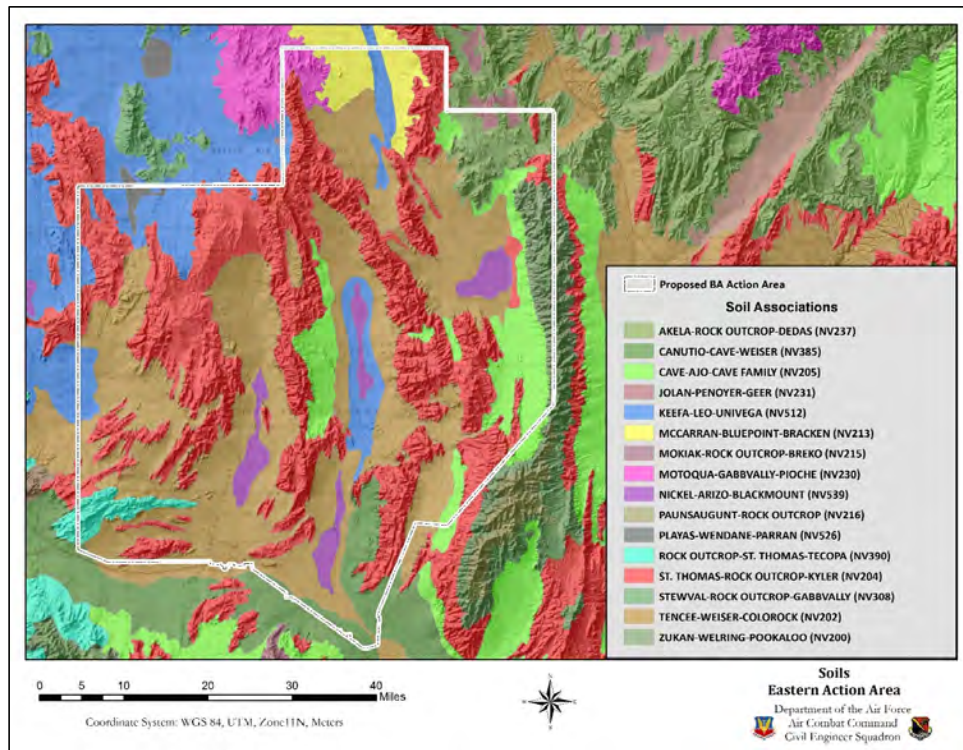


Figure 13. Soil associations found on the Eastern Action Area

Note that these are soils associations which contain several different soil mapping units having a wide variety of textures and structures. Thus, even though an association may be located in a topographically ideal area for the DT, it may not have the soil texture or structure for burrow excavation by the DT. Most of the soil associations that are not listed as likely to support DT populations are characterized by rocky surfaces and mountainous terrain. Soils in the dry lakes are often saline or contain thick accumulations of alkaline mineral salts at or near the surface resulting in areas of sparse vegetation. Desert pavement is also common on much of the Eastern Action Area.

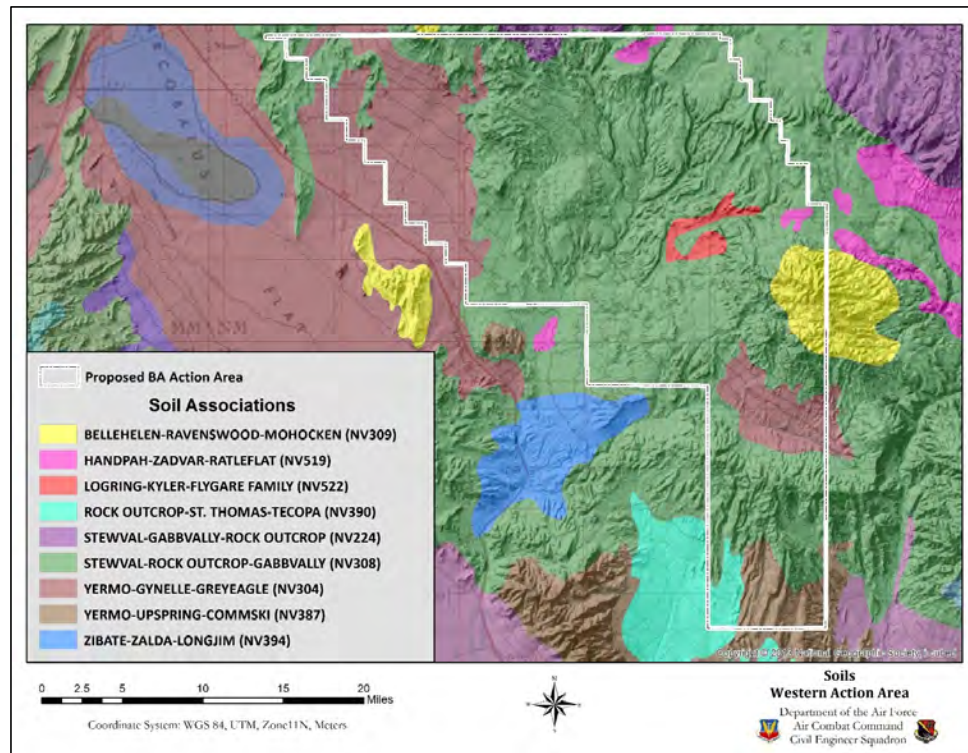


Figure 14. Soil associations found on the Western Action Area

Geology

The mountain ranges in the Eastern Action Area are dominated by Paleozoic carbonate rocks mixed with smaller amounts of quartzite, sandstone, and shale. Valleys in this area contain thick deposits of alluvium originating from erosion of adjacent mountain ranges. Sedimentary rocks originating from lakes and rivers have been deposited in shallow basins and outcrop in several locations within the Action Area, particularly in the southern Spotted Range, the Pintwater Range, and the Desert Range. Older Tertiary valley-fill sediments which were uplifted with the underlying Paleozoic bedrock are exposed on the flanks of the mountains (Nevada Bureau of Mines and Geology, 1997) (Longwell, Pampeyan, Bowyer, & Roberts, 1965).

Volcanic rocks dominate the geology of the Western Action Area. The Timber Mountain Caldera and Black Mountain are the centers of volcanic activity found in the Western Action Area (Cornwall, 1972; Nevada Bureau of Mines and Geology, 1997). The geologic outcrop most likely to support DT on the Action Area are alluvial deposits that dominate the Eastern Action Area and are also found on the west side of the Western Action Area. This formation is typified by relatively deep sedimentary deposits of loam or silt loam soils. They are usually found from the edges of playas to the base of mountain ranges and comprised of alluvial fans or bajadas.

Hydrology

The Action Area is located in a mountain and basin drainage system where most of the hydrology is internally drained. The only areas on the Action Area that drain externally and are connected to navigable waters making them fall under the jurisdiction of the U.S. Army Corps of Engineers are shown in Figures 15 and 16. The Eastern Action Area is almost completely internally drained with the exception of a small portion of the southeastern corner which drains into the Las Vegas Wash and, eventually, the Colorado River (Figure 15). Much of the Western Action Area drains into the Amargosa River, but about one third of the area is internally drained into Sarcobatus Flats which is a closed basin (Figure 16). Local drainage patterns are comprised of alluvial fans having complex networks of braided channels. Surface waters are all ephemeral and the source of hydrology is precipitation. Storm events can result in rapid accumulation of storm water in washes causing local flash floods and extensive erosion. Many of these washes cut through areas covered with rocks and coarse gravel, not conducive to burrowing activities of the DT. The channels often provide exposed banks free of rocks and gravel that are often used by the DT for burrows.

Water flows from the mountains and bajadas into the dry lakes, where it accumulates for short periods of time. Very few perennial water sources are found in the Action Area and most of those are springs and wildlife water developments located in the mountains. Detailed information on the hydrology of the Action Area is discussed in a summary report prepared for the LEIS (U.S. Air Force, 2017A).

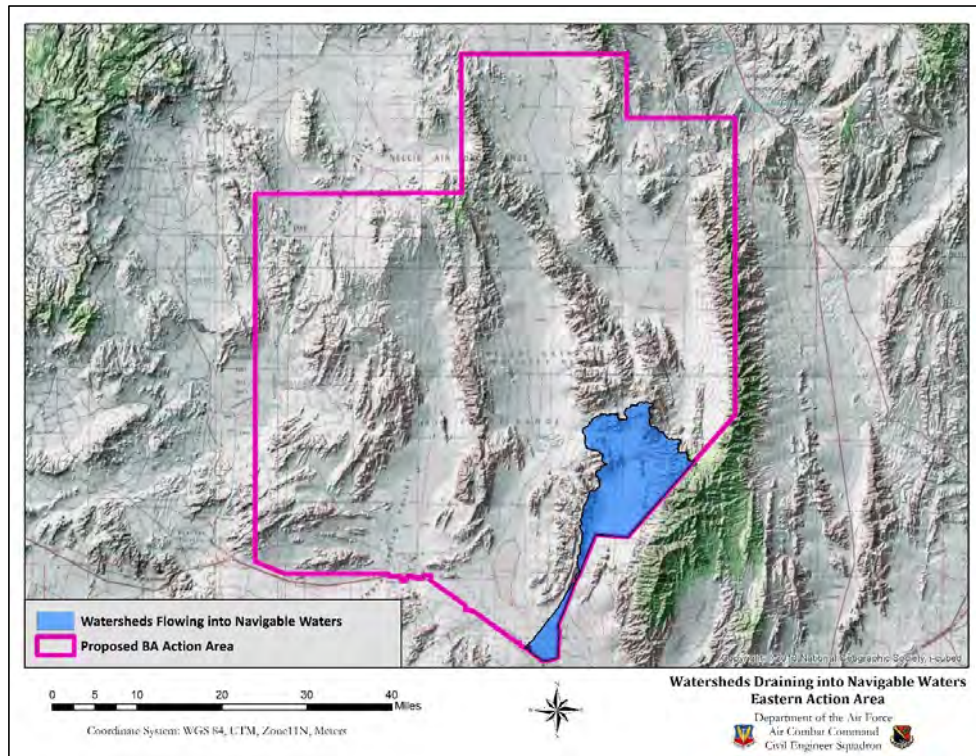


Figure 15. Watersheds on the Eastern Action Area draining externally into navigable waters (Las Vegas Wash/Colorado River). All other watersheds drain internally in closed basin systems.

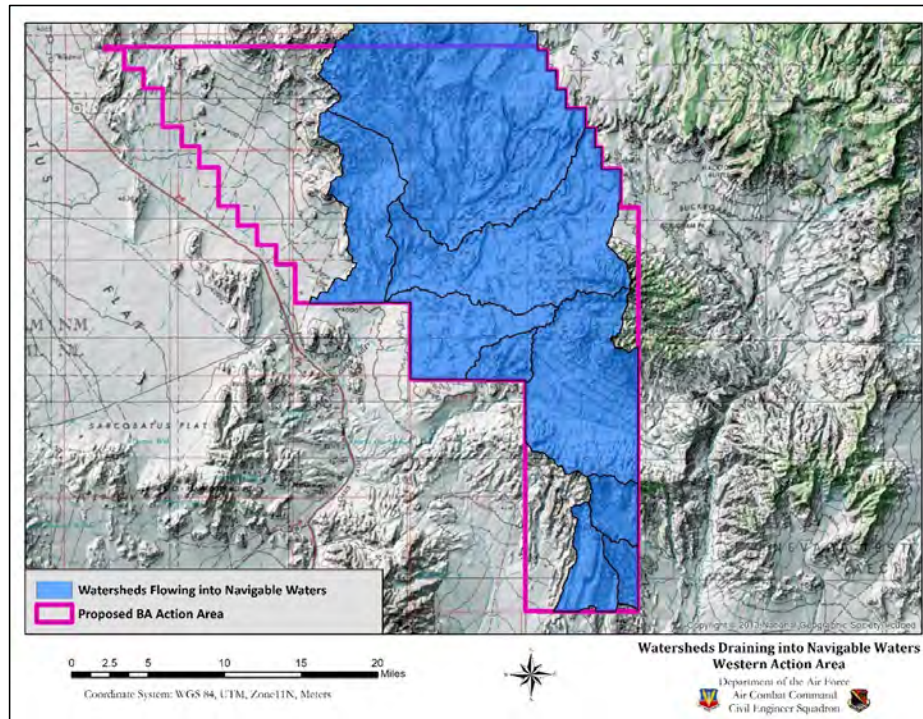


Figure 16. Watersheds on the Western Action Area draining externally into navigable waters (Amargosa River). All other watersheds drain internally in closed basin systems.

Vegetation

Plant communities have been tentatively mapped for the Action Area by the USAF which is provided in detail in a separate report (Figures 17 and 18) (U.S. Air Force, 2017B). This discussion only highlights the plant communities found on the Eastern and Western Action Areas.

Eastern Action Area

The Eastern Action Area mostly lies in the Mojave Desert, where creosote bush (*Larrea tridentata*)/white bursage (*Ambrosia dumosa*), and saltbush communities are the most common vegetation communities on the South Range of the NTTR. Where soils are especially alkaline and clay-rich, as on the margins of dry lake beds (playas) at the lowest elevations, saltbush species, including four-wing saltbush (*Atriplex canescens*) and shadscale (*A. confertifolia*), dominate the vegetation. Saltbush communities, especially near playas, may consist exclusively of these species.

Vast areas of the basins and bajadas in the Mojave Desert, below approximately 3,940 ft. MSL, support plant communities dominated by creosote bush and white bursage. Saltbush species, joint firs or Mormon teas (*Ephedra* spp.), brittlebush (*Encelia farinosa*), desert mallow (*Sphaeralcea ambigua*), cacti (especially prickly pears and chollas [*Opuntia* spp. and *Cylindropuntia* spp.]), and Mojave yucca (*Yucca schottigera*) may also occur in this community.

At higher elevations (approximately 3,940 ft. to 5,900 ft. MSL) blackbrush (*Coleogyne ramosissima*) often is the dominant plant in the community. In addition to blackbrush, this plant community includes joint

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firs, turpentine-broom (*Thamnosma montana*), and littleleaf ratany (*Krameria erecta*). Joshua tree (*Yucca brevifolia*) is another plant establishing significant populations at higher elevations of the creosote bush-white bursage and at most elevations of the blackbrush communities. While it is rarely the dominant species in terms of numbers or cover in these communities, the Joshua tree contributes a significant proportionate biomass in the local area, and its mature height of up to 20 feet contributes to its visual domination over the surrounding low shrubs, most of which grow to less than 3 feet tall.

The sagebrush/pinyon-juniper community comprises a woodland habitat that is present on parts of the Eastern Action Area and is distinctive of the higher elevations of the Mojave and Great Basin Deserts. At these higher elevations, increased precipitation and lower temperatures facilitate the development of this woodland habitat. The dominant species include big sagebrush (*Artemisia tridentata*), single leaf piñon pine (*Pinus monophylla*), and Utah juniper (*Juniperus osteosperma*) in habitats with deeper soils, and black sagebrush (*Artemisia nova*) or dwarf sagebrush (*Artemisia arbuscula*) in areas with shallow, rocky soils. On the Eastern Action Area, scattered populations of Utah juniper may be found. Mormon tea (*Ephedra viridis*), snakeweed (*Gutierrezia* spp.) and rabbitbrush species (*Chrysothamnus* spp.) are common sub-dominants in this woodland. On the Eastern Action Area, the blackbrush and sagebrush/pinyon-juniper communities are more limited in distribution, being restricted to higher elevations than the creosote bush/white bursage and saltbush communities.

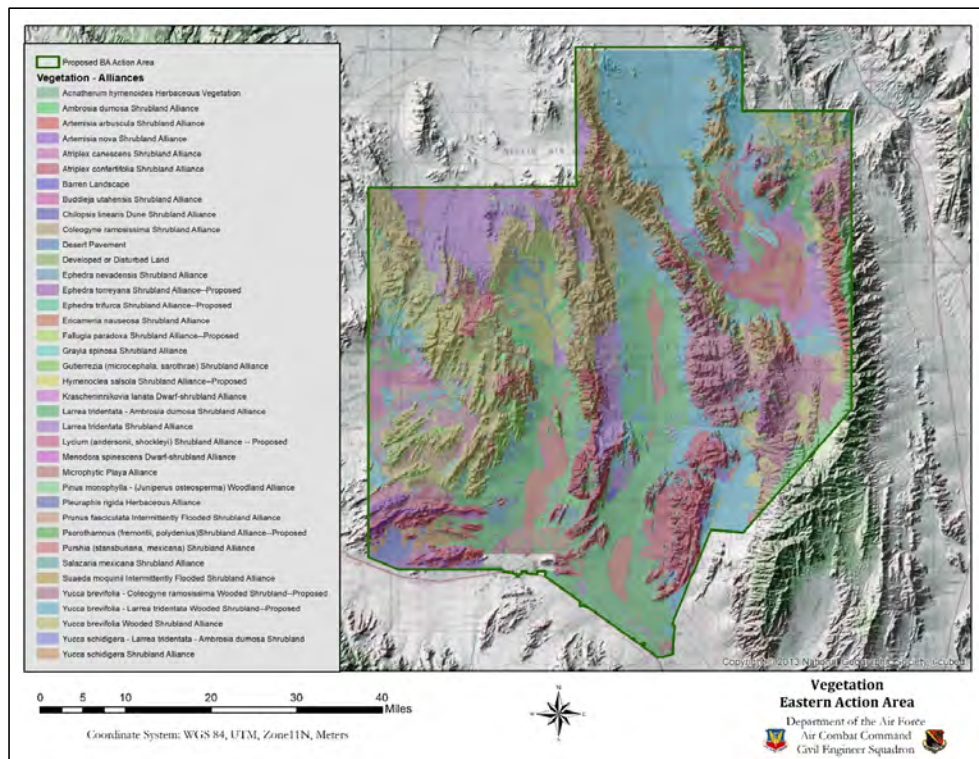


Figure 17. Plant alliances found on the Eastern Action Area.

Western Action Area

The vegetation on the southern half of the Western Action Area is similar to the Eastern Action Area. However, on the northern half of the Western Action Area, vegetation of the basin floors is typified by shadscale and greasewood (*Sarcobatus vermiculatus*). Both salt-tolerant shrubs may occur in relatively monotypic stands, or may be co-dominant with winter fat (*Krashennikovia lanata*) and green molly (*Kochia americana*). Intermediate elevation slopes are dominated by various species of horsebrush (*Tetradymia* spp.), rabbitbrush (*Chrysothamnus nauseosus*, *C. viscidiflorus*), hopsage (*Grayia spinosa*), greasewood, shadscale, and budsage (*Picrothamnus desertorum*). With increasing elevation to the north and around the Timber Mountains, Utah juniper and pinyon pine become the dominant overstory with an understory of various species of sagebrush. Other species that occur in this community include rabbitbrush, joint fir, and occasional Joshua tree. Greasewood may occur as a co-dominant with sagebrush. The blackbrush vegetation occurs in the southerly portions of the Western Action Area at intermediate elevations between the shadscale community and sagebrush-pinyon-juniper community.

A vegetation transition zone found between the Mojave and Great Basin deserts occurs on the Action Area, and includes plants from both deserts distributed in a mosaic pattern. Specific indicators of this transition might also be identified. In the existing scientific and technical literature, the author who most directly addressed this issue was Janice Beatley (Beatley, 1976). Beatley identified and described a vegetation transition zone dominated by blackbrush and other plants, such as boxthorn (*Lycium* spp.),

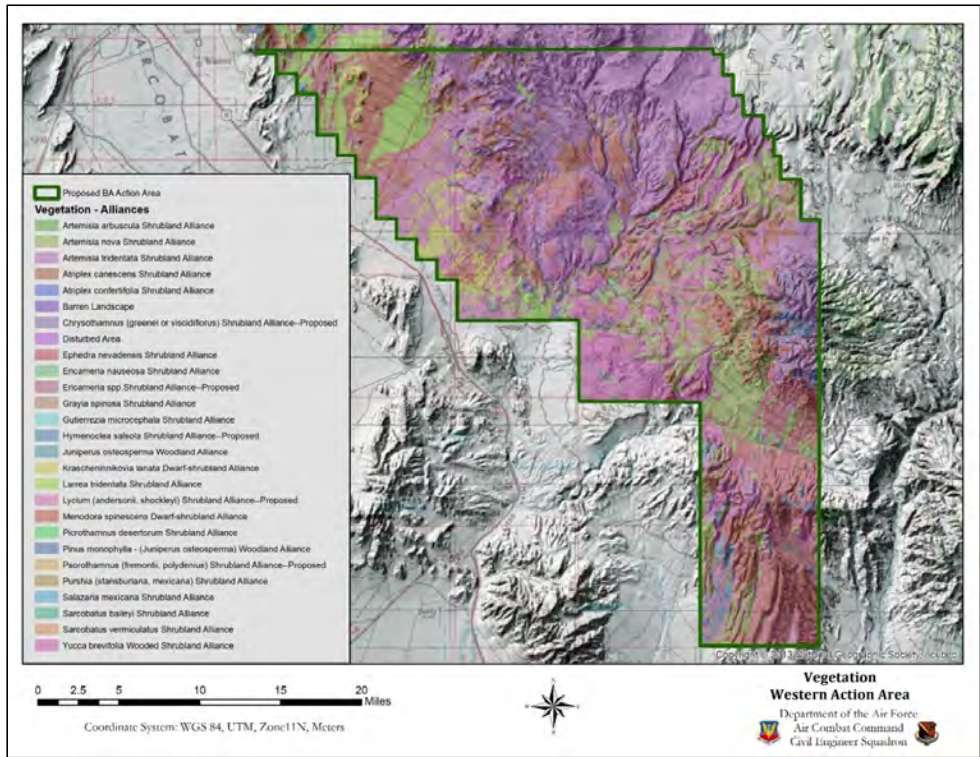


Figure 18. Plant alliances found on the Western Action Area.

hopsage, and saltbush species, located largely on the Nevada Test Site (see also (Beatley, 1975; El-Ghonemy, Wallace, & Romney, 1981)) and occurring on the Western Action Area.

This transition zone represents an important region on public lands because it supports species from different biotic regions. A greater diversity of plant and animal species is likely to be found there, and may harbor unique species. Transition zones serve as corridors for some species and as barriers for others, because the transitional habitats can be optimal for some species while being inhospitable for others.

Wildlife

Beginning in 2005, the NNRP initiated extensive surveys to provide baseline information on wildlife populations on the NTTR. The DNWR also conducted a limited number of surveys on the refuge outside of the South Range of the NTTR. In 2016, golden eagle and migratory bird surveys were conducted by Leidos on the alternative expansion areas. Summary reports of historic and recent surveys that were prepared for the LEIS for the renewal and expansion of the withdrawn land include the following:

- Migratory Birds (U.S. Air Force, 2017C)
- Large Mammals (U.S. Air Force, 2017D)
- Golden Eagle and Raptors (U.S. Air Force, 2017E)
- Special Status Wildlife Species (U.S. Air Force, 2017F)

In addition to these reports, annual project reports have been prepared for the NTTR by the Nellis Natural Resources Program (NNRP) to include large mammals, golden eagles, migratory birds, reptiles, small mammals, and bats. These are available upon request to the NNRP at NAFB.

Of importance to the DT are those species that compete with the DT for forage and species potentially preying on the DT. Probably the greatest competitor for forage is lagomorphs, especially the desert cottontail (*Sylvilagus audubonii*) and the black-tailed jackrabbit (*Lepus californicus*) which are common on the Action Area and forage on many of the succulent, herbaceous annuals preferred by the DT. Several small mammals are also common on the Action Area and may consume some of the forages used by the DT, but most are granivores and do not rely heavily on green vegetation. Predators of the DT (Boarman, 2002) that have been observed on the Action Area include:

- Raptors (Various species including the golden eagle)
- Common Raven (*Corvus corax*)
- Coyote (*Canis latrans*)
- Badger (*Taxidea taxus*)

Species Description

BIOLOGY

The DT is Nevada's official state reptile and is currently listed by the USFWS as "Threatened", and classified as a State Protected and Threatened Species by the Nevada Department of Wildlife (NDOW) (Nevada Department of Wildlife, 2012). The Mojave Desert population occurs in both the Mojave and Sonoran Deserts north and west of the Colorado River in southwestern Utah, southern Nevada, southeastern California, and northwestern Arizona (Nevada Fish & Wildlife Office, 2013) (Berry K. , 1989). Currently, five recovery units for the DT have been designated by the USFWS based on geographic boundaries and genetic differences between DT populations. Although the species is listed as merely distinct population segments, it is possible that future regulations may apply to separate subspecies (Digital West Media, Inc., 2013).



DT resting in the shade of a Mojave Yucca.

DTs are long-lived species that have a carapace length of 1.4 inches at birth and reach 11-16 inches when mature. Adult DTs weigh over 10 pounds. Adults have a domed carapace and relatively flat, un-hinged plastrons. Their shells are brown to dark brown in color with orange to yellow scute centers. A gular horn is located on the anterior end of the plastron (bottom of the shell) and is pronounced in males. Males tend to have shorter claws, longer and thicker tails, a concave plastron, and large chin glands compared to females (Boarman, 2002).

DTs are slow growing, requiring 13 to 20 years to reach sexual maturity, and have low reproductive rates during a long period of reproductive potential (Turner, Medica, & Lyons, 1984) (Bury, Esque, DeFalco, & Medica, 1994) (Germano D. , 1994). Growth rates are greater in wet years when annual plant production is higher (Medica, Bury, & Turner, 1975). The number of eggs (1-10) as well as the number of clutches (1-3) that a female DT can produce in a season is dependent upon a variety of factors including environment, habitat, availability of forage, drinking water, and physiological condition (U.S. Fish & Wildlife Service, 2011) (Turner, Burge, Robertson, & Hayden, 1986) (Turner, Berry, Rabdall, & White, 1987) (Henen, 1997). As a desert species, DTs tolerate water, salt, and energy imbalances on a daily basis. This ability



DT found on South Range of NTTR

allows them to use unpredictable and ephemeral resources to meet nutritional requirements for survival (Peterson, 1996). However, these stresses can have long term reproductive consequences on individuals and populations.

The activity peak of Mojave DTs occurs in spring (Luckenbach, 1982), where they begin daily foraging around the last week in March or first week in April and are generally aestivating by mid to late June (Jennings, 2002). They are most active in April and May, with the level of summer activity being higher in eastern populations (Averill-Murray, Martin, Bailey, & Wirt, 2002). DTs in the western portion of its range likely spend more time aestivating during summer than those in eastern populations due to the lack of summer rains in the west (Devender, Averill-Murray, Esque, & Holm, 2002). DTs hibernate in their burrows during the winter. On a research site on the northern edge of the Mojave Desert in southwestern Nevada, 98% of individuals hibernated from mid-November to mid-February (Meyer, 2008). Nesting occurs in May and June in the Mojave Desert (Averill-Murray, Martin, Bailey, & Wirt, 2002) (Turner, Burge, Robertson, & Hayden, 1986) (Turner, Medica, & Lyons, 1984) (Wallis, Henen, & Nay, 1999), and slightly later in the Sonoran Desert (Meyer, 2008). Eggs hatch from September to October in the eastern Mojave Desert and August to September in the western Mojave Desert (Averill-Murray, Martin, Bailey, & Wirt, 2002).

Due to the DT being ectothermic (cold blooded), ambient temperatures strongly influence DT activity level. Although DTs can survive body temperatures below freezing (Bailey, Schwalbe, & Lowe, 1995) (Vaughan, 1984) to over 104°F, most activity occurs when body temperatures are 79°F to 93°F (Vaughan, 1984; Rundel & Gibson, 1996). The influence of ambient temperature is reflected in daily activity patterns, with DTs active late in the morning during spring and fall, early in the morning and late in the evening during the summer, and occasionally becoming active during relatively warm winter afternoons (Vaughan, 1984; Rundel & Gibson, 1996).

The herbivorous diet of the DT is also highly variable, but is mostly comprised of grasses and forbs. Although non-native plant species generally do not comprise a major portion of their diet, some can be important components where populations have adapted to changes in vegetative communities caused by soil disturbances or wildland fires. Native or non-native dominant plants found in any location will comprise over 60% of the DT diet with less common plants comprising the remaining 40% (Meyer, 2008). As many as 79 plant species have been listed as part of the DT diet depending on the location (Jennings, 2002; Vaughan, 1984; Martin & Devender, 2002; Esque, 1994). Most of these species are annuals and herbaceous perennials. The forage mainly consists of leaves, stems, flowers, fruits and seeds of species. Within the Mojave Desert populations, diets may include plantains (*Plantago* spp.), milkvetches (*Astragalus* spp.), lupines (*Lupinus* spp.), threeawns (*Aristida* spp.), gramas (*Bouteloua* spp.), evening primrose (*Camissonia* and *Oenothera*), phacelia (*Phacelia* spp.), desert dandelions (*Malacothrix* spp.), big galleta (*Galleta* spp.), and smooth brome (*Bromus tectorum*) (Jennings, 2002) (Vaughan, 1984) (Esque, 1994) (Martin & Devender, 2002) (Ofstedal, Hillard, & Morafka, 2002) (Ernst, Lovich, & Barbour, 1994). Spurge (*Euphorbia* spp.) and narrowleaf silverbush (*Argythamnia lanceolata*), as well as desert shrubs and the pads or fruits of the prickly pear (*Opuntia* spp.), are occasionally important components of the DT diet (U.S. Fish & Wildlife Service, 2011).

DTs spend the majority of their time in a shelter. However, movements of up to 660 ft. per day are common and long-distance movements do occur. The common, comparatively short-distance movements presumably represent foraging activity, traveling between burrows, and possibly mate-seeking or other social behaviors. Long-distance movements could potentially represent dispersal into new areas and/or use of peripheral portions of the home range (Meyer, 2008). Estimates of DT densities vary from less than 13 DT/sq.mi. on sites in southern California (Berry K. H., 1986) to over 800 DT/sq.mi. in the western Mojave (Meyer, 2008). The often-overlapping home ranges of DTs generally average from 10 to

100 acres, although average home ranges are as small as 2.2 acres and as large as 131 acres. Variations in home range sizes are likely due to differences in gender, season, and the availability of resources (Meyer, 2008).

HABITAT DESCRIPTION AND REQUIREMENTS

Optimal habitat for the DT has been characterized as creosote bush scrub in which precipitation ranges from 2 to 8 inches (Nussear, et al., 2009) (Germano, Bury, Esque, Fritts, & Medica, 1994) (U.S. Fish and Wildlife Service, 2009). These plant communities have a relatively high diversity of perennial plants, and high productivity of herbaceous plant (Luckenbach, 1982) (Turner R. , 1982) (Turner & Brown, 1982). Soils must be sufficiently friable for digging burrows, but adequately firm to prevent collapsing of burrows (U.S. Fish and Wildlife Service, 2012). DTs occur from below sea level to an elevation of



DT occupying a burrow

7,300 ft. MSL, but the most favorable habitat occurs at elevations of approximately 1,000 to 3,000 ft. MSL (Luckenbach, 1982). In addition, they occur in cheesebush scrub, blackbrush scrub, hopsage scrub, shadscale scrub, Mojave saltbush-allscale scrub, and scrub-steppe vegetation types of the desert and semi-desert grassland complex (U.S. Fish and Wildlife Service, 1994B).

Within these vegetation types, DTs potentially can survive and reproduce where their basic habitat requirements are met. These requirements include a sufficient quantity and quality of forage species; shelter sites for protection from predators and environmental extremes; suitable substrates for burrowing, nesting, and overwintering; various plants for shelter; and adequate area for movement, dispersal, and gene flow (U.S. Fish and Wildlife Service, 2012). Throughout most of the Mojave Region, DTs occur most commonly on gently sloping terrain with sandy-gravel soils, scattered shrubs, and abundant inter-shrub space for growth of herbaceous forage plants (Nussear, Esque, Haines, & Tracy, 2007) (W.B. Jennings, 2015). Throughout their range, however, DTs can be found in steeper, rockier areas (Gardner & Brodie, 2000) (U.S. Fish and Wildlife Service, 2012) .

Status of the Desert Tortoise in the Action Area

PREVIOUS ACTIVITIES AND DISTURBANCES AFFECTING THE SPECIES

South Range of the NTTR

Previous activities and general disturbances that have occurred on the South Range of the NTTR include weapons delivery areas (targets), target cleanup, threat emitters, infrastructure construction and maintenance, and test and evaluation. The current BiOp covers all the actions that occurred after 2003 (U.S. Fish and Wildlife Service, 2003). Activities prior to 2003 were approved through individual consultation and BAs specific to those actions. Specific disturbances occurring on South Range of the NTTR include the following:

- 1994: Installation of 15 waste disposal sites
- 1994: Relocation of a cluster bomb unit weapons delivery areas (U.S. Fish and Wildlife Service, 1994A)
- 1999: Installation of borrow pits for road construction and maintenance
- 2002: Construction of a bypass road for accessing a target on the western edge of Dogbone Lake (U.S. Fish and Wildlife Service, 2002)
- 2002: Construction of a High-Technology Test and Training Complex (One sq. mi. footprint)
- 2006: Construction of an equipment pad in the southern part of the South Range of the NTTR
- 2006: Construction of an equipment pad in the central part of the South Range of the NTTR at the Urban Combat Training Center
- 2007: Construction of the Creech Air Force Base (CAFB) bypass road.
- 2008: Construction of new training facilities at Silver Flag Alpha(SFA) on the southeast corner of the South Range of the NTTR
- 2008: Installation of training markers for the Thunderbirds
- 2010: Additional expansion of the training area at SFA
- 2010: Remediation of depleted uranium
- 2015: Demolition of buildings on the east side of CAFB
- 2015: Installation of a new fence for the Mile Range Equipment Storage Area.

Range 77

Previous activities and general disturbances on Range 77 include the following:

- Infrastructure maintenance and construction, including monitoring wells, roads, and detention basins
- Test and evaluation

Alternative 3A

The only actions that have occurred previously on Alternative 3A were road construction and maintenance and public access.

Alternative 3B

Previous actions occurring on Alternative 3B were minor and have mostly occurred on the southern part of the alternative and were associated with the construction and maintenance of U.S. Highway 95 (borrow pits, access roads, etc.). The remainder of this alternative was protected as a potential wilderness area and was impacted by minor road maintenance on previously constructed roads.

Alternative 3C

Because this entire area is included in the DNWR, previous actions on this alternative were minor and associated with road maintenance and construction and public access.

HISTORIC SURVEYS

Presence/Absence Surveys

Sharp, B.E. 1989. Desert Tortoise Survey on the Desert National Wildlife Refuge 1989-1980. U.S. Fish and Wildlife Service, Portland, Oregon (Sharp, 1989). A survey was conducted to determine the relative abundance of DT on the DNWR to update previous surveys conducted by Schneider and Turner in 1981. Surveys were conducted from October 16, 1989 to October 26, 1989 using the triangular survey methodology described by Berry (1984). The survey found 135 DT burrows, 20 scat, eight carapaces, and one live tortoise. All the DT and sign were found below 4,000 ft. MSL.

Zellar, B. L. 1990. Survey of Desert Tortoise Habitat on the Southern Desert National Wildlife Range May 1990. U.S. Fish and Wildlife Service. Las Vegas, Nevada (Zellar, Survey of Desert Tortoise Habitat on Southern Desert National Wildlife Range May 1990, 1990). Random triangular 1.5-mile survey transects were randomly conducted on the south side of the DNWR. During the survey, 20 burrows, two scat, and seven carapaces were observed during a total of 10 transects. It was concluded that the DT density was slightly higher on the southern part of the DNWR compared to the eastern part. Overall, DT density was considered low.

Zellar, B. L. 1994. Survey of Desert Tortoise Habitat near a Gravel Pit on the East Side of US 93. U.S. Fish and Wildlife Service. Las Vegas, Nevada (Zellar, 1994). Four 0.5-mile transects were surveyed around a gravel pit located slightly north of mile marker 19 on US 93. During the survey, two scat and two burrows were observed. It was concluded that the DT density in the area was low and unlikely to be jeopardized by equipment operating in the area currently disturbed by the gravel pit.

Zellar, B. L. 1995. Survey of Desert Tortoise Habitat on the Southwest Boundary of the Desert National Wildlife Range. U.S. Fish and Wildlife Service. Las Vegas, Nevada (Zellar, 1995). The DT survey was conducted along the unfenced boundary of the DNWR on May 10, 1995. The transect covered approximately 3.25 miles on a relatively flat bajada. During the survey, three burrows and one carapace were observed. Overall the DT's density was determined to be low.

Environmental Research Center, Barrick Museum of Natural History, UNLV-Las Vegas. May 1990. A Desert Tortoise Investigation of the Dogbone Lake Site, Range 62, Nellis Air Force Range for the Nellis Air Force Base, USAF (Pratt, 1990). On May 5 and May 12, 1990, an approximate 720-acre area of the Dogbone Lake Site, Range 62, NTTR (located in Section 8, T13SA, R58E, Clark County, Nevada) was searched for the presence of DT activity. Search objects included live DT, DT scat, tracks, burrow entrances, pellets, and other evidence of species activity. Results of the survey uncovered twenty-five active burrows and pellets, fifteen inactive burrows, and eleven disused burrows and pellets. Additionally, five live specimens (two in burrows and three active individuals) and three DT carcasses were observed. In total, 57 signs were identified for a relatively low density of 0.1 signs per acre for the 720-acre project area.

Science Applications International Corporation. March 1, 1991. Mojave Desert Tortoise Survey at Range 63, Nellis Air Force Base, Nevada (Weinstein, 1991). A survey was conducted on February 9th and 10th, 1991, to evaluate a 206-acre parcel of land located in Range 63 (South Range) of NAFB for the presence of DT sign. Range 63, located near Indian Springs, Nevada, is part of both the Desert National Wildlife Refuge (DNWR) and NAFB weapons testing grounds. The survey was conducted under the pro-

toloc recommended by the USFWS. Based on the results of the survey, no “live DT, burrows, carcasses, scat, or tracks” were identified within the surveyed area.

Dames & Moore. January 7, 1994. Report: Desert Tortoise Survey South Range Disposal Sites for Nellis Air Force Base (Dames and Moore, 1994A). In December of 1993, Dames & Moore personnel conducted DT surveys in association with site characterizations of waste disposal sites intended to ascertain whether the presence of waste burial pits had resulted in impacts to soil or groundwater media. Of the fifteen total waste sites, it was determined that only nine site characterizations (all on NTTR South Range) had the potential to impact DT populations or habitat. Subsequent surveys and zones of influence surveys of these nine areas were conducted by qualified biologists, and DT sign was recorded. The surveys did not find any live signs of DT or active burrows; however, possible burrows were identified on two of the zone-of-influence surveys. The condition of the possible burrows indicated that neither had been used for several years, and the overall results of the survey activities indicated that this portion of the South Range of the NTTR was not presently being used by DT. These findings were in agreement with previous surveys which indicated that this particular region is either low-density or unsuitable DT habitat.

Dames & Moore. January 11, 1994. Biological Assessment of the Proposed CBU Target Site at the Nellis Air Force Base Range (Dames and Moore, 1994B). Dames & Moore prepared a BA to address potential impacts to DT populations and habitat resulting from relocating the existing cluster bomb unit (CBU) target area approximately 1.5 miles southwest of its 1994 location. The report noted that previous studies identified in the literature review indicated that DT populations at NTTR are low to moderate (0-99 animals per square mile) and relatively stable under normal base operations. Potential impacts identified by the assessment included: 1) removal or destruction of habitat from explosive detonations; 2) loss of habitat features (i.e. burrows); 3) actual loss of animals from bombing activities; 4) degradation of potential habitat from soil disturbances and noise increases; and 5) disturbance of animals by blast pressures and ground vibrations.

The report further advises that compensation for losses of DT habitat could be off-set by rehabilitating the retired CBU range. Additionally, the assessment recommended that a DT education program be implemented for all employees working at the site and a protocol be implemented for reporting dead DT and transporting injured or ill animals to a veterinarian.

EG&G Energy Measurements. 1994. The Northern Boundary of the Desert Tortoise Range on the Nevada Test Site. U.S. Department of Energy. Las Vegas, Nevada (Rautenstrauch, Brown, & Goodwin, 1994). A DT study was conducted in 1993 to determine the northern boundary of the range of DT on the NNSS. Approximately 210 Miles of transects were walked to make this determination. During the survey, 53 tortoise sign were recorded. Information was used to develop a map of the northern extent of DT habitat. A copy of the map is provided in in Figure 19.

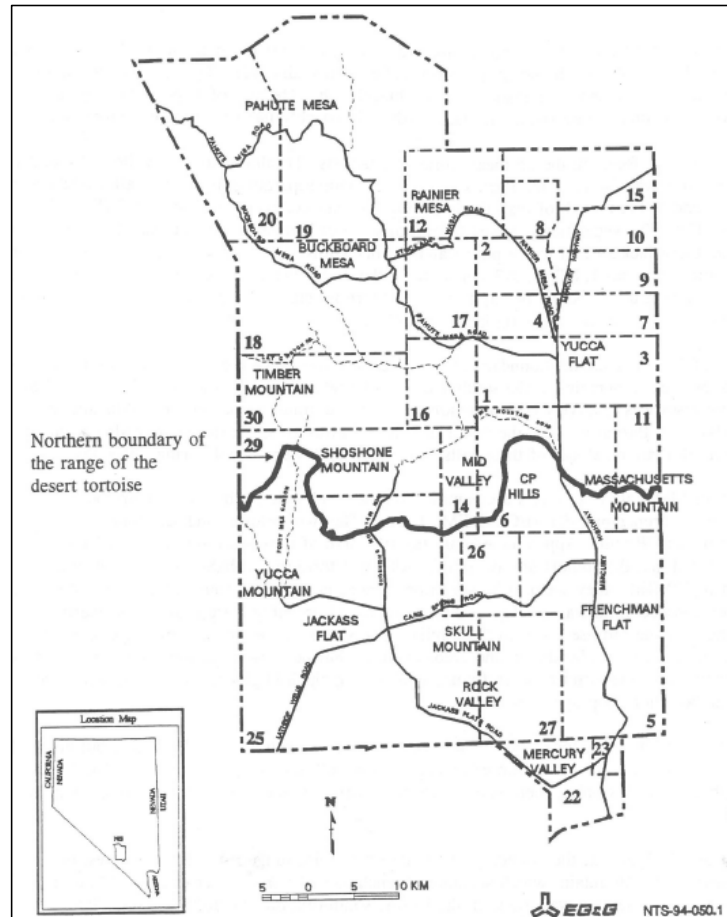


Figure 19. Map of the northern extent of DT habitat on the NNSS as determined in 1994.

U.S. Air Force. July 2002. Biological Assessment for Desert Tortoise (U.S. Air Force, 2002A). This BA was prepared to evaluate whether impacts to DT habitat and populations would occur from implementation of one of three alternatives involving construction of a High-Technology Test and Training Complex (HTTC). The HTTC complex would have a surface footprint of approximately one square mile. Two alternatives (Alternatives 1A and 1B) as well as no-action alternative were evaluated. Alternative 1A (869 acres) is located within Range 62B and Alternative 1B (946 acres) is located in Range 64B; both of which are near the western boundary of the South Range of the NTTR and within the Desert National Wildlife Range (DNWR).

Survey activities at the Alternative 1A location indicated that the site supports a low-density DT population. Surveying activities identified three live DT, tracks, 40 burrows, 14 pallets, and two carcasses. The estimated DT density for this location was 5-10 DT per square mile. Minimal sign was recorded at the Alternative 1B project location. Identified sign included only several inactive burrows; however, suitable DT habitat was identified on the project area.

The BA concluded that while some impacts to DT habitat and populations would occur from implementation of the proposed action, based on the results of survey activities, Nellis training initiatives, and planned mitigation activities, the DT population would not be significantly impacted.

National Security Technologies LLC. 2008. Biological Assessment for the Effects of National Nuclear Security Administration Activities at the Nevada Test Site on the Desert Tortoise. Las Vegas, Nevada (National Security Technology LLC, 2008). This BA was prepared to present potential impacts to DT as a result of activities on the NNSS over the next five years. Background information on DT distribution and relative abundance was provided in the BA. Additionally, the VA described proposed actions and mitigative measures to eliminate, reduce, or compensate for negative impacts. A map of DT habitat was provided in indicated that the northern extremity of habitat followed a line just slightly north of Beatty, Nevada. DT density on the project area ranged from very low or none (0-10 DT/sq. mi.) to moderate (44-90 DT/sq. mi.). The conclusion of the report was that the proposed activities would likely impact individual desert tortoises but would not threaten the continuing existence of the species on the NNSS.

Stantec Consulting Services Inc. 2012. US Ecology Nevada Facility—Biological Evaluation. Beatty, Nevada (Stantec, 2012). This biological evaluation also included the results of a DT survey report for the project area, which was located north of Beatty, Nevada. According to both reports, no DT or DT sign were found in the action area. Because the facility itself is fenced and basically DT proof, it was recommended that no impacts to DT would occur and no further action to protect DT would be required.

NNSS. Annual. Ecological Monitoring and Compliance Program Annual Reports. Las Vegas, Nevada. Each year the NNSS prepares an annual report summarizing all of the ecological monitoring and compliance programs conducted for the NNSS. Part of this includes a summary of DT surveys and monitoring. DT populations are continually monitored and clearance studies are conducted for all activities potentially impacting DT populations. Annual reports indicate that DT populations are relatively stable and continue to be at a relatively low density similar to surrounding areas. The northern boundary of DT habitat is still considered the same as that mapped in 1994.

Monitoring/Clearance Surveys

L. Cunningham. May 26 to June 17, 2004. Nellis Air Force Range Desert Tortoise Monitoring Report. Construction of a target by personnel from DynCorp on the HTTC site was monitored for DT from 25 May 2004 to 17 June 2004. Almost all DT and signs were found along the eastern area of the HTTC, where a fan sloped down from low hills and mountain bases, and strips of Galleta grass (*Pleuraphis torr.*) alternated with desert pavement. Highest density appeared to be around the military barracks, where all live DT, active burrows, and a nest were observed. Tracks were common along canals on the east side and a few on dirt roads to the south and to the north of the main city. No DT or signs were found around the playa to the west where an airport and runway were constructed.

The following DT signs were recorded during the monitoring period: one adult female, one adult male, and one juvenile (live DT); one nest with five eggs; one dead DT; two areas of shell fragments; two active burrows; two inactive burrows; and seven sets of tracks.

NNRP. 2006. DT clearance survey for construction of an equipment pad for monitoring mission activities on NTTR in Range 63A. No formal report was written for this survey.

NNRP. 2006. DT clearance survey for construction of an equipment pad for the Urban Combat Training Center in Range 62B. No formal report was written for this survey.

NNRP. 2007. DT clearance survey for construction of the Creech Air Force Base bypass road. No formal report was written for this survey.

NNRP. 2008. DT clearance survey for construction of new training facilities at Silver Flag Alpha. No formal report was written for this survey.

NNRP. 2008. DT clearance survey for installation of Thunderbird training markers. No formal report was written for this survey.

NNRP. 2010. DT monitoring for expansion of Silver Flag Alpha on the NTTR. No formal report was written for this survey.

NNRP. 2010. DT monitoring for remediation of depleted uranium area on the South Range of the NTTR. No formal report was written for this survey.

Works, A. 2010. Desert National Wildlife Refuge Tortoise Survey Report for U.S. Fish and Wildlife Service. SNEI Biological and Botanical Services, Las Vegas, Nevada (Works, 2010). SNEI was contracted by the USFWS to conduct a DT presence/absence survey for a fence line being installed on the southern side of the DNWR. This survey was not located on the action area. The fence was approximately three miles long. No live desert tortoises were observed during the survey, but one pallet and two burrows were observed.

Adams Ecology Inc. August 6-23, 2012. Installation of a Fiber Optics Cable on BLM Land in Indian Springs, Nevada to Service CAFB. The Indian Springs Fiber Optics Installation Project site was monitored for DT as required by the BLM for CAFB. Construction personnel were cooperative and alert to DTs during construction, and no negative incidents occurred. No live DTs or DT sign were observed within the bounds of the project during the time of the monitoring events. A preliminary survey of the project site indicated that the site did not appear to support DT populations. However, monitoring was conducted since the site was located in viable DT habitat. On August 6, 2012, DT biologists conducted a clearance survey to ensure that no DTs were on the project site prior to any vehicles or equipment being moved onto the area. No DTs were observed. Prior to each day's construction activities, the project area was surveyed for DTs. All personnel working on the site were given formal DT training and were required to complete a check list to document the topics covered by the training session. During the entire project life from August 6 through August 23, no DTs or DT sign were observed. Several burrows were identified, but were found to be created by other mammals and not created or used by DTs.

Adams Ecology Inc. January 21, 2015. CAFB Clearance Survey. On January 21, 2015, NNRP conducted a desert tortoise and burrowing owl clearance survey of a project area just outside of the boundaries of CAFB that previously supported a casino, gas station, small strip mall, and RV park. These areas were scheduled for demolition and eventual development and incorporation into CAFB. The clearance survey concentrated efforts on desert tortoise and burrowing owls to ensure that these species would not be impacted by construction activities. Four qualified biologists conducted the clearance surveys in compliance with current USFWS protocol. The biologists walked transects approximately 20 feet apart inspecting all ground surfaces for live desert tortoises, desert tortoise sign, live burrowing owls, and burrowing owl sign. This clearance survey successfully covered 100% of the project area.

During this survey, no live tortoises, tortoise sign, live burrowing owls, or burrowing owl sign were observed. The project area was heavily impacted by public use and development. None of the project area would be considered habitat conducive to either of these species. It was concluded that this area did not support burrowing owl or desert tortoise populations, and any construction activity planned for this project area would not impact desert tortoise or burrowing owl populations.

Adams Ecology Inc. April 28 to May 20, 2015. Mile Range Equipment Storage Area DT Monitoring. The NNRP provided DT monitoring for the installation of a new fence around the equipment storage area in Range 64C, which is located on the South Range of the NTTR. The project began on April 28 and contin-

ued through May 20. Because the site was located in an area adjacent to DT habitat, a monitor was requested to ensure no take of DT. During the monitoring event, all workers were given DT training and the work areas were subjected to clearance surveys at the start of each work day. No tortoises were observed during the project and the work crew was cooperative and in full compliance with the 2003 Programmatic BiOp.

Density and Relative Abundance Surveys

Revegetation Innovations. May 1992. Fighter Weapons Center Range Complex Biological Assessment for the Desert Tortoise (Revegetation Innovations, 1992). Between December 1991 and May 1992, standard transect surveys for DT were conducted at the Tactical Fighter Weapons Center Range Complex. A total of 431 sections comprising 459 square miles (293,760 acres) were surveyed. The BA was conducted to evaluate if expansion of air-to-ground ordnance impact areas would adversely affect DT populations. Surveyors searched for signs of DT activity including live specimens, pellets and burrows, scat, eggshells, drinking and mating areas, and DT tracks. Of the 431 transects performed, evidence of DT activity was present along 110. This number should be considered with caution, however, as the survey transects were conducted during a period of relative DT inactivity, and the survey data may underestimate the presence of DT within the project area. Though the study was unable to determine the precise DT population densities within the project area, survey data indicated that the population densities appeared to be consistent with other areas in southern Nevada. Potential direct, indirect, and cumulative effects to DT populations were unclear from the study; therefore, absent of further data collection, it was concluded that negative and significant impacts would be realized by DT populations in association with the proposed action.

TRW Environmental Safety Systems, Inc. 1997. The Distribution and Relative Abundance of Desert Tortoise at Yucca Mountain. U.S. Department of Energy. Las Vegas, Nevada (TRW Environmental Safety Systems, Inc., 1997). This report summarized DT surveys that were conducted on the NNSS from 1981-1995. Past surveys had indicated that the northern boundary of the distribution of DTs was slightly north of the Yucca Mountain project. It was concluded that the relative density of DT was approximately 25-31 DT/sq.mi. overall, the relative abundance of tortoises was considered low compared to Southern Clark County but similar to that of Nye and Lincoln County.

Bechtel Nevada. September 1998. The Relative Abundance of Desert Tortoises on the Nevada Test Site within Ecological Landform Units (Woodward, Rautenstrauch, Hall, & Ostler, 1998). DT sign-survey transects were conducted in 1996 to estimate the relative abundance of desert tortoises on the NNSS. Approximately 332 transects totaling 552 miles were conducted on 206 ecological landform units which are small areas that are uniform or homogeneous in ecological characteristics. During the survey, 281 DT sign were counted. Results of the survey indicated that 70% of the area sampled was low DT abundance, 29% was low abundance, and 1% was moderate abundance. A map showing the relative abundance of DT on the NNSS was provided.

CURRENT STATUS

NTTR South Range DT Surveys

Methodology

Initiated in 2010 and continuing through 2016, transect surveys were conducted to determine the presence/absence and relative abundance of the DT population on the South Range of the NTTR, as required by the INRMP and the Programmatic Biological Opinion for the NTTR (NPBO). The INRMP will require updating based on the outcome of the withdrawal process. Applicable programmatic BiOp requirements will be incorporated into the INRMP. According to the current programmatic BiOp for the NTTR,

the action area for consultation included only the South Range of the NTTR and not the North Range of the NTTR because “the North Range occurs outside the range of the DT” (USFWS File No. 1-5-02-F-522). This is the same assumption associated with this BA. The goal of the survey was to provide the USAF with a map showing the relative abundance and general location of DT populations on the South Range of the NTTR. With the exception of project specific surveys as required by the current programmatic BiOp for the NTTR and summarized in the “Historic Surveys” section of this BA, the last comprehensive DT surveys that were conducted for the NTTR were located on the South Range in 1992. These surveys were relative abundance surveys that indicated that the DT population was low density in areas that supported DT. The current relative abundance surveys are being conducted for the preparation of the Range Renewal in 2021 and to re-evaluate suitable habitat in accordance with the current programmatic BiOp for the NTTR. These surveys were a modification of the protocol issued by the USFWS DT Recovery Office, titled 2010 USFWS DT Pre-Project Survey Protocol using relative abundance transects as described by Berry and Nicholson (1984). The methodology was developed with informal coordination and approval by the Las Vegas Office of the USFWS and the Natural Resources Manager of NAFB. All surveys were conducted during the active season of DT (Table 1), but scheduling was unpredictable and was subject to access approval by the USAF based on security and safety issues inherent on a secured USAF facility.

The survey method is used to classify areas according to abundance categories, which are 0-20, 20-50, 50-100, 100-250, and greater than 250 DT/sq.mi. For the surveys on the South Range of the NTTR, the first class was further divided into 0-5 (DT populations are very low density or may not be present) and 6-20 (Low abundance). Past surveys by Woodman indicate that this method is a reasonable measure of the actual abundance category for areas (Woodman, 2006; Berry & Nicholson, 1984). The method involves two steps:

1. Observing and recording the types and numbers of sign along a transect
2. Conversion of sign counts to DT density

For this method, two parallel 0.75-mile belt transects that were 30 ft. wide and approximately 100 ft. apart were walked by qualified DT biologists. Thus, approximately 2.5 acres were surveyed per transect (Total of 5.0 acres). The survey was designed to cover all DT habitat previously mapped by the USAF and approved by the USFWS as DT habitat in 2009. Each group of two transects totaling 1.5 miles of transect were walked per square mile. The square miles covered by each group of two transects were arranged by Section, Township, and Range as designated on USGS topographic maps. Thus, within each section, 1.5 miles of transects (5.0 acres) was surveyed. During the survey, all DT sign was recorded including live DTs, scat, burrows, pellets, and DT carcasses. Photographs of all live DT were taken, along with any other sign that was noteworthy. If necessary, an adjustment was made to convert total sign to Total Corrected Sign (TCS). For example, if a live DT was observed and it was in a burrow with scat, this was listed as three total sign (live DT; scat; burrow) and one TCS. This rarely occurred on the South Range of the NTTR due to the apparent low density of the DT population.

A Garmin GPS unit was used to record the location of the start, middle, and end of each transect in WGS 1984 UTM Zone 11N Meters projection. Additionally, the location of any observed sign was recorded on the GPS. The GPS was also used to ensure that the transect was walked in a relatively straight line, usually in a north/south direction. Some townships and ranges were smaller and oddly shaped if they occurred near the edge of the mapped DT habitat, usually near mountains. This resulted in the shape of the transect being modified to fit the area.

Calibration transects were not used for this study. According to Woodman (2006), most biologists have a range of calibration coefficients from 8.9 to 12.1. Woodman has been using a calibration coefficient of 10 since 1983 and the same coefficient of 10 was used for these studies. Estimated DT abundance was

calculated by multiplying the TCS by the calibration coefficient, providing an estimate of DT per square mile. Transects were walked during the active season of DT (April to May; September to October) with the dates being modified each year to compensate for seasonal differences in temperature. Transects were initiated in 2010 and were nearly completed by 2015. Table 2 and Figure 20 show the surveys conducted each year of the project.

To approximate the density of DT for the South Range of the NTTR, the length of transects (592.5 miles) was multiplied by the average width of the transect (30 ft.) to provide a total area surveyed (2,155 acres or 3.37 sq.mi.). Density was then estimated by dividing the total live DT observed by the area surveyed and adjusted by assuming 90% detection (U.S. Fish and Wildlife Service, 2016). This is a raw estimate that was used for a rough comparison to densities determined for the Eastern Mojave Recovery Unit. Methodology used for this project did not provide the information required to calculate density using standard procedures described by the USFWS (U.S. Fish and Wildlife Service, 2016) because the study was not designed for that purpose.

Table 2. General information on the DT surveys conducted on the South Range of the NTTR

Year	Dates of Surveys	Miles of Transects Surveyed
2010	April 24-25 May 9 May 16 October 9-11	138
2011	October 9-10	67.5
2012	April 14-15 April 21-22 September 22-23 October 6-8	138
2013	April 28 September 21-22	57
2014	April 5 April 12 April 27 September 27-28	63
2015	April 4-5 April 12 April 18-19 May 23-25 September 26 October 10-12 October 24-25	129
2016	April 2-3 May 15 May 21-22 September 3 September 11	57
Total	47 Days	649.5

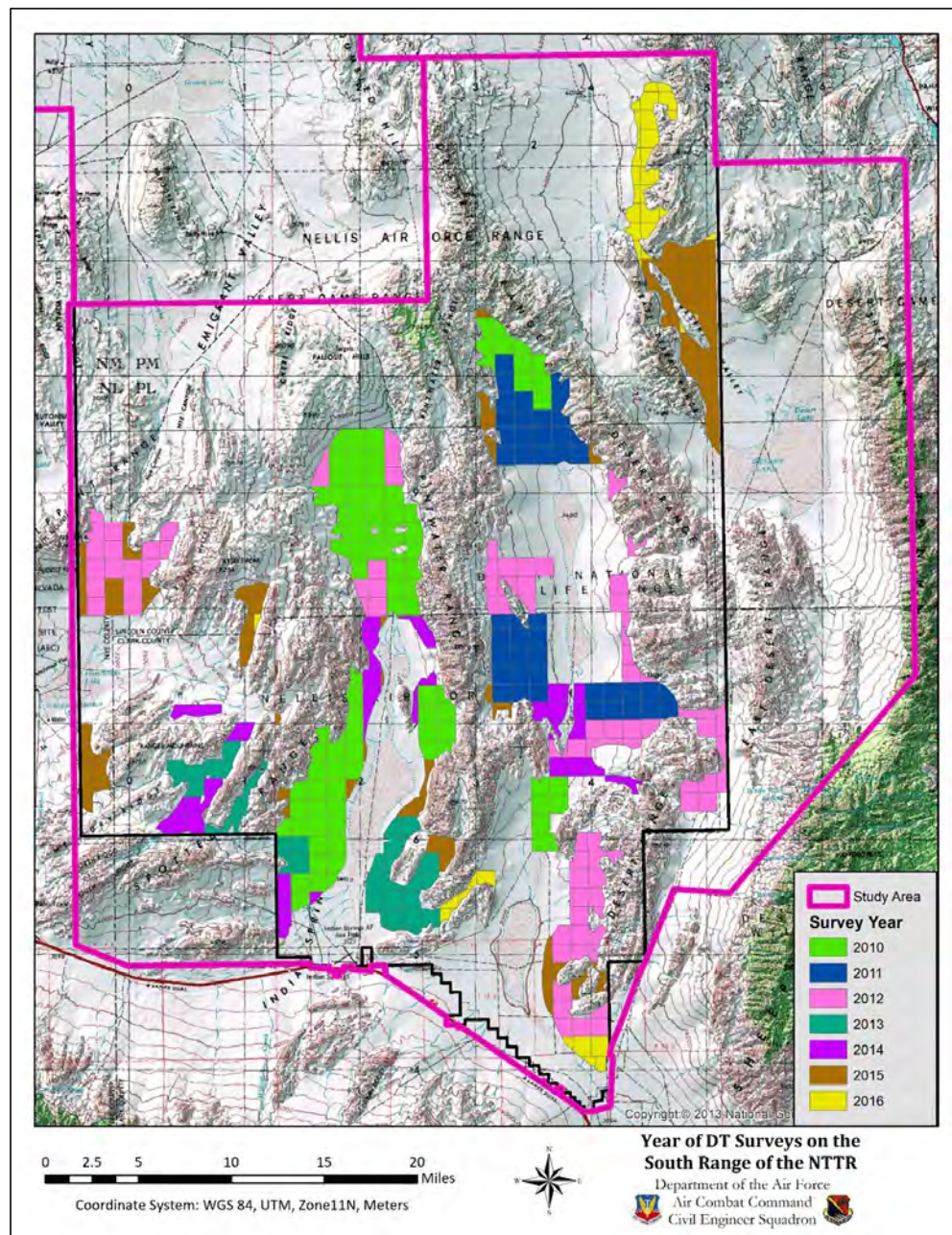


Figure 20. Years that DT surveys were conducted on the South Range of the NTTR.

Burrows and pallets were evaluated according to condition as follows:

1. Active w/live DT or recent DT sign
2. Good Condition; Definitely DT and recently used
3. Deteriorated; Definitely DT
4. Deteriorated; Possibly DT
5. Good condition; Possibly DT

Scat was evaluated as follows:

1. Wet or freshly dried; Obvious odor
2. Dried w/ glaze; some odor; dark brown
3. Dried, no glaze or odor; Signs of bleaching, tightly packed
4. Dried; Light, light brown to pale yellow loose material; scaly appearance
5. Bleached; or consisting only of plant fiber

Carcasses and time of death were evaluated using the following criteria as modified from Woodman and Berry (1984) and Averill-Murray (2000):

1. Fresh or putrid (Time of Death <1 year)
2. Normal color; scutes adhere to bone (Time of Death <1 year)
3. Scutes peeling off bone (Time of Death = 1-2 years)
4. Shell bone is falling apart; Growth rings on scutes are peeling (2-4 years)
5. Disarticulated and scattered (>4 years)

If a live DT was encountered, the following parameters were measured:

1. Median carapace length
2. Sex
3. Approximate age
4. Condition

An example of the field form used for DT surveys is provided in Figure 21.

Headwaters Forest Reserve Survey Data Sheet

Date: _____ Location: _____ Observer: _____

Township: _____ Start Time: _____ Start Time: _____ GPS Start Point #: _____ GPS ID: _____

Range: _____ End Time: _____ End Time: _____ GPS End Point #: _____

Section: _____ David Curren: _____ Precipitation: YES / NO GPS End Point #: _____

Burrow/Pallet Condition Codes:

- 1. Active w/live DT or recent DT sign
- 2. Good condition; Definitely DT and recently used
- 3. Deteriorated; Definitely DT
- 4. Deteriorated; Possibly DT
- 5. Good condition; Possibly DT

Scat Condition Codes:

- 1. Wet or freshly dried; Obvious odor
- 2. Dried w/ glaze; some odor; dark brown
- 3. Dried, no glaze or odor; Signs of bleaching, tightly packed
- 4. Dried; Light, light brown to pale yellow loose material; scaly appearance
- 5. Bleached; or consisting only of plant fiber

Shell/Tortoise Condition Codes:

- 1. Fresh or putrid
- 2. Normal color; scutes adhere to bone
- 3. Scutes peeling off bone
- 4. Shell bone is falling apart; Growth rings on scutes are peeling
- 5. Disarticulated and scattered

LIVE TORTOISE

#	GPS PT #	Easting	Northing	Time	Tortoise Location (in burrow, in tortoise pen, near sign of burrow opening, etc.)	Approx MCL (millimeter YIP)	Existing tag # and color, if present
1							
2							
3							

TORTOISE SIGN (Burrows, scat, carcasses, etc.)

#	GPS PT #	Easting	Northing	Type of Sign (burrows, scat, carcasses, etc.)	Condition Code	Description / Comments / Habitat
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Headwaters Forest Reserve

Figure 21. Form used for entering data collected during the relative abundance surveys on the South Range of NTTR.

RESULTS

As of the end of 2015, approximately 73% of the DT habitat of the South Range of the NTTR had been surveyed. Of the remaining 27%, 24% is inaccessible to surveyors due to safety and security issues. Thus, only 3% of the habitat remains to be surveyed. A total of 270,860 acres were to be sampled on the South Range of the NTTR. As of the end of 2015, 196,441 acres have been sampled. Figure 20 shows the areas that were surveyed each year of the project.

Table 3 shows the condition class of burrows that were observed during the South Range surveys. Seventy-nine active burrows (451 inactive or abandoned) were observed during surveys on the South Range of the NTTR. During the surveys, 39 carcasses of various age classes were observed and recorded (Table 4).

Table 3. DT burrows observed during relative abundance surveys on the South Range of the NTTR

Condition Class	Description	Number of Burrows
1	Active w/live DT or recent DT sign	79
2	Good Condition; Definitely DT and recently used	209
3	Deteriorated; Definitely DT	141
4	Deteriorated; Possibly DT	61
5	Good condition; Possibly DT	40

Table 4. DT carcasses observed during relative abundance surveys on the South Range of the NTTR

Class	Time of Death	Number of Carcasses
1	<1 year	1
2	<1 year	6
3	1-2 years	6
4	2-4 years	9
5	>4 years	17

This indicates a relatively even distribution of mortality over time. However, no real conclusions can be made since the surveys were not designed to determine mortality rates.

Seventeen live tortoises were observed during the 2010-2016 surveys (Figure 22). The locations of observed DT sign other than live DT and carcasses as recorded for the South Range of the NTTR are shown in Figure 23. Figure 24 shows the areas that have been completed and the areas remaining to be surveyed as of the end of 2015 (2016 data is not available). The areas shaded in red represent areas that are inaccessible to surveyors due to safety and security issues. The relative abundance surveys indicate that the majority of the South Range of the NTTR supports a low abundance of DT based on the density classes developed for the survey (Figure 24 and Table 5). Of the areas that have been surveyed thus far, approximately 88% were classed as habitat with a low abundance (6-20 DT/Sq.mi.) or areas where DT may not be present (0-5 DT/sq.mi.). The remaining 12% supports moderate to high abundance of DT. If the total number of live DT is divided by the total area surveyed (30 ft. x 592.5 mi. or 3.37 sq.mi.), the estimated density of DT on the South Range of the NTTR is approximately 5.2 live DT/sq.mi or 5.8 DT/sq.mi. correcting for 90% detection. This is lower than the average density for the Eastern Mojave Recovery unit where the average DT density in 2007 was estimated to be 15 live DT/sq.mi. (U.S. Fish and Wildlife Service, 2010). However, the density is comparable to the estimates for 2015 and 2016 for the Eastern Mojave Recovery Unit, which were 4.9 and 7.0 DT/sq.mi., respectively (U.S. Fish and Wildlife Service, 2016). These field surveys support past surveys conducted in 1991-1992 that indicated that most of the South Range of the NTTR supported low density populations of DT (Revegetation Innovations, 1992). The 1992 survey found evidence of DT in 110 of 431 (26%) transects. The 2010-

2016 surveys found 201 of 443 transects (45%) showing evidence of DT. This indicates that, based on observed DT sign, the DT population on the South Range of the NTTR is showing a trend towards an increase in size and is comparable in density to populations in the Eastern Mojave Recovery Unit.

Table 5. Relative abundance of DT on the South Range of the NTTR

Density (DT/sq. mi.)	Abundance Class ¹	Area (acres)	Percent of Surveyed Area (%)
0-5	DT May Not Be Present	105,649	53
6-20	Low Abundance	69,295	35
21-50	Moderate Abundance	18,903	10
51-100	Moderately High Abundance	4,653	2

¹Abundance classes as described by Berry and Nicholson (1984) and modified by Woodman (2006).

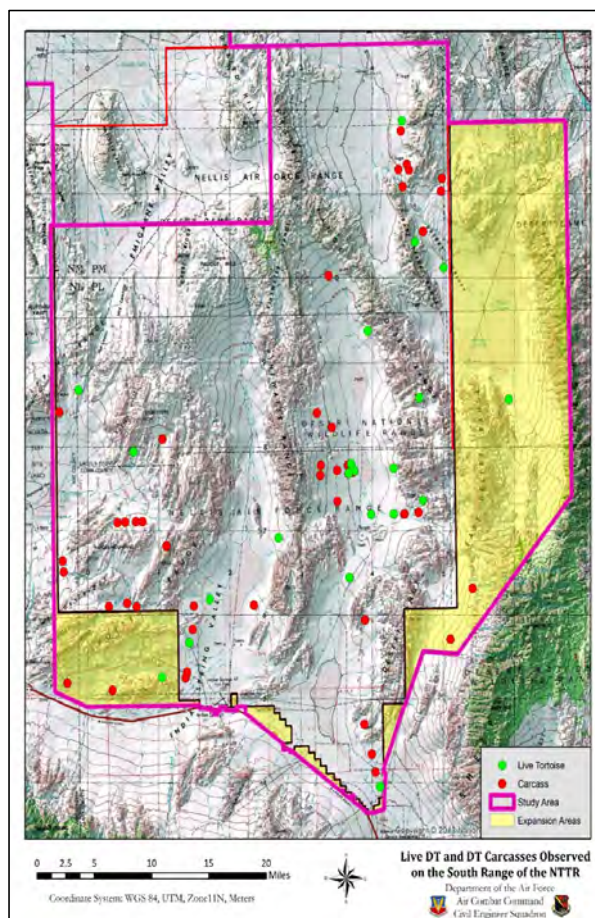


Figure 22. Live DT and DT carcasses observed on the South Range of the NTTR. Note that observations of DT in Alternative 3C were incidental during vegetation and migratory bird surveys.

It is important to note that these surveys were not designed to provide accurate estimates of DT density, but are only used to calculate relative abundance. The USFWS has developed standard methodologies to determine densities more accurately and those methods will be used on areas where the USAF activities result any disturbances (especially soil disturbance or habitat removal) that could impact DT. The method used for the South Range of the NTTR survey was the best that could be accomplished during the active DT season, in a large survey area, and with issues involved in scheduling surveys within the constraints of safety, security, and military activities.

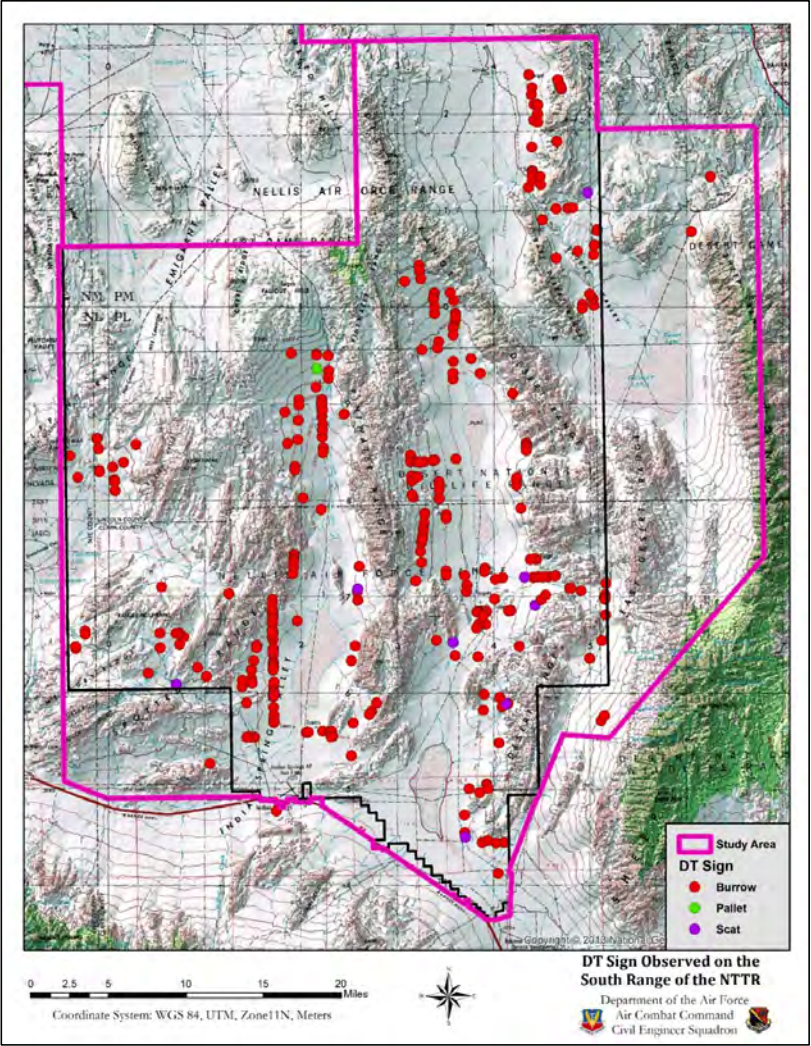


Figure 23. DT sign observed on the South Range of the NTTR. Note that observations of DT in Alternative 3C were incidental during vegetation and migratory bird surveys.

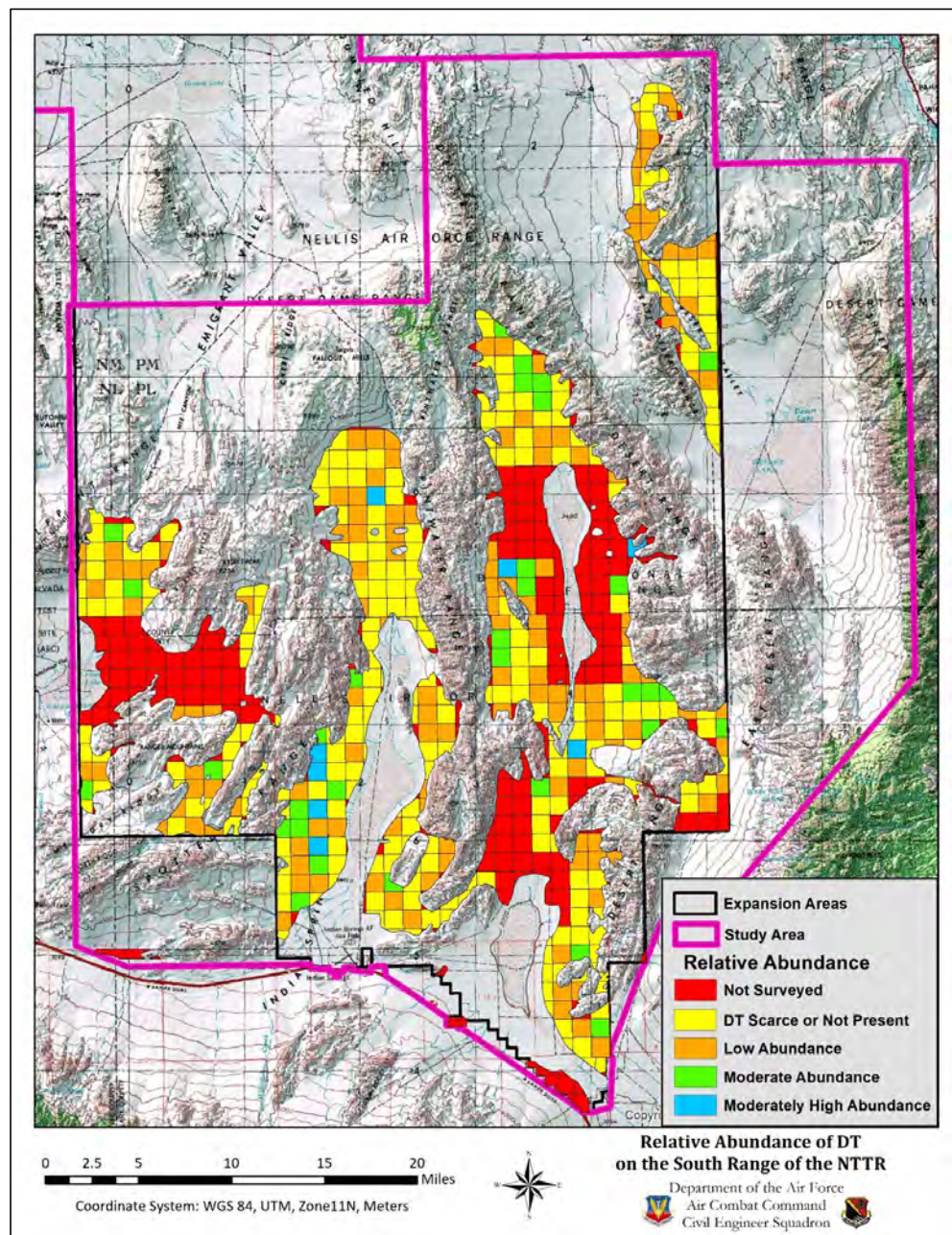


Figure 24. Relative abundance of the DT on the South Range of the NTTR.

DT Surveys on the Expansion Alternatives

Formal DT surveys have not been conducted in the expansion alternatives. Because of the size of the area encompassed by the expansion alternatives, the USAF has coordinated with the USFWS to develop habitat models based on vegetation and other parameters to determine the potential location of DT populations and to measure potential impacts to those populations. This information is provided in the Model Section of this BA. If the expansion alternatives are incorporated into the withdrawn land, field surveys (100% coverage) will likely be required by the USFWS for actions by the USAF that may affect DT or its habitat. While other wildlife and vegetation surveys were being completed on the expansion areas in 2016, incidental sightings of DT and sign were recorded. When such sightings occurred, a GPS point was taken along with condition and any other information that could be gathered. During vegetation surveys and migratory bird surveys in Expansion Alternatives 3B and 3C, two live DT were encountered, while 5 carcasses and 6 burrows were observed (Figures 18 and 19). No DT or DT sign were incidentally observed in Expansion Alternative 3A during vegetation and migratory bird surveys conducted in 2016.

USFWS Approved DT Habitat Map for the South Range of NTTR

Beginning in 2005, the NNRP conducted several helicopter surveys to map and characterize DT habitat on the South Range of the NTTR. Habitat was determined as a factor of various features including geology, soils, and vegetation as well as slope and topography. The map was finalized in 2009 and reviewed by the USFWS at that time. Later, the USFWS accompanied the Natural Resources Manager on a helicopter tour of the South Range of the NTTR to finalize the map, which was officially approved by the USFWS on August 27, 2009. Figure 3 is the map approved by the USFWS. It was agreed that any military mission activities impacting areas shown as potential DT habitat would require the following:

- Provide desert tortoise awareness training to anyone working in, or traveling through potential desert tortoise habitat.
- Impose a speed limit of 25 miles per hour in desert tortoise habitat and that speed limit signs be posted on roads that enter tortoise habitat. Ensure that these speed limits are enforced.
- Rehabilitate disturbances of desert tortoise habitat and/or pay a per-acre remuneration fee.
- Conduct clearance surveys for desert tortoises or construct tortoise exclusionary fencing for actions in potential tortoise habitat.

All other actions not in DT habitat would not require monitoring or coordination with the USFWS.

Range 77

No DT surveys have been conducted in Range 77. This area will be included in the DT modeling effort using recent vegetation maps created for the area.

Desert Tortoise Habitat Range Model

Two different habitat mapping models were completed for this BA to delineate areas where military operations could potentially impact DT populations. The intent of the modeling effort was to develop a map to determine areas where DT surveys would be required if DT habitat was potentially affected by military actions. One of the habitat models was a habitat suitability model, where information for the model is derived from documented data on the habitat preferences of each species. The second model was a probabilistic model, Maxent, which uses actual observation points of a species to determine suitability of habitat. Available GIS layers were used to measure the suitability of the cumulative environment to accommodate the habitat preferences of DT. Details on the development of each of these models and the final model used to predict potential DT habitat are provided in a separate report (Nellis Air Force Base, 2017).

A meeting was held on July 18, 2018 at the Las Vegas Office of the USFWS to discuss the model parameters. Changes were made in the parameters and the Habitat Suitability Model was selected for use in the BA.

HABITAT SUITABILITY MODEL RESULTS

The initial habitat suitability model for the Action Area scored habitat from 1 to 84 with 84 being very good habitat. To tighten the results, scores of 0-48 were considered not suitable habitat and the resulting model for the Eastern and Western Action Areas is shown in Figures 25 and 26. This model was comparable to the original DT habitat map approved for the South Range of the NTTR and the Nussear model, but indicated more DT habitat around the edges of playas where *Atriplex confertifolia* and *Atriplex canescens* were dominants and extended the habitat to higher elevations (5,000 ft. MSL compared to 3,600 ft. MSL for the previous map). Additionally, some habitat was designated in areas further north than the range of the DT, since the current model did not use current known range of the DT as a criterion. This allowed the map to accommodate observations of DT and DT sign at the northern boundary of the action area. The northern extent of DT habitat on the Action Area closely matches the northern boundary of habitat previously designated on the NNSS in 1994 (Rautenstrauch, Brown, & Goodwin, 1994). Surveys should be conducted around the boundary of the Action Area and the NNSS to further validate the northern boundaries of DT habitat in both areas.

ACCURACY ASSESSMENT

The models prepared for the BA have not been subjected to a formal accuracy assessment, but observations of DT that have been made in past surveys were overlaid on the model results of the Eastern Action area to assess accuracy. The model was adjusted by scoring to accommodate all observations to date. Field surveys are still required to further assess and even modify the map as required.

CONCLUSION

The habitat suitability model appears to be an excellent prediction of potential DT habitat on the Action Area. It is recommended that this map be used to determine where actions imposed by military operations may potentially impact DT populations. The Maxent model was also a good model, but qualitative accuracy was slightly less (based on past observation points lying within the modeled habitat) and the model provided less protection for the DT compared to the Habitat Suitability Model. If a military action has direct or indirect impacts on DT or DT habitat within the mapped DT habitat of this model, formal or informal consultation with the USFWS as required by the programmatic BiOp would be initiated to determine if DT populations are present and the mitigation measures required.

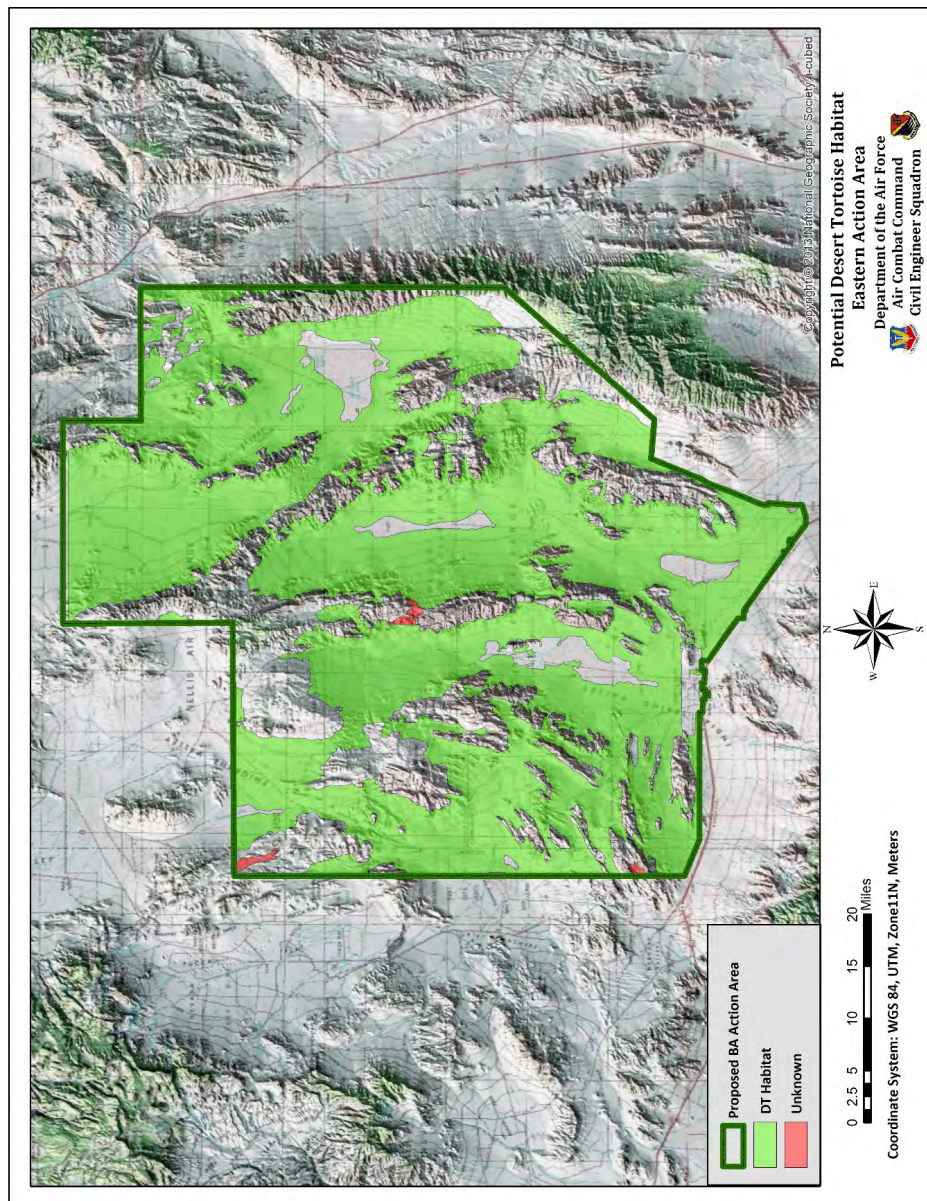


Figure 25. DT habitat on the Eastern Action Area as determined by a Habitat Suitability Model.

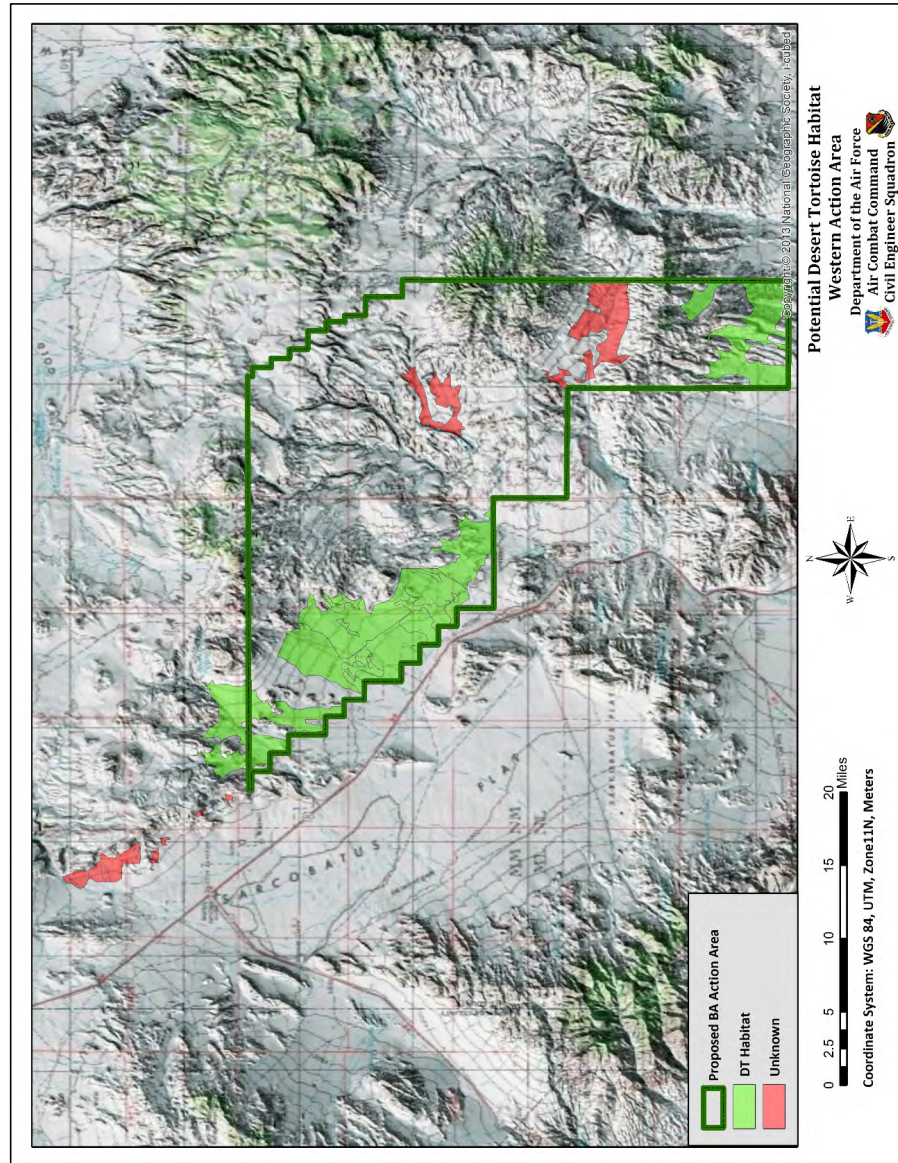


Figure 26. DT habitat on the Western Action Area as determined by a Habitat Suitability Model.

Physical, Biological, and Chemical Effects of the Action

DIRECT IMPACTS

Directs impacts include the immediate effects of the proposed action on the DT or its habitat. New weapons delivery areas in the South Range or expansion areas are not part of the actions covered by this BA, and use of existing weapons delivery areas have been covered under previous consultation. Impacts to those areas were compensated in most cases by remuneration fees. Three sites were closed in the past and are no longer used for military activities. These sites were discussed in the 2002 BO for the NTTR (File No. 1-5-02-F-522) and included Targets 64-5, 63-1, and an abandoned army camp on Range 65. The sites were initially planted with native vegetation in 1997. These areas are still in the restoration process, but the latest surveys of those areas indicate that the vegetation has almost completely recovered by natural encroachment of vegetation. Planting of native species at these sites was not successful, but natural restoration has progressed quite well (Nellis Natural Resources Program, 2014).

For this BA, direct impacts will be discussed according to the actual operations planned for the Action Area and the actions listed in the “Description of the Actions Potentially Taken by the USAF on the Action Area”. In general, the actions associated with this BA are similar to those discussed by the original programmatic BiOp. The USAF estimates that overall activities on the Action Area will increase by about 30%. The USAF will encourage activities to be located in areas outside of DT habitat, but some impacts to habitat are anticipated. The new DT habitat map includes areas not previously designated as DT habitat. Actions occurring within DT habitat will be located in previously disturbed or developed areas to minimize impacts to higher quality habitat, where practical. This will not preclude required monitoring and pre-project surveys, but will assist in minimizing impacts to DT.

Ready Access

Ready access would be provided for the entire Action Area, but minimization measures will be implemented to decrease impacts to the DT. Ready access especially impacts the Eastern Action Area, most of which is currently protected by the proposed wilderness area designation and managed in de facto as such within the boundaries of the DNWR. Depending on the method implemented for acquiring ready access, requirements for managing the South Range as potential wilderness may be removed or lessened, thus resulting in the potential for increased take of DT since DT are currently fully protected by the proposed wilderness designation. Direct impacts anticipated from ready access include the following:

- Direct Physical Impacts: DT could potentially be physically harmed or killed as a result of troop activities in interstitial areas currently protected as proposed wilderness. These activities can result in direct contact of humans with DT and may involve crushing, trampling, or collision of DT with troops resulting in DT death or injury.
- Harassment of DT: The presence of troops, troop noise, and troop movements could significantly disrupt the normal behavior of DT, such as breeding, foraging, and resting in burrows and other cover. Use of flares, smoke bombs, and paint balls in troop activities can result in harassment of DT. Live munitions are not used in these activities. Burrows could be damaged or destroyed by foot traffic and troop activities causing the DT to relocate. Additionally, foraging by DT may be interrupted by the presence of troops causing DT to move to other foraging areas that may be less desirable.
- Habitat impacts: Because troops will be in small groups and infrequent, impacts to habitat are anticipated to be minimal. Some temporary loss of vegetation from trampling and other activi-

ties may occur. Soil disturbance or long-term impacts are not anticipated as a result of ready access.

- Chemical residue from blank munitions and pyrotechnics has the potential to impact DT if accidentally ingested in soils and vegetation. This will be minimized by requiring cleanup of munition cartridges and other debris after training is completed.
- Predators: Ravens and other predators may be attracted to areas by trash and food left behind by troops. This will also be minimized by training troops to properly dispose of trash and food before leaving an area. Spent munitions and other items will also be removed from areas.
- Increased potential for take would be minimal because troops will be in groups of less than 12 soldiers that have been provided with DT awareness training.
- Vehicles are currently not allowed on trails and unimproved roads on most of the Eastern Action Area. Under ready access, vehicles, including jeeps, ATVs, would be used to transport personnel and equipment on all roads including unimproved roads and trails. Ready access will open these areas to estimated 30% increase in use by vehicles. Although most activity by vehicles will be restricted to roads and trails, DT can be crossing these areas in habitat potentially supporting DT.
- Ready access is also projected to result in a 30% increase in aircraft operations in the existing NTTR airspace, and the corresponding increase by 30% in the use of munitions as outlined in Table 6. However, live munitions will not be used outside of target impact zones and firing ranges (Figure 6). These weapons delivery areas and firing ranges were previously constructed under the current BiOp or other consultations.

Table 6. Current and projected levels of aircraft sorties and live munitions on the NTTR, NNSS, and expansion alternatives.

Impact Description	Current	Projected
Aircraft Activity (Sorties)	24,898	32,367
Large Caliber Munitions (No.)	10,915	14,190
Small Caliber Munitions (No.)	1,600,746	2,080,970

Note: Large caliber includes weapons in the following categories: AGM, CBU, GBU, LUU, M206, MK, 2.75" rockets

Small caliber includes .50 Cal, 20mm, 30 mm, 40 mm, 5.56 mm, 7.62 mm

Weapons Delivery Areas

Weapons delivery areas are directly impacted by use of live munitions including unguided ordnance, laser-guided bombs, air to ground missiles, small arms munitions, and self-protection devices (flares and chaff). Most of the weapons delivery areas are located in playas and dry lakes outside of DT habitat. No new weapons delivery areas will be established on Range 77. Only those weapons delivery areas already established in Range 77 and the South Range of NTTR will be used. Most of the potential DT habitat in Range 77 is located on the west and southern boundary where weapons delivery areas will not be located. Weapons delivery areas can be initially cleared for DT prior to and during construction if they are found in potential DT habitat. However, clearance surveys prior to weapons delivery is not practical and DT take may occur. No new weapons delivery target impact areas are being planned for the proposed expansion alternatives, Range 77, and the South Range of NTTR. Those areas are either being used as a weapons safety footprint buffer or to address safety and security concerns.

Two different areas of impact are associated with weapons delivery areas. One area is associated with soil disturbance caused directly by the explosion of a munition or cleaning the area after explosions. The second area is the area potentially impacted by explosive fragment dispersal. Soil disturbances currently associated with target sites were evaluated by reviewing high resolution satellite imagery at each target site and delineating a boundary around the areas where soil disturbance could be observed. Note

that no current or proposed weapons delivery areas are in DT habitat in the Western Action Area, thus, it is not being considered in this discussion. Weapons delivery areas may be implemented in Range 77, but they will be located a significant distance (probably over one mile) outside of DT habitat. Acreage of DT habitat according to the new habitat model directly impacted by soil disturbance at active and inactive weapons delivery areas is the following (Figure 27):

- Active Weapons Delivery Areas: 2,207 acres
- Inactive Weapons Delivery Areas: 1,045 acres
- Total: 3,252 acres

Please note that these acreages are being used to establish the baseline of weapons delivery areas that have been impacted in the past either during other BiOps or before DT was listed.

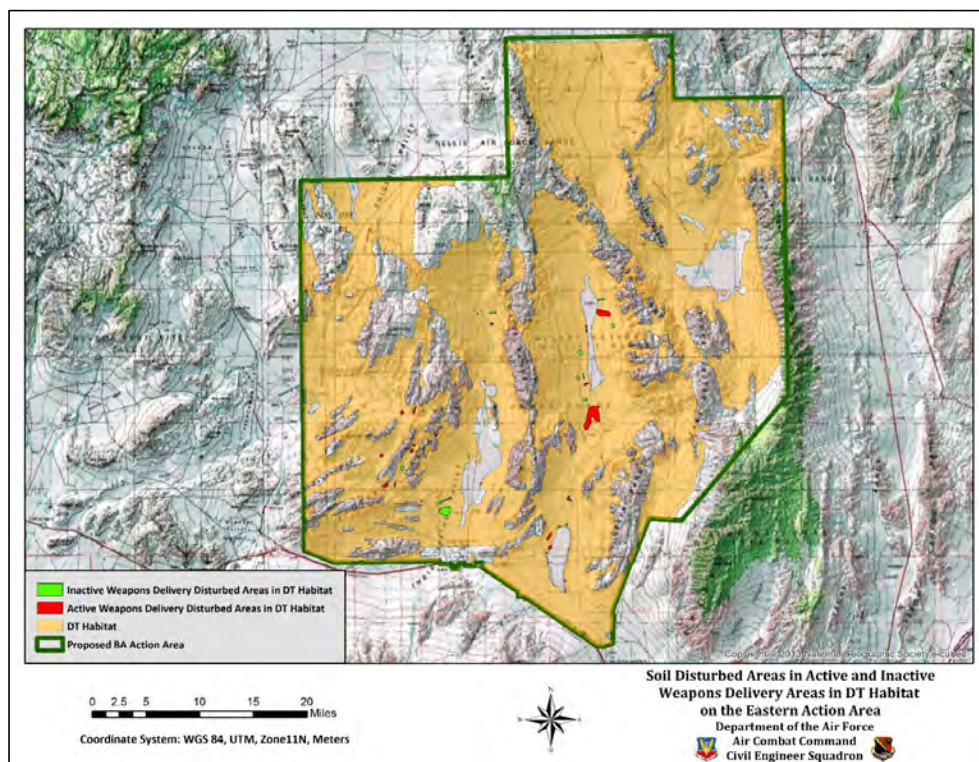


Figure 27. Area directly impacted in the past by soil disturbance associated with active and inactive weapons delivery areas on the Eastern Action Area.

For this BA, an important consideration in analyzing the hazard associated with explosion of ordnance is the effect of the fragments generated by the explosion. A hazardous fragment is defined as one having an impact energy of 58 foot-pounds or greater (Department of the Army, 1999). Bombs and similar ordnance used on the targets at NTTR would probably be classed as 1.1 materials where hazardous fragment density is defined as one or more hazardous fragments per 600 square feet. This equates to a 1% probability of hitting a 6 ft. tall man with a face-on surface area of 6 square feet. Considering these two

factors, the minimum fragment distance for ordinance used on the NTTR is estimated to be 1800 ft. from the point of impact for humans. The U.S. Army uses 1250 ft. as the fragment distance for stored 1.1 class explosives (The Army Institute for Professional Development, 1992). However, for the NTTR, the point of impact of bombs within a target is variable, therefore, the fragment distance is estimated as 2000 ft. from the center of the target. Using this fragment distance and the DT habitat map, the total acreage of DT habitat potentially impacted by explosive fragments from targets is estimated to be the following (Figure 28):

- Active Weapons Delivery Areas: 6,156 acres
- Inactive Weapons Delivery Areas: 5,293 acres
- Total: 11,449 acres

Inactive weapons delivery areas are included in this analysis because they may be potentially used in the future. These areas are the radius around the center of a target where the probability of a standing 6 ft. tall human being hit by a fragment is greater than 1%. Obviously, the probability of fragments hitting a DT that is about 8 in. tall and a face-on surface area of less than one sq. ft. would be much less and a much smaller area.

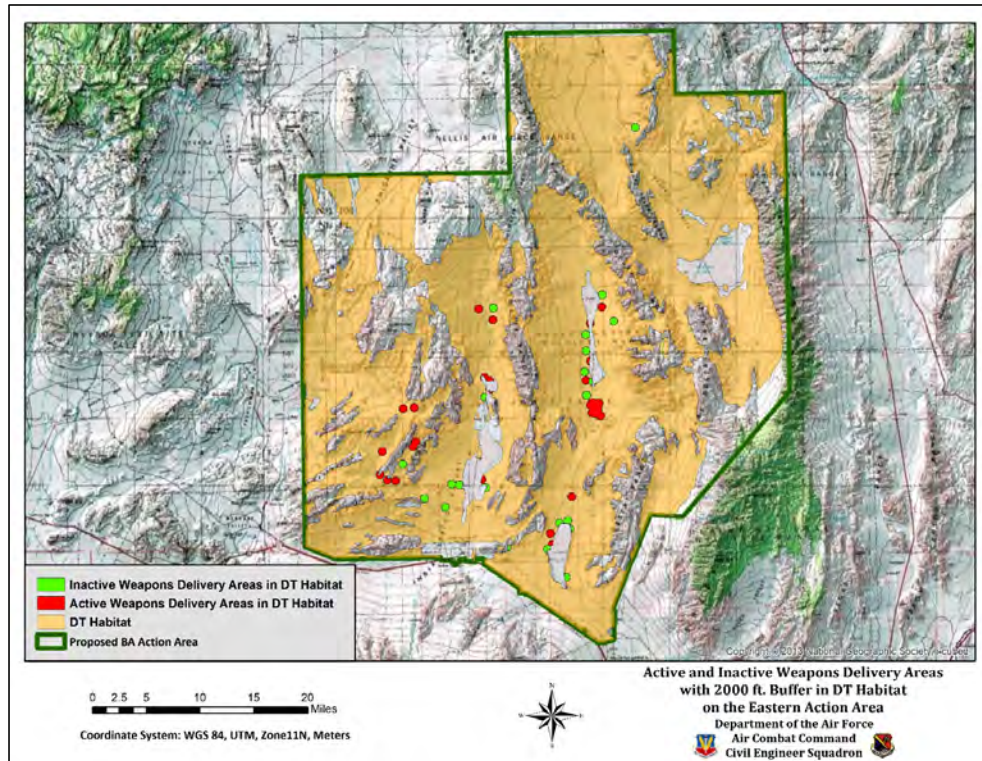


Figure 28. Area potentially impacted by explosive fragments associated with active and inactive weapons delivery areas on the Eastern Action Area. Areas were determined by a 2000 ft. radius from the centroid of each weapons delivery area.

The USAF is currently using target impact areas to delineate areas that have the potential to jeopardize the safety of humans and equipment during target use. A majority of these areas will never be impacted by target use, but have been designated to ensure protection and safety of USAF personnel. Figure 29 shows the location of these impact areas with respect to DT habitat. Approximately 111, 291 acres are located in target impact areas, of which 84,309 or 76% is located in DT habitat.

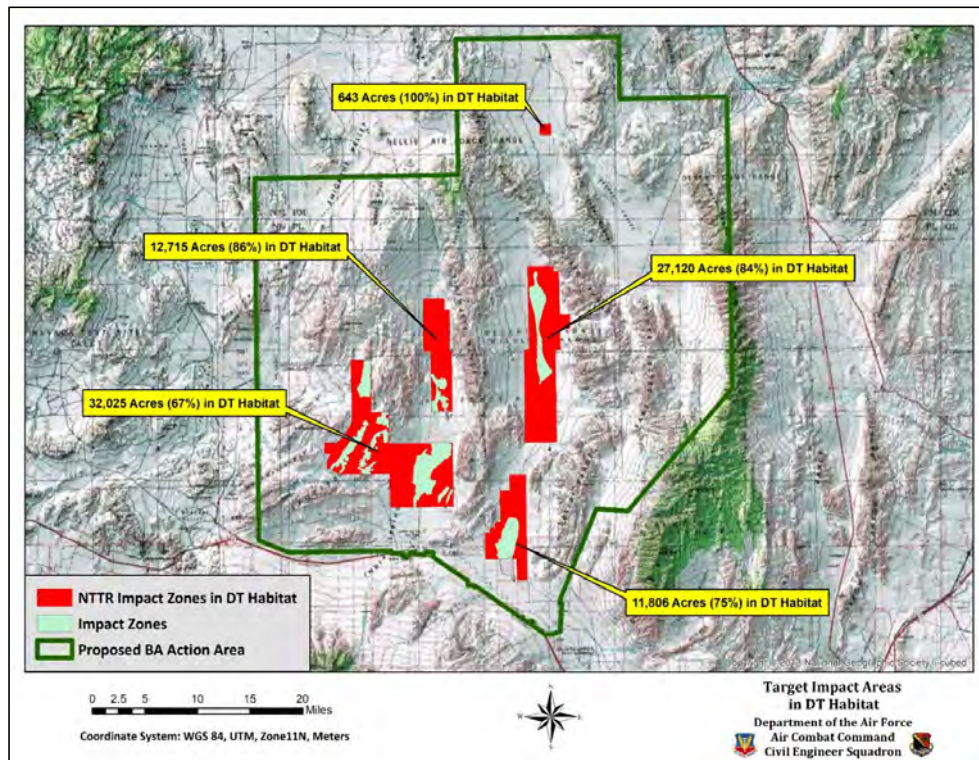


Figure 29. Target impact areas (per MOU with the USFWS) in DT habitat in the Eastern Action Area.

Most of the weapons delivery areas or targets are reused on a relatively frequent basis, which makes them less desirable for DT, although DT may traverse the areas in transit to other locations. DT can be killed or harmed if they are within the weapons delivery areas when they are in use. As discussed, weapons delivery areas are projected to experience a 30% increase in live munitions use in association with the proposed action. Direct impacts in weapons delivery areas include the following:

- **Soil disturbance:** Disturbance of soils can be caused by several different aspects of weapons delivery maintenance and use including excavation and clearing activities during construction of the area, movement of heavy equipment and targets on the area, construction and repair of targets, and exploding ordnance. Such activities can result in destruction of burrows, mortality of DT, removal of vegetation, and encroachment of invasive, undesirable plant species.
- **Noise and vibration:** Exploding ordnance, live munitions, aircraft and other weapon delivery systems, and heavy equipment used for maintenance and repair of targets can produce noise that may impact DT. Noise levels produced by vehicles, dropping of ordnance, and other sources of

noise can alter DT behavior or cause hearing loss, but actual noise effects on DT are difficult to assess and are not well documented. Noise can cause temporary displacement of DT or physiological stress, which will cause unnecessary increase in metabolic function. These noises may simulate that of natural sounds (i.e. thunder) to which many animals may be adapted to respond (United States Geological Survey (USGS) , 2007). Noise can cause temporary displacement with the tortoises fleeing and can also cause physiological stress (U.S. Department of Interior, 2012). Noise can also mask the sounds of approaching predators resulting in impediment of proper responses and potentially increasing predation (U.S. Fish and Wildlife Service, 1994B). Increased noise levels may cause a loss of auditory function in DT, which could lead to a loss of ability to detect and avoid predators (United States Geological Survey (USGS) , 2007).

- **Vegetation removal:** Exploding ordnance, vehicle and heavy equipment use, and target construction and maintenance can result in removal of vegetation or alteration in the plant community. These areas are often invaded by undesirable species of plants resulting in habitat degradation. Recovery of vegetation in the Mojave Desert can take long periods of time, especially without assistance by seeding or planting and irrigating impacted areas. Estimates of full, natural restoration of plant communities to the original state range from 33 to over 215 years (Vasek, Johnson, & Eslinger, 1975; Abella, 2010). Changes in the plant community can impact forage and cover for the DT and cause movement of DT out of impacted areas.
- **Wildland fire:** Fires can be initiated by exploding ordnance, flares, and chaff. These fires can potentially destroy or alter DT habitat and may result in mortality or take of DT.
- **Dust and particulate air pollution:** Exploding ordnance and soil excavation can result in the release of dust and an increase in particulate air pollution. This impact could be minimized by avoiding military operations on high wind days. Recent studies on surface dust impacts on plant gas exchange in Mojave Desert shrubs showed that dust reduced the photosynthetic rate and decreased the water-use efficiency of plants, which may result in decreased biomass production of plants during the growing season. Dust was also shown to increase leaf and stem temperatures (Sharifi, Gibson, & Rundel, 1997). Decreases in photosynthetic rates and biomass production can potentially impact DT populations by decreasing the availability of food and cover. It is doubtful that dust would directly impact the DT since it is a burrowing animal that is in contact with soil and dust during its excavation activities. Based on these premises, impacts of dust deposition on DT would likely be minor.
- **Water:** To minimize dust and particulate air pollution, water trucks are used to wet soil surfaces. This action can result in attraction of DT to weapons delivery areas. Direct impacts to the DT by this action can be one of the largest sources of DT mortality due to the additional attraction of DT to roads by water and the potential to be killed by vehicular traffic. This can be minimized by careful application of water to roads, which will prevent accumulation of water in depressions, potholes, etc. USAF personnel should be made aware that this action can result in encroachment of the area by DT.
- **Depleted uranium:** DT may be exposed by ingestion, inhalation, or dermal contact with low levels of depleted uranium that is used in some munitions. It is currently unknown if this has any effect on DT (U.S. Air Force, 2002A). Research on the effects of DU on wildlife and humans is minimal, in spite of its widespread use in the Gulf Wars. However, a significant amount of research has been conducted on the health effects of natural and enriched uranium. Because DU contains uranium at lower doses, one can assume that if uranium has effects, then DU has the potential for effects on organisms. Conversely, if uranium does not have epidemiological effects on humans and wildlife, then depleted uranium does not have those effects. Harley et al. (1999) completed an extensive review of the literature on the potential effects on DU on human

health, including soldiers with fragments embedded in their tissue or organs, and found that no evidence of epidemiological effects. In fact, no overall increase in population mortality has been observed due to exposure of humans and wildlife to natural uranium and harmful medical “effects from DU exposure” are not expected (Office of the Special Assistant to the Deputy Secretary of Defense for Gulf War Illnesses, 2000). In a later review, a small group of Gulf War veterans wounded with DU still excreted higher than normal levels of uranium in their urine, but no adverse health effects could be attributed to DU or the elevated uranium levels in the urine (McDiarmid, et al., 2004).

Other research has shown general information about negative effects of DU on health of other species. The effects appear to be dependent on the exposure pathway, duration, frequency, magnitude to a given life stage of the species. Miller et al. (2017) demonstrated that “non-DU exposed cells are influenced by their proximity to DU exposed cells.” The bystander effect was determined to be real and can cause death of other cells that were not initially in contact with radiation. Other studies indicated that when animals were exposed to water soluble uranium compounds, high doses cause kidney damage, may affect the brain and other neurological functions, and adversely affect normal functioning of the liver, lungs, and heart (Katz, 2014). Other negative effects on humans and animals include developmental issues, altered behavior, and bone structure (Briner, 2010). The major route of exposure appeared to be inhalation of dust created by the explosion of DU munitions (Almuqdad & Al-Ansari, 2013; Briner, 2010). Most of the research showing detrimental effects of DU focused on the release of radioactive dust following deployment and explosion of DU munitions. Hon et al. (2015) found that there is minimal risk associated with the handling and storage of DU, but toxicological and radio-toxicological effects result for inhalation or ingestion of dust particles “produced by the burning of the core of the anti-tank ammunition.”

An environmental assessment was conducted at one of the ranges on the South Range Study Area (Range 63) and concluded that DT would not be detrimentally affected by use of depleted uranium on the target (Nellis Air Force Base, 2006). The assessment stated that research on the impacts of depleted uranium on wildlife is minimal, but based on the low population of DT in the area, no effect on the DT population was anticipated. In summary, exposure to DU appears to not have detrimental health effects on humans and animals, but dust particles inhaled or ingested after the burning of the DU core in weaponry can have detrimental effects. DU may be deployed to a limited extent on weapons delivery areas and some areas may be used to store targets exposed to DU munitions. Based on these studies and reviews, DU may potentially adversely affect individual DT as a result of this proposed action, but due to the limited use and the fact that exposure must occur during weapon deployment, it is unlikely to adversely impact the DT population on the Action Area.

- Hazardous materials: Weapons delivery areas are periodically cleaned and hazardous or unexploded materials are removed at that time. A project was conducted on NTTR to determine contaminants found in soils of bombing targets (Nellis Air Force Base, 1996). The conclusion of the project was that bombing and strafing activities on the NTTR generally do not cause surface soil contamination levels that would pose risks to on-site workers or the public. If the area is considered safe for humans, it is probably safe for DT populations. Therefore, it is unlikely that DT traversing a target site would come in contact with unsafe levels of metals or explosive materials.
- Vehicular traffic: Vehicles and heavy equipment are periodically used on weapons delivery areas for maintenance, repair, and observation. Potential take of DT could occur by these moving vehicles. In all cases, the vehicles would be restricted to access roads and the actual weapons

delivery area. Off road vehicle use may occur if ordnance or target materials are deposited off target by explosions, etc.

In general, some take of DT would likely occur as a result of weapons delivery systems. Take of DT can be minimized by encouraging use of targets in areas not potentially supporting DT populations. Additionally, with proper precautions and education of USAF personnel, take can be minimized.

Weapons Delivery Area Cleanup

As previously discussed, weapons delivery areas are periodically cleaned, repaired, or removed. If a target is located in DT habitat, activities could be monitored by a DT biologist to avoid impacts to DT populations. Other cleanup activities that could impact DT populations would include aircraft crash sites and off target ordnance explosions. Direct impacts potentially caused by weapons delivery areas cleanup include the following:

- Soil disturbance: During the cleanup operation, weapons delivery areas are often graded and individual targets may be replaced. Most of these operations require shallow excavation and minor soil disturbance. Because this occurs in areas that are repeatedly impacted, potential for DT to be present is less than in surrounding, undisturbed areas.
- Noise and vibration: Use of heavy equipment during the cleanup operation produces noise and vibration that may have minor and temporary impacts on DT populations.
- Dust and particulate air pollution: Excavation and soil disturbance associated with weapons delivery areas cleanup can result in the release of dust and increased particulate air pollution. Direct impact to the DT population would be minimal.
- Hazardous materials: Hazardous materials are removed from the target site during weapons delivery areas cleanup and impacts by these materials to DT would not be expected.
- Vehicular traffic: Vehicles and heavy equipment moving on access roads and on the weapons delivery area could potentially impact DT and result in DT mortality. This can be minimized by proper training of USAF personnel.
- Water: To minimize dust and particulate air pollution during weapons delivery area cleanup, water trucks are used to wet soil surfaces. This action can result in attraction of DT to weapons delivery areas. Direct impacts to the DT by this action would be considered minor.

Threat Emitters

Threat emitters are generally located along existing improved or unimproved roads. Approximately 15 emitters may be constructed as part of this action. Impacts associated with threat emitters include the following:

- Soil disturbance: Soil disturbance would only occur during the construction of an emitter site and any roads. Soil disturbance would involve clearing an area approximately 150 ft. by 150 ft. for each emitter; it is currently unknown the exact needs for roadways because that would be dependent on emitter placement within proximity to current roads, access needs, etc. For analysis purposes, it is assumed that approximately four acres of roadway would need to be constructed or improved for emitter site support. If the emitter and/or roadway is located in DT habitat, impacts can be avoided by construction monitoring and clearance surveys conducted by a qualified DT biologist. The roads may require periodic maintenance, usually on an annual basis. DT monitoring and other preventive measures may be required where roads are located in DT habitat. The potential maximum area of soil disturbance caused by this action in DT Habitat would be a total of approximately 7.5 acres for emitters (about 0.52 acres per emitter) and four acres for roadways, equaling 11.5 acres total.

- Vegetation removal: Vegetation would be permanently removed during construction of the emitter site. Because of the small area involved, loss of DT habitat (if located in DT habitat) would be considered minor.
- Vehicular traffic: Vehicular traffic would be increased slightly by the presence of a threat emitter for maintenance and use of the facility. Impacts to DT by this increase would be considered minimal, especially if personnel are trained in DT awareness.
- Noise and vibration: Each emitter requires a 1.5 kilovolt generator to operate. These generators produce noise that likely would not impact local DT populations. A study was conducted in the late 1990s that concluded that short term exposure to subsonic and supersonic aircraft noise do not appear to cause hearing loss or physiological changes in DT (Bowles, et al., 1999). The study did not determine the effects of chronic exposure to noise and noise in natural conditions (study was conducted in a lab). Noise originating from the generators would be much less than that of aircraft.
- Electromagnetic radiation, lasers and microwave transmissions: Electromagnetic radiation (EMR) and microwaves would be produced by some emitters and communications equipment utilized on the NTTR, and targeting lasers may also be used on the NTTR. At the present time, little is known about the impact of these emissions on DT. RF energy is absorbed by an animal in the form of heat. At relatively low RF energy intensities, the heat induced can usually be accommodated by a body. Thus, any effects produced would generally be reversible. At high intensities, the thermoregulatory capabilities of any given species may be exceeded, which could lead to thermal distress or even irreversible thermal damage.

The impact of these emissions on wildlife was reviewed in a programmatic EA prepared for EMR at Eglin AFB in Florida. The EA indicated that EMR and microwave transmissions would have no effect on small mammals at ground level because of the exposure requirements and operational parameters of the emitter sources (i.e., actual emission sources are well above ground level, directed outward and upward, and are not static), which result in negligible emissions at ground level and minimal chance for extended exposure (U.S. Air Force, 2002B).

The radar units are normally placed on an elevated surface and then emit skyward, with the beam constantly moving to either find or track moving objects. They are not pointed at the ground or placed along public roadways. Most radars have "elevation locks" which prevent them from aiming the detector/emission beam below the horizon. The safe separation distances between the emitters and people or other equipment are provided in feet based on the emitter type and power requirements, with the greatest distance under 1,000 feet (Bechtel SAIC Company, 2007). Human safety indicators are established for those personnel that conduct maintenance, testing or training with the emitters who may be in close proximity to the emitters for extended periods. Negative impacts to animal species would require exposure to the emitter beam for extended periods of time, which is unlikely given that the beam is not static and moves to either find or track an object.

Balmori (2009) conducted research on the effect of continuous microwave and radiofrequency radiation from wireless telecommunication towers on wildlife. The research did not include reptiles, but amphibians were adversely effected, resulting in behavioral changes, decreased natality, and increased mortality. In studies investigating the effect of electromagnetic radiation on the African clawed frog (*Xenopus laevis*), no effects on the behavior, reproduction or mortality of the species was observed (Redlarski, et al., 2015). The article basically stated that claims of negative impacts of electromagnetic radiation on living organisms are unjustified and require

“systematic scientific verification.” Further research, especially DT, is definitely required to make any definitive determinations on impacts.

Because DT are very close to the ground (below the emitter’s “line of site” and horizon lock), it can be assumed that EMR and microwaves would have no effect on the DT. DT would need to be in direct contact with the emitter beam for an extended period of time to experience negative impacts, and this is unlikely to occur. Lasers would have potential impacts to vision and skin on small mammals and may have similar adverse effects on the DT. Impacts of lasers on wildlife has not been studied or documented and impacts are only assumed because of adverse effects observed in humans. However, the probability of a DT being exposed to a laser is extremely low because of their low profile. Thus, lasers are not likely to adversely affect the DT.

- Predation: Threat emitters may be placed on towers or other structures that provide a location for natural predators of DT such as ravens to nest and perch (Boarman, 2002). If raven nests are observed at an emitter site, they should be removed, but a Migratory Bird Treaty Act permit would be required. Perching or roosting can be discouraged with various methods commonly used at airports for bird management.

Infrastructure Construction and Maintenance

Buildings, roads, and equipment staging/storage areas require periodic maintenance and new facilities may require construction. These activities can definitely impact DT populations if they occur in potential DT habitat. Impacts can be minimized by construction monitoring and clearance surveys conducted by qualified DT biologists. Any trenches or holes excavated during operations should be covered or protected to exclude DT with temporary fencing. Most of these activities require environmental assessments (EA) or environmental impact statements (EIS) and formal or informal consultation with the USFWS. As previously discussed in the Action Description Section, up to 115 miles of security fences, depending on topography, (approximately 140 acres, based on a 10 ft. right-of-way (ROW)) may be constructed on the outer boundaries of the alternative expansion areas. Portions of this fence will likely cross DT habitat.

Impacts potentially caused by infrastructure construction and maintenance include the following:

- Soil disturbance: Soil disturbance is probably the major impact associated with infrastructure construction and maintenance. Construction activities can involve extensive shallow or deep soil excavation depending on the project. Impacts can be restricted to a building or infrastructure footprint or may involve extensive excavation along rights-of-way for installation of power lines, pipelines, or communication lines or construction of new roads. These structures may be constructed above or below ground. In all cases, soil disturbances would be significant and could result in take of DT and destruction of DT burrows if the activity occurs in DT habitat. Soil disturbance is also associated with maintenance of roads, parking areas, and utility rights-of-way. In many cases, these activities result in permanent removal of vegetation and, potentially, DT habitat. Any holes or trenches should be covered or temporarily fenced to prevent DT from falling into the hole. DT monitoring during activities will also prevent DT from falling into trenches or holes.
- Noise and vibration: Use of heavy equipment during construction and maintenance of infrastructure generally produces noise and vibration that may have temporary, minor impacts on DT populations in the immediate area.
- Vegetation removal: Most construction and maintenance activities associated with infrastructure results in permanent removal of vegetation and potential loss of DT habitat. In some cases, such as utility rights-of-way, native vegetation will be allowed to return to an impacted area.

- Dust and particulate air pollution: Construction activities and some maintenance activities can result in release of dust and particulate air pollution. This is minimized by application of water to the soil surface. However, dust and particulate air pollution probably has negligible impacts on DT.
- Hazardous materials: Hazardous materials may be used for construction of various infrastructure. Additionally, petroleum products and other fluids may be accidentally released during the operation of heavy equipment. Generally, these are quickly remediated and impacts to DT would be negligible.
- Vehicular traffic: Vehicular traffic in and around infrastructure construction would be temporarily increased. Depending on the location, this may impact DT populations. Training personnel on DT awareness would decrease the potential for take of DT by vehicular traffic. Depending on the infrastructure being constructed, an increase in traffic may be permanent.
- Water: Application of water to minimize dust production during construction can result in attraction of DT to an area. Construction personnel should be made aware of this potential, thus minimizing impact to DT populations.
- Predation: Accumulation of trash in and around construction sites can result in attraction of certain predators including ravens and coyotes that also prey on DT. Construction personnel should be instructed to properly dispose of trash and food wastes to prevent this from happening. Additionally, fences can provide perches for predators such as ravens.

Borrow Pits and Landfills

The construction of borrow pits and landfills causes significant impacts to DT. Approximately 539 acres of borrow pits are found on the Action Area of which 528 acres or 98% are in DT habitat. Loss or destruction of habitat can occur and DT can be displaced or harmed during the construction of borrow pits or landfills. Careful monitoring and clearance surveys during construction activities would minimize direct impacts to live DT. Landfill sites have the potential to increase numbers of predators, especially ravens and coyotes, due to accessible food (U.S. Fish and Wildlife Service, 1991). Landfills have been documented to impact DT by loss of habitat, introduction of hazardous materials, increased road mortality and attraction of predatory species, such as ravens (Boarman, 2002). Generally, on USAF lands, landfills and borrow pits require EAs and formal or informal consultation with the USFWS (if listed species are impacted) prior to construction. Specific impacts to the DT include the following:

- Soil disturbance: Construction and maintenance of borrow pits and landfills entails extensive excavation and grading. Additionally, monitoring wells may be required. These types of activities can result in destruction of burrows and potential mortality to DT. While they are in operation, borrow pits and landfills result in loss of DT habitat. Clearance surveys and construction monitoring by qualified DT biologists, as well as DT awareness training of personnel can minimize take of DT at these facilities.
- Noise and vibration: Heavy equipment and other vehicles on landfills and borrow pits produce noise that could have some minor impact on DT populations in the area. Vibrations caused by use of heavy equipment may impact DT populations in close proximity to the facility.
- Vegetation removal: Daily maintenance and construction result in relatively permanent removal of vegetation and DT habitat. If properly closed, some of these facilities may be restored to natural vegetation depending on permit requirements and other regulatory issues.
- Dust and particulate air pollution: Excavation activities in and around landfills and borrow pits typically produce dust and particulate air pollution. This would probably have little effect on DT populations in the area. Current air pollution regulations would also decrease the potential for impacts.

- **Hazardous materials:** Depending on the type of landfill, hazardous materials may be present. Also, fuels and lubricants can be released during excavation activities. Current regulations require that these be remediated or disposed immediately. Impacts to DT populations are not expected.
- **Vehicular traffic:** This type of facility would result in increased vehicular traffic which could result in take of DT. Proper awareness training of personnel can minimize this impact.
- **Water:** During excavation and daily cover activities, water may be applied to soil surfaces to decrease dust production. This can, in turn attract DT to the area. Personnel should be made aware of this potential event and how to respond.
- **Predation:** As previously mentioned, predators such as ravens and coyotes, may be attracted to trash and garbage on landfills. Current landfill regulations require that waste be covered on a daily basis, which should minimize attraction to predators. These predators can impact DT populations in the area.

Test and Evaluation

This action generally involves test and evaluation of various types of equipment including aircraft, ground equipment, enemy detection equipment, communication equipment, and others. Most of these activities will be staged in areas that have already been cleared for a specific use and additional impacts to DT populations would not be expected. However, the following are potential additional impacts that could be associated with this action depending on the equipment being evaluated:

- **Noise and vibration:** Testing of new aircraft and certain types of weapons delivery systems could result in noise and vibration emanating from flyovers at normal or supersonic speeds. Such actions could temporarily disorient DT populations, but overall impact would be expected to be minimal. As previously discussed, the effect of noise on DT populations is not well understood, but disorientation and loss of hearing are potential impacts.
- **Electromagnetic radiation, lasers and microwave transmissions:** Electromagnetic radiation (EMR) and microwaves would be produced by some emitters and communications equipment utilized on the NTTR, and targeting lasers may also be used on the NTTR. As previously discussed, this action is not likely to affect DT or DT habitat.

Battlefield Training

Battlefield training includes ground troops as well as the use of air and vehicle operations. This action may include para-drops, which is discussed in the "Insertion/Extraction and Overland Navigation" section that follows. Tortoise densities have been shown to decrease with the addition of military training but if training times were altered, impacts were minimized (Kristin H. Berry, 2016). As previously discussed, the actual number of activities and operations is not known at this time, but battlefield training conducted in DT habitat will be at a sufficiently low occurrence to ensure that effects to DT populations and habitat will not be adversely affected. Impacts associated with this action are discussed in detail in the Ready Access section and include the following:

- **Soil disturbance:** Soil disturbance would be considered minimal with this action. Most soil disturbances would be localized and small. This would usually be associated with trampling of soils by soldiers and soil displacement by vehicles.
- **Noise and vibration:** Battlefield training includes use of vehicles, blank small arms, hand flares, and smoke grenades which produce noise in some vibration in localized areas. Impacts to DT would be minimal, local, and temporary.
- **Vegetation removal:** Movement of troops and vehicles across interstitial areas (areas located between roads and trails) could result in damage to vegetation and DT habitat. In a desert setting, recovery from these impacts can take several years and can also result in encroachment of

invasive plants. Judicious location of troop activities in areas not potentially supporting DT populations and restoration of habitat following troop activities can minimize these impacts.

- Wildland fire: Battlefield training often involves use of flares and other munitions potentially causing wildland fires. Such fires can significantly impact DT habitat and vegetation depending on the size and temperature of the fire. This impact can be minimized by using proper precautions to prevent initiation of fires and rapid response to extinguish fires.
- Dust and particulate air pollution: Movement of troops can result in the production of dust and particulate air pollution. However, this would be considered minor and probably not impact DT populations.
- Vehicular traffic: Troop activities usually involve small groups of soldiers and not vehicles. However, movement of soldiers to an area would involve use of vehicles. Implementation of DT awareness training for troops would minimize impacts to DT by this action.
- Predation: Battlefield training can result in deposition of trash and food in local areas. Predators, such as ravens and coyotes, can be attracted by the trash in food and can prey on DT in the area. Training of troops in proper cleaning of battlefield areas will minimize attraction of predators to areas after training and, thus, minimize impacts to DT.

Insertion, Extraction, and Overland Navigation

Insertion, extraction and overland navigation will typically be conducted in areas that are not designated targets or weapons delivery areas. Ready access will allow implementation of this action on areas currently supporting DT populations. Most of the activities will be similar to troop movement discussed in the Ready Access section and have similar impacts on DT populations. However, these activities may also include the following impacts:

- Soil disturbance: Some level of soil disturbance may result from para-drops, especially those involving equipment on pallets. Touchdown and takeoff of fixed wing and rotary military aircraft will usually occur on unimproved surfaces and may result in some soil disturbances. Insertion points may be constructed as runways that are approximately 6000 feet long and 90 feet wide. One such runway will potentially be constructed in the dry lake in Alternative 3C and will impact approximately 13 acres. This location is not in DT habitat and not expected to impact DT populations. Para-drops can potentially result in accidental take of DT. Additionally, touchdown and takeoff of fixed wing or rotary aircraft can result in soil disturbance and take of DT.
- Noise and vibration: Most of the noise and vibration associated with this action would be caused by fixed wing and rotary aircraft. Noise and vibration would be localized and impacts to DT populations would be minimal.
- Vegetation removal: Para-drops, touchdown and takeoff of fixed wing and rotary military aircraft and troop movements can result in impacts to vegetation communities and DT habitat. These impacts would likely be temporary, but recovery of vegetation may take several years.
- Dust and particulate air pollution: This action can result in the release of dust and particulates, especially around fixed wing and rotary aircraft that may be landing and taking off. However, impacts to DT would be considered minimal.
- Vehicular traffic: As with most of these actions, an increase in vehicular traffic in the area may occur. Impacts to DT can be minimized by proper training of personnel.

INDIRECT IMPACTS

Indirect impacts include actions that potentially impact the DT but are separated from direct actions by time or distance. Indirect impacts to the DT caused by actions associated with the land withdrawal include the following:

- **Ready Access:** The implementation of Ready Access is expected to increase the activity on the Action Area by 30%. This may result in a corresponding increase in vehicular and aircraft traffic outside of the boundaries of the action area. Off-site DT populations could be impacted to some degree by this increase in noise and potential mortality on highways and roads. However, this would probably be minimal because many preventive measures to protect DT have been implemented on the highways in the area. Also, entry into the Action Area will be through gated entrances monitored by security forces or electronic monitoring systems. This ensures that only properly trained personnel will be entering the Action Area.
- **Weapons Delivery Areas:** Construction, maintenance, use, and repair of weapons delivery areas results in significant soil disturbance and vegetation removal. This, in combination with increased noise and activity, would likely displace DT populations from the immediate area, forcing them to move to surrounding areas. This could result in a slight increase in DT densities in habitat surrounding the weapons delivery areas. If the habitat can support the populations, this may not be an issue. Because the population density is apparently low on the Action Area, this indirect impact would be considered minimal. If a weapons delivery area is no longer in use and not projected to be used in the future, an effort should be made to restore DT habitat and vegetation on that area.
- **Weapons Delivery Area Cleanup:** Target cleanup on weapons delivery areas will have the same indirect impacts as those listed for weapons delivery areas. However, off-target cleanup associated with aircraft crashes and off-target explosions can result in long-term loss of DT habitat and displacement of DT populations from those areas. This indirect impact can be minimized by ensuring that off-target areas are restored to natural vegetation as soon as possible.
- **Infrastructure Construction and Maintenance:** Most of the indirect impacts of infrastructure construction and maintenance is associated with the increased activity and vehicular movement in and around the facility that has been constructed. This impact is easily minimized by proper DT awareness training of personnel. Additionally, new structures and facilities often produce trash that must be deposited in landfills and may require fill and other materials from borrow pits. Although these activities are covered in direct impacts, increase in their use is an indirect impact from infrastructure construction.
- **Borrow Pits and Landfills:** The USAF has no plans to use off-site landfills and borrow pits for construction of facilities on the action area. Therefore, no indirect impacts involving these actions is anticipated.
- **Battlefield Training:** As previously mentioned, some battlefield training activities could result in damage to vegetation and potential degradation of DT habitat. This can be minimized by proper DT awareness training of personnel. Like soil disturbing activities, this can result in displacement of DT populations and changes in density and dynamics of the populations in the area. This impact can be minimized by avoiding DT habitat for battlefield training wherever possible.
- **Dust and Particulate Air Pollution:** Dust and particulate air pollution can indirectly impact vegetation communities and DT habitat in the vicinity of the source of dust and particles. This is especially evident along unimproved roads and construction areas. Significant deposition of dust on vegetation can result in injury and death of plants. Also, encroachment of invasive plants can occur by dissemination of seeds from disturbed areas to surrounding areas. With proper precautionary measures, such as light wetting of surfaces or use of other dust suppression methods prior to vehicle use or construction activities, to minimize dust production, this impact would be minimal. However, dust production due to ordnance and live munitions cannot be controlled and some impacts to DT populations may be realized.

- **Abandoned Borrow Pits, Berms, and Construction Areas:** These areas often attract DT for construction of burrows if they are abandoned for extended periods of time. This would be a positive impact if the abandoned areas remain unused. However, if they are placed back into use, proper precautions should be made to ensure that they are checked for active DT burrows and use.
- **Impacts that may occur outside the Boundaries of NTTR and the Expansion Alternatives:** Impacts occurring outside of the boundaries of the action area are not anticipated, with the exception of increased vehicle or and aircraft traffic which is discussed above.

CUMULATIVE EFFECTS

Cumulative effects are the impacts of future local, state or private activities (non-federal), that may occur within the action area of the Federal action subject to consultation. Most of the Action Area is located in the Eastern Mojave DT Recovery Unit which appears to support a low density of DT. According to general surveys conducted in 2015 and 2016 in the Eastern Mojave Recovery Unit, DT population densities ranged from three to five DT/sq.mi. (U.S. Fish and Wildlife Service, 2016). This indicates that the DT population in this Eastern Mojave DT Recovery Unit is low, but relatively stable (U.S. Fish and Wildlife Service, 2011). Currently no future actions by state, local, or private agencies are anticipated to occur in the Action Area. If any unanticipated actions occur in the future, they are subject to review and approval by the USAF and would likely require an EA or EIS and formal consultation with the USFWS.

Proposed Minimization and Mitigation Measures for Each Program

Previous BiOps and formal/informal consultation with the USFWS have provided past guidance regarding DT management practices on the NTTR. Many of the management practices and mitigation requirements outlined in the BiOps have been implemented on the current NTTR and would be continued on the Expansion Alternatives. Recommendations for DT management are listed below and are intended to further conserve, manage, and monitor DT within the context of the military mission on the NTTR.

An Official Representative will be an Authorized Biologist who is responsible for implementation and oversight of compliance with recommendations, mitigation measures, reasonable and prudent requirements stated in the final USFWS BiOp prepared for this BA. The Official Representative will also ensure that the NTTR complies with all review and reporting requirements and any re-initiation requirements of regulatory procedures or documents. The Official Representative will be responsible for interagency cooperation among (but not limited to) private contractors, the USFWS, base personnel, and the USAF.

PROGRAMMATIC APPROACH TO CONSULTATION

The intention of this programmatic approach to consultation is to provide all necessary reasonable and prudent measures to ensure minimization of impacts and incidental take of DT by the USAF operations on the Action Area. This programmatic approach is used because specific information on individual projects potentially implemented by the USAF is currently not available. Thus, for each USAF action that may result in incidental take in the future, and incidental take statement should be provided to the USFWS to determine if it falls under the programmatic approach or will require additional formal/informal consultation.

ANNUAL REPORTING

USAF will provide the USFWS an annual report documenting any actions or the absence of any actions taken in compliance with the conservation measures and terms and conditions included in the final BiOp

for this action. Any actions resulting in “take” of DT will be reported to the USFWS within 24 hours. If a dead, injured, or diseased DT is found, the Las Vegas office of the USFWS Ecological Services should be notified as soon as possible.

FORMS OF TAKE

To ensure that protective measures are effective and being properly implemented and to document DT take, the USAF will notify the USFWS Ecological Services Division immediately if a DT is killed or injured by a project action. If possible, the project action should be temporarily stopped until the USFWS and the USAF have reviewed the circumstances surrounding the incident to determine if additional protective measures are required. Project activities may continue pending the outcome of the review provided that protective measures are continued. The previous BiOp estimated no more than one DT injury or mortality per year would be caused by USAF actions. Because of the increase in activity and area, this estimate may need to be increased. On NTTR, no DT have been injured or killed by military actions from 1999 to 2017 under any of the formal consultations and the current BiOp.

Take can only be estimated for a programmatic approach such as this because locations of specific actions have not been determined. These actions may or may not be located in potential DT habitat. Consultation with the USFWS can be initiated when the specifics are defined and the action is known to be impacting DT habitat. Estimated impacts to DT habitat (assumes that all actions are in DT habitat) are as follows:

- Fencing: A total of up to 115 miles of fence totaling 140 acres based on a 10 ft. ROW. It is estimated that about 90% of this fencing (126 acres) will likely be located in DT habitat.
- Threat emitters: 15 emitters at 0.517 acres per emitter, plus approximately four acres of roadway construction/improvement, totaling 11.5 acres. It is estimated that about 50% of this acreage will be located in DT habitat.
- Weapons Delivery Areas: No new areas will be constructed and impacts are not expected to exceed those that have already occurred under past BiOps and prior to DT listing. However, take of DT will likely occur due to military activities in these areas. DT take has not been documented for these areas by past actions and anticipated take is expected to be minimal. However, survey of weapons delivery areas by a qualified DT biologist should be conducted at least once annually during weapons delivery areas cleaning activities. Estimated areas of impact for this action is listed below and is based on the area already impacted by past actions.
 - Fragment Impacted Areas:
 - Active Targets: 6,157 acres
 - Inactive Targets: 5,293 Acres
 - Total: 11,450 Acres
 - Soil Disturbed Area:
 - Active Targets: 2,207 acres
 - Inactive Targets: 1,045 Acres
 - Total: 3,252 Acres
 - Target Impact Areas: 84,309 acres

All DTs found in harm's way in project areas may be captured and moved to a safe location by a qualified DT biologist. The previous BiOp estimated that no more than five DT would be taken per year through capture and movement. Again, because of the increase in activity in area, this estimate may need to be increased during formal consultation for the new programmatic BiOp. Also, ready access exposes more DT to activities and may require more capture and movement. Based on the 30% increase in activity and ready access, take is estimated to be no more than seven DT per year through capture or movement and two DT incidental mortalities per year.

DT eggs and nests may also be disturbed or destroyed during surface disturbing activities, especially at weapon delivery areas and during infrastructure construction and maintenance. The previous BiOp estimated that the number of eggs and nests affected by the USAF activities would be one per year. This BA is not anticipating a significant increase in soil disturbing activities and, therefore, the previous estimate is probably accurate.

Weapons Delivery Areas will be surveyed at least annually by a qualified DT biologist to identify any mortalities that may have occurred at the target during the year. This information will be used to provide a more accurate determination of take in those areas. If mortalities are identified, frequency of surveys may be increased and a more extensive plan of DT monitoring of the target to move DT from harm's way may be required.

As discussed in the action section of this report, DT may be taken through predation by ravens drawn to trash in the project area. With proper trash management and DT awareness training, this level of take can be minimized, but will occur to some degree. An increase in this type of predation is not anticipated.

PROPOSED CONSERVATION MEASURES

The following sections are devoted to a discussion of reasonable and prudent measures that can be taken to minimize and avoid impacts to DT populations on the Action Area. Mission actions will be planned and sited in a manner to avoid DT and DT habitat whenever possible. Actions most likely to adversely affect DT will be scheduled during the less active seasons of the year for the DT, when possible. Almost all of these measures are being administered by the USAF under the requirements of the current programmatic BiOp for NTTR (U.S. Fish and Wildlife Service, 2003). The measures are listed according to the type of impact. The actual USAF actions associated with these impacts are described in detail in the action description section of the BA. Conservation measures as well as informal/formal consultation with the USFWS for future site-specific actions would be required when the USAF actions occur within the boundaries of potential habitat as delineated by the current habitat suitability model. Actions occurring outside of DT habitat according to the model will not require conservation measures of consultation.

An annual report should be prepared for the USFWS summarizing all DT surveys and monitoring on the Action Area. Mortalities, injuries, and translocation of DT should be documented in the report. Data providing information on the location and disposition of DT and DT sign observed on the action area should be provided.

Movement of DT from Harm's Way

If DT or their sign are observed within the boundaries of the NTTR, facility personnel or operations contractors should immediately call NAFB Natural Resources Manager to request a biologist for further evaluation. The USAF activities that may endanger a DT will cease if a DT is found in harm's way as a result of the activity. Project activities will resume after NAFB Natural Resources Manager has been contacted and an authorized biologist removes the DT from danger. Relocation and handling of live DT will be conducted according to the recommendations found in most current version of the Desert Tortoise Field Manual (U.S. Fish and Wildlife Service, 2009) which may be found at https://www.fws.gov/nevada/desert_tortoise/dt/dt_auth_form.htm.

On a case by case basis, as determined by the NAFB Natural Resources Manager and the USFWS, and based on the size (acreage) and the type of activities that will be conducted on proposed action sites, DT found and removed from the sites and perimeter areas may be fitted with a radio transmitter. DT may be moved up to one mile away from the project site as required to be out of harm's way. DT fitted with a radio transmitter will be monitored and data collected until the project is completed to determine

movement and possibility of DT returning to the area of capture. Returning DT will continue to be moved from harm's way until completion of the project. Telemetry data will be collected during the project monitoring phase and for the life of the transmitter or until the transmitter is removed from the DT. Telemetry data collected on DT moved out of harm's way will be provided to the USFWS in the annual report.

DTs that are moved offsite and released into undisturbed habitat will be placed in the shade of a shrub, in a natural unoccupied burrow similar to the burrow in which it was found, or in an artificially constructed burrow (Desert Tortoise Council, 1999) depending upon the time of year and ambient temperatures.

DT moved in the winter (November 1 through March 1) or those in hibernation regardless of date must be placed into an adequate burrow. If one is not available, one will be constructed using the protocol for burrow construction (Desert Tortoise Council, 1999). During mild temperature periods in the spring and fall, DT removed will not necessarily be placed in a burrow.

If a DT is encountered and appears to be experiencing heat stress, it will be placed in a tub, by an authorized DT biologist, with 1 in. of water in an environment with an ambient temperature between 76°F and 95°F for several hours, until heat stress symptoms are no longer evident.

Upon locating dead, injured, or sick DT, proper notification shall be filed with the USFWS Las Vegas office. Only qualified biologists should handle live, sick, or injured DT. Dead DT should be handled with care to maintain the carcass in good condition for subsequent analyses of cause of death. Sick or injured DT will be delivered to any qualified veterinarians for treatment or disposal. A form for all DT that are handled (live and dead) will be completed by the Official Representative and the qualified representative shall be responsible for the handling, storage, and updating of completed forms.

Soil Disturbance

In areas where potential impacts and soils disturbance are likely to persist over a long period of time, the project site should be cleared of DT prior to construction. The current BiOp allowed for 971 acres of DT habitat to be removed by use of targets and other military activities. Therefore, the assumption is that the 971 acres was completely used during the duration of the current BiOp. Preconstruction DT clearance surveys should be conducted no more than 48 hours prior to earth-moving or vegetation-disturbing activities, unless the impacted area is secured from entry by DT. Clearance surveys should be coordinated with the Nellis Natural Resources Manager well in advance of any project. In addition, a perimeter around the project area should be cleared, as determined by the Nellis Natural Resources Manager and the USFWS. The determination to conduct perimeter clearance and the width of the perimeter will be made by Nellis Natural Resources Manager and will be based on the location of the project in DT habitat according to the current DT habitat map. A DT monitor will be present on the project sites during all project construction/earth-moving activities until the project is completed. Any DT or eggs found within the project area will be properly removed by a qualified DT biologist (Desert Tortoise Council, 1999).

For areas that would be temporarily disturbed or where restoration is proposed, the top 6 inches of soil will be excavated separately from deeper soils and stockpiled in a separate location. Any excavations should be backfilled with deep soils first, with the topsoil being backfilled as the final layer. This allows the site to have a final layer of soil that approximates original soil conditions and that contains a relatively healthy seed bank for regrowth of vegetation, thus rectifying potential soil displacement. Soils may be lightly rolled or compacted to reduce the potential for wind erosion. Excavated holes and trenches should be covered or surrounded with DT proof fencing until they are backfilled. A qualified DT monitor should be present during excavation activities to ensure that DT do not fall in holes or trenches.

Additionally, the USAF will implement other impact minimization procedures associated with permit-related requirements for construction. Most of these practices specifically target minimization of soil erosion and loss. Where practicable, the impacted surface will be brought back to original contours and erosion control measures will be used to maintain the soil in place. Sediment fences will be placed around the construction site to prevent movement of soils, sediments, and construction materials off-site during storm events. The excavated areas will be lightly wetted to minimize dust production. Application of water will be carefully controlled to prevent puddling and subsequent attraction of DT to the area.

Construction of roads, blading of existing roads, or other surface disturbance associated activities will be confined to the locations authorized by the Nellis Natural Resources Manager and will not exceed the minimum size required for safe usage. Roads will be lightly wetted to minimize dust production during maintenance activities and heavy use. Application of water will be carefully controlled to prevent puddling and subsequent attraction of DT to the area. Vehicular speeds will be maintained at 25 MPH in DT habitat.

Disturbance of DT burrows will be avoided from May 15 to September 30 to prevent impacts to buried egg clutches and emerging hatchlings. If this is not possible, active burrows impacted by the action must be carefully excavated or inspected with a fiber optic scope to determine if eggs are present. Eggs found in burrows must be removed and placed in a new burrow in suitable habitat according to the current recommendations found in *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council, 1999). Following the inspection of burrows for DT, all burrows must be collapsed to prevent future use.

All disturbance of DT habitat associated with existing targets and projects will be limited to the current acreage of target impact areas, not including roads. Remuneration fees or habitat restoration will only be required for new areas of soil disturbance based on the maps provided in Figures 5-8 and 27-29.

Any areas temporarily impacted by excavation and other activities will be returned to original contours and allowed to naturally return to the original habitat. Encroachment of weeds and invasive species will be managed and removed by mechanical, hand, and/or chemical methods in accordance with the Nellis AFB Pest Management Plan (Nellis Air Force Base, 2013). If logistics do not allow these procedures, the USAF will pay the remuneration fee for destruction of habitat based on the current rates determined by the Clark County DT Habitat Conservation Fund.

As an alternative to remuneration fees, the USAF may fund and implement DT habitat enhancement projects on the withdrawn land. The project cost should approximate the calculated cost of remuneration fees. DT habitat projects will be developed and approved by the USFWS prior to implementation of activities covered under this BA, but those habitat projects do not necessarily need to be completed before the covered activity begins. DT habitat projects and remuneration fees can be combined to mitigate impacts.

Vegetation Removal

Any vegetation temporarily impacted by excavation, maintenance, training, and other activities will be returned to original contours and allowed to recover naturally. Native plants may be seeded for germination following the first storm event after project completion. Initial irrigation may be used to stimulate germination of seedling plants but should not be continued to prevent adaptation of the plants to an artificially wet environment with shallow surface moisture. If nursery stock is used for replanting, all plants should be native and endemic to the specific area. Natural recovery of areas is preferred to seeding and planting.

As previously discussed, the top 6 inches of soil will be excavated separately from deeper soils and stockpiled in a separate location. Any excavations should be backfilled with deep soils first, with the top-soil being backfilled as the final layer. Excavated areas will be brought back to original contours where practicable. Soils may be lightly rolled or compacted to reduce the potential for wind erosion.

Encroachment of invasive plants in disturbed or restored areas should be prevented, and any invasive plants that become established should be removed. Excavation and construction equipment should be cleaned thoroughly before traveling from one area to another on the NTTR. Off-road vehicle use should be minimized whenever possible to decrease the spread of invasive species such as red brome, Russian thistle, halogeton, and cheatgrass. Wherever possible, maintenance of road shoulders will be minimized to prevent the spread of invasive plants. Those areas should be managed to develop native plant populations.

Noise and Vibration

The USAF will minimize and avoid excessive noise and vibration associated with various construction and military operations where possible. However, impacts to the DT by this type of action are not well understood, but appear to be minimal at best.

Wildland Fire

The USAF currently has a wildland fire management plan in place for NTTR. This plan will be expanded to include the alternative expansion areas if they are included as part of the withdrawn land. As part of the wildland fire management plan, USAF personnel will be trained to properly respond to the incidences of wildland fire. Implementation of this plan will ensure that wildland fires will be minimized and impacts to DT due to wildland fires will also be minimized.

The USAF will adhere to the following DT management recommendations by the BLM with respect to fire suppression activities (USDI-BLM, 1998). While safety is paramount, the following guidelines for DT conservation should be considered for all fire suppression activities:

- Utilize the current Mojave Desert Initiative (MDI) guidelines.
- Minimize acres burned through rapid fire suppression.
- Avoid spreading non-native plants by ensuring that all firefighting equipment has been cleaned before entering the area.
- Use the current map for potential desert tortoise habitat as designated by the USFWS and mapped by the NNRP to determine where special consideration suppression tactics will be conducted.
- Fight wildland fires aggressively in order to minimize burned acreage. Actions will be compatible with appropriate suppression options.
- Minimize soil surface disturbances during fire suppression
- Limit the use of mechanized equipment when possible
- Restrict use of firefighting equipment/vehicles to existing roads and trails when possible.
- The use of aerial retardant is authorized in the BLM fire management plan and is the preferred method of fire suppression. Foam or fugitive retardant is preferable to iron oxide retardant in DT habitat.
- Establish fire camps, staging areas, and helispots in previously disturbed areas outside mapped DT habitat. If possible, this should be accomplished in consultation with a qualified resource advisor from BLM or NNRP.
- Provide all firefighters and support personnel with a briefing on DT and their habitat to minimize tortoise injuries and destruction, particularly those associated with vehicle use.

It is important to note that if the Eastern Action Area continues to be under the jurisdiction of the USFWS as a potential wilderness area, the general rule will be to not aggressively fight wildland fires un-

less they are jeopardizing land outside of the boundaries of the NTTR or important military assets located within the boundaries of the NTTR.

Dust and Particulate Pollution

Dust and particulate pollution is not expected to have significant impacts on DT populations. As discussed earlier, dust can impact vegetation, which in turn can affect the DT by decreasing the available forage. In an effort to minimize this potential, the USAF will comply with all regulations required for construction and military activities to minimize production of dust and other particulates into the air. It is recognized that use of water to decrease dust production can inadvertently attract DT to roads and construction sites. However, current particulate pollution standards require that dust be contained on construction sites and along roads. Therefore, the USAF will minimize use of water where practicable and when water is used for dust control, it will be used sparingly to avoid puddling and accumulation of water in a manner that attracts DT. Alternatives for dust control will also be explored and include implementation of dust abatement measures using a soil stabilizer (e.g., application of dust palliatives [e.g., polymer emulsion or synthetic fluid]) to reduce impacts from dust.

Vehicular Traffic

The USAF, contractors, and other personnel should check under their vehicles prior to moving if the vehicle has been parked for more than a few minutes in DT habitat. Additionally, signs in parking areas of projects or facilities located within DT habitat should be posted to remind personnel to check under their vehicles prior to moving them. Relocation of a live DT found by personnel will be conducted by a qualified DT biologist according to the recommendations found in most current version of the Desert Tortoise Field Manual (U.S. Fish and Wildlife Service, 2009).

Speed limit of 35 mph will be maintained on paved roads in DT Habitat. Speed limits of 25 mph will be maintained for all regular vehicle travel on gravel roads in DT habitat. Speed limit of 15 mph will be maintained on two-track roads and trails.

Signage will be posted to clearly delineate areas within potential or known DT habitat where off-road vehicle use is prohibited. If necessary, fences with appropriate signage should be implemented in problem areas. Signs should be posted no further than 300 feet apart and facing outward from restricted areas. Off-road vehicle use in DT habitat will be minimized or avoided where allowed by military operations and constraints.

Although DT activity at night is rare, convoys and other night vehicular traffic planned for the Action Area should be made aware to watch for DT on roads. The day after convoys are conducted, the routes should be inspected for mortalities and those reported immediately to the Nellis Natural Resources Program Manager.

Water

Minimization of dust production in and around construction sites and some military activities often involve application of water via water trucks and other methods. Accumulation of water can result in attraction of DT to those areas. The USAF, contractors, and visiting personnel will be made aware of this potential and to be more cognizant of the occurrence of DT in these areas to avoid impacts.

Water can also accumulate in depressions and potholes on roads and construction areas following the storm events. These also serve as attractants to DT and personnel should be aware of the potential occurrence of DT in those areas. The USAF will periodically maintain roads and parking areas to remove these depressions and potholes.

Electromagnetic Radiation

The impact of electromagnetic radiation on DT is not fully understood at this time. As more information is procured on this type of impact, the USAF will implement methods to minimize impacts to DT, if possible. However, current literature indicates that adverse impacts to the DT from threat emitters would be unlikely and discountable due to the fact that the DT remain close to the ground, out of the range and emission zone of emitters. Also, impacts from emitters are associated with chronic, long term exposures, which are not likely for the DT.

Predation

Signage, fencing, power poles, and antennas will only be installed where required to minimize elevated perches for predators. If raven nests are discovered in DT habitat they will be removed by a qualified biologist and in compliance with the Migratory Bird Treaty Act.

All trash and debris will be regularly collected and contained in covered containers to minimize attracting potential predators of the DT (ravens). This program will include the use of covered, predator-proof trash receptacles and proper disposal of trash in a designated solid waste disposal facility. Vehicles hauling trash to the landfill and leaving the landfill must be secured to prevent litter from being released along the road.

Landfills should be properly managed and maintained to reduce the potential for scavengers such as ravens, dogs, and coyotes to congregate in areas used by DT. Appropriate fencing maintained around these facilities would reduce the potential for terrestrial animals to access these facilities, and best management practices such as sorting trash with high organic matter (i.e. foodstuffs) and burying it immediately with sufficient cover will reduce the occurrence of potential predators of DT. At the present time, no municipal or hazardous waste landfills (as opposed to construction and demolition landfills) are located in DT habitat and none are planned to be constructed.

Hazardous Materials/Depleted Uranium (DU)

The USAF will comply with all state and federal regulations to accommodate or remove hazardous materials and DU from target sites, construction sites, etc. Based on this information, the effect of DU on DT is anticipated to be minimal as a result of the proposed action.

Fencing

Some construction projects (i.e. vehicle demolition areas, explosive demolitions ranges, equipment staging or storage areas, etc.) may involve installation of fences that can impede movement of DT into the areas. Following the installation of new fencing, enclosures should be searched for presence of DT or their sign using 100 percent coverage techniques. Any identified DT burrow will be inspected to determine occupancy. Surveys will be conducted for enclosed areas unless a prohibitive risk of surveyors to explosive ordnance or demolitions activities impedes surveying activities. Enclosed areas will be surveyed a total of three times unless the results of the second survey determine conclusively that DT are not present within enclosures.

The previous BiOp originally required DT proof fencing to be constructed around some of the targets located in the South Range of the NTTR. Because of excessive damage and difficulty of maintaining these fences around live munitions targets, this requirement was amended and the amendment is recommended for this BA. DT should be removed from harm's way following standard procedures delineated in this BA.

With respect to boundary fencing, direct removal of vegetation and ground disturbance should be minimized. Bulldozer clearing or other major soil disturbing methods should be avoided. In areas with heavy vegetation, irregularly shaped fence line clearings should be used rather than fence lines with uniform

clearing widths. Mechanical clearing can be used if accompanied by actions that minimize soil loss and allow restoration of native vegetation.

Periodic monitoring of the fence and maintaining the fence in a usable condition, consistent with the original as-built standards, could be conducted. In addition, the fence line and access roads should be monitored for invasive plant species and appropriate invasive plant control measures should be implemented when required. Measures to decrease use of fences for perching of predators should be implemented where required.

Awareness Training

Contractors, military personnel, and any visitors on site will be provided with DT awareness training to recognize DT and DT sign. The program will be presented by an authorized DT biologist for projects causing the greatest potential for destruction of DT habitat. A video or fact sheet, as approved by the USFWS, may be presented or provided in lieu of a presentation for projects with low impact potential as determined by the Nellis Natural Resources Manager. Records of training provided to each individual will be signed upon completion of training by each individual and those records will be maintained by the Nellis Natural Resources Manager. Contact information for the Nellis Natural Resources Manager shall be included on any fact sheets or handout materials.

Environmental staff will conduct awareness briefings for all personnel working in DT habitat. These briefings will be conducted either in person or via a video presentation of the briefing. At a minimum, the briefings will include discussions of:

- General provisions of the Endangered Species Act
- Necessity for adhering to the provisions of the Act
- Potential for civil and criminal penalties associated with violating the provisions of the Act
- Terms and conditions of the USFWS BiOp that are applicable to the activity
- The definition of “take”
- The exact boundaries of the site within which the project activities may be accomplished
- General behavior and ecology of the DT and its sensitivity to human activities
- Measures to protect DT
- Proper disposal of food and trash to avoid attracting predators of DT
- Personal measures employees can take to promote the conservation of DT
- Specific and detailed instructions will be provided on the proper techniques (preferably by a qualified biologist, if practicable) to capture and move a DT that may be in imminent danger (on a heavily traveled road, on an active project site, or under a vehicle) in accordance with the USFWS approved protocol.
- Instructions for personnel to inspect beneath their vehicles while in DT habitat prior to moving the vehicle. If a desert tortoise is found beneath the vehicle, it will be moved by environmental staff or by project personnel in accordance with guidelines provided to them during the awareness briefings.
- Reporting requirements when DT are observed, moved, injured, or killed

Conclusion

It is the conclusion of this BA that if the conservation measures delineated by the BA are properly administered, military activities described in this BA may adversely affect DT populations on the action area. Based on the low-density population of DT on the Action Area and the implementation of proposed conservation measures, DT take is anticipated to be minimal. Estimates of take are the following:

- Seven DT per year through capture or movement from harm’s way

- Two DT per year mortality
- Total of 11.5 acres of DT habitat for emitter/roadway construction
- Up to a total of 126 acres of DT habitat for fence construction
- No additional habitat will be destroyed for target construction or use over the current acreage in DT habitat. Acreage of DT habitat impacted by soil disturbance on weapons delivery areas is 3,252 acres.
- Area of DT habitat potentially impacted by bomb fragments is 11,450 acres.
- Area of DT habitat in target impact zones is 84,309 acres
- Total additional DT habitat taken by construction, excavation, and other activities (in excess of current baseline impacts) that is subject to remuneration: 150.5 acres

Total take of DT habitat anticipated by the proposed action above those areas that have been currently impacted or impacted in the past are shown in Table 7.

Table 7. Take of DT habitat anticipated as a result of the proposed action

Action	Current DT Habitat Impacted by Action (Acres)	Estimated DT Habitat Impacted by Action (Acres)	Increase or Change in Impacts (Acres)	Notes
Weapons Delivery Areas—Soil Disturbance	3,252	3,252	0	Activity at weapons delivery areas is expected to increase by 30%
Weapons Delivery Areas—Explosive fragments from munitions	11,450	11,450	0	Activity at weapons delivery areas is expected to increase by 30%
New Threat Emitters--Facility	---	7.5	7.5	
New Threat Emitters—New Roads	---	4.0	4.0	Established roads will be used, if possible
Borrow Pits/Landfills	528	528	0	No new borrow pits or landfills are planned.
Landing Zone (Alternative 3C)	0	13	13	
Fencing	---	126	126	Approximately 115 miles of new fence

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