



APPENDIX K

CONSOLIDATED GROUP OF TRIBES AND ORGANIZATIONS (CGTO) NATIVE AMERICAN PERSPECTIVE



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K.1 NATIVE AMERICAN ASSESSMENTS: NEVADA TEST AND TRAINING RANGE (NTTR) LAND WITHDRAWAL PRELIMINARY DRAFT LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Summary

The Nevada Test and Training Range Land Withdrawal Legislative Environmental Impact Statement is a regulatory document in accordance with the National Environmental Policy Act (NEPA) that authorizes the Air Force to formally request the land withdrawal of the Nevada Test and Training Range (NTTR) which is used to support military operations under the direction of the US Air Force. The Consolidated Group of Tribes and Organizations (CGTO) has worked closely with the Nellis Air Force Base Native American Program since 1996. During a regularly schedule Tribal Update Meeting with the CGTO, participating tribes recommended the Air Force support Native American Writers in developing tribal text for the LEIS. The Air Force agreed to fund two meetings during the months of September and October 2017.

The Native American Resource Document is a summary of opinions and cultural perspectives relating to the Nevada Test and Training Range (NTTR) Land Withdrawal Preliminary Draft Legislative Impact Statement that represent the Consolidated Group of Tribes and Organizations (CGTO). The document contains (a) general concerns regarding long-term impacts from military operations on the NTTR and perceived impacts to the proposed land expansion areas; and (b) a synopsis of specific comments made by Native American Writers appointed by the CGTO to provide detailed responses to reflect the position of the CGTO.

The Native American Resource Document was produced in response to consultation required for the NTTR LEIS in accordance with Department of Defense Instruction 4710.02, DOD Interactions with Federally Recognized Tribes; and Air Force Instruction 90-2002 Air Force Interactions with Federally Recognized Tribes. The consultation focused specifically on four alternatives that will drive future military operations on the NTTR. However, the CGTO's response to this consultation is not limited to LEIS information and alternatives, but also for the purpose of integrating relevant recommendations made by the CGTO from previous Air Force projects in which Native Americans participated.

This Appendix was provided in its entirety by the Consolidated Group of Tribes and Organizations (CGTO). No changes have been made to the text provided by the CGTO. Text provided by the Air Force appears in boxes such as this one, to help the reader cross-reference the CGTO's perspective to the section in the main body of the LEIS being addressed by the CGTO.

1 The CGTO has a long history of relationships with the Nellis Air Force Base (NAFB)
2 who oversees multiple activities on the NTTR. In 1996, the NAFB initiated a Native
3 American Program that integrated 17 culturally affiliated tribes because of their ties to
4 the area. Participation in the NAFB Native American Program was initiated under the
5 auspices of the American Indian Religious Freedom Act, (AIRFA), (Public Law No. 95-
6 341, 92 Stat. 469 (Aug. 11, 1978) commonly abbreviated to AIRFA), codified at 42
7 U.S.C. § 1996. AIRFA reaffirms the Native American rights under the First Amendment
8 of the United States Constitution who require access to lands and resources essential in
9 the conduct of their traditional religion. These rights are exercised not only in tribal
10 lands but beyond the boundaries of a Indian reservation. The Native American Graves
11 Protection Act (NAGPRA),(P.L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048)
12 provides a mechanism for culturally affiliated tribes to engage in consultation with
13 federal agencies and/or museums that curate archeological collections. These
14 consultations are conducted for the purpose of examining artifacts under their authority
15 with the potential of repatriating items that meet the definition of NAGPRA. Executive
16 Order 13007 permits Native American access to sacred sites that are under federal
17 jurisdiction and located on lands managed by the US government.

18 To reaffirm cultural affiliation for the purpose of interacting with the federal government
19 in addition to the loss of ancestral ties to the NTTR, 17 tribes aligned together to form
20 the CGTO as a means of speaking collectively through one voice. The CGTO is
21 comprised of officially appointed tribal representatives who are designated by their
22 respective tribal governments to share insight and report back to their tribal
23 governments. The primary focus of the group has been on the protection of cultural
24 resources and engaging in co-management strategies. The CGTO works closely with
25 the NAFB in cultural resource management to coincide with mission driven activities
26 and positive interactions.

27 While this resource document provides information and shares tribal perspectives that
28 target the preservation of Native American religion, culture, society and economy, the
29 CGTO believes it is important to respond to the LEIS using the collective thoughts of
30 participating tribes. Co-management of cultural resources (which is all inclusive),
31 remain a priority of the CGTO. Ethnographic studies are necessary to systematically
32 collect data that augments information that can be applied to enhance resource
33 management. The CGTO believes it is essential to use a qualified ethnographer who is
34 familiar with the region and has a positive working relationship with the CGTO. Such
35 studies help document tribal perspectives and allow the Air Force to become better
36 acquainted with cultural sensitivities surrounding those resources that could be
37 impacted on the NTTR. This collaborative approach helps to concurrently promote
38 progressive interactions and innovative management practices.

1 **Consolidated Group of Tribes and Organizations**

2 **Southern Paiute**

- 3 • Las Vegas Paiute Tribe, Nevada
- 4 • Moapa Band of Paiutes, Nevada
- 5 • Pahrump Paiute Tribe, Nevada
- 6 • Kaibab Paiute Tribe, Arizona
- 7 • Paiute Indian Tribe of Utah, Utah
- 8 • Chemehuevi Indian Tribe, California
- 9 • Colorado River Indian Tribes, Arizona

10 **Western Shoshone**

- 11 • Duckwater Shoshone Tribe, Nevada
- 12 • Ely Shoshone Tribe, Nevada
- 13 • Yomba Shoshone Tribe, Nevada
- 14 • Timbisha Shoshone Tribe, California

15 **Owens Valley Paiute/Shoshone**

- 16 • Benton Paiute Tribe, California
- 17 • Bishop Paiute Tribe, California
- 18 • Big Pine Paiute Tribe, California
- 19 • Lone Pine Paiute and Shoshone Tribe, California
- 20 • Fort Independence Indian Reservation, California

21 **Mojave**

- 22 • Fort Mojave Indian Tribe, Arizona

23 **Native American Writers**

24 **Representing Southern Paiute/Chemehuevi**

- 25 • Kenny Anderson, Las Vegas Paiute Tribe, Nevada
- 26 • Ron Escobar, Chemehuevi Indian Tribe, California

27 **Representing Western Shoshone**

- 28 • Maurice Frank Churchill, Duckwater Shoshone Tribe, Nevada
- 29 • Barbara Durham, Timbisha Shoshone Tribe, California

30 **Representing Owens Valley Paiute/Shoshone**

- 31 • Danelle Gutierrez, Big Pine Paiute Tribe, California
- 32 • Sean Scruggs, Fort Independence Indian Reservation, California

1 **Representing Fort Mojave Indian Tribe**

- 2 • Linda Otero, Fort Mojave Indian Tribe, Arizona

3 **Native American Coordinator**

- 4 • Richard Arnold, Pahrump Paiute Tribe

5 **Sponsors, Organizers and Facilitators**

6 **Nellis Air Force Base**

- 7 • Col Paul Murray, Base Commander 99th ABW
- 8 • Lt. Col. Patrick Kolesiak, Commander 99th CES
- 9 • Eloisa Hopper, 99th CES
- 10 • Kenneth Finger, 99th CES
- 11 • Russ Collins, 99th CES
- 12 • Kish LaPierre, 99th CES

13 **Colorado State University Center for Environmental Management on Military** 14 **Lands**

- 15 • James Zeidler

16 **Bubar and Hall, Inc.**

- 17 • Ron Hall
- 18 • Dashiell Hall
- 19 • Alex Basaraba
- 20 • Abby Kerstetter

21 **First Native American LEIS Writers Meeting**

22 The first meeting of the Native American LEIS Writers was held on September 18-22,
23 2017 at the Avi Hotel in Laughlin, NV. The location is situated on the Fort Mojave Indian
24 Reservation and was selected to maximize tribal participation in the writing activities.
25 The goal of the first meeting was to develop a writing strategy, review pertinent sections
26 of the LEIS, draft an outline of writing tasks and begin developing draft text to
27 correspond with information in the LEIS. The NAFB Native American Coordinator
28 facilitated the meeting with clerical and logistical support from Bubar and Hall, LLC.

29 The Native American Writers identified three major areas to be used as the foundation
30 for the development of tribal text for corresponding sections of the LEIS:

- 1 1. Culturally affiliated tribes have lived or have cultural and historic ties to the
2 NTTR;
- 3 2. Native American culture, economy, religion and health could be affected by the
4 proposed alternatives; and
- 5 3. NTTR and the proposed land expansion areas could have long-term and
6 cumulative consequences on Native American culture, economy, religion and
7 health.

8 The NTTR Legislative Environmental Impact Statement provides information that
9 includes 4 alternatives which range from existing to incrementally expanded lands for
10 the NTTR. Another key consideration in the LEIS is the proposed duration (20, 50
11 years or indefinite) land withdrawal period. Due to time constraints, the Native
12 American Writers agreed to work in groups of two to focus on assigned sections in and
13 develop suitable text that would be presented for consideration to other group members
14 during the second meeting.

15 **Outline of Writing Tasks**

16 The Native American Writers made the following three decision regarding developing
17 Native American perspectives for the LEIS.

- 18 1. The Native American Writers will produce short technical essays to expand
19 sections of the LEIS, particularly those sections that refer to cultural resources,
20 economics and health and safety. These essays could be included in the main
21 text of the LEIS.
- 22 2. Tribal writers will also produce an Native American Resource document that will
23 be used as an LEIS appendix.
- 24 3. The Native American text will be included in the LEIS as italicized text within text
25 boxes to distinguish from the main text that is presented.

26 **Second Native American LEIS Writers Meeting**

27 The second meeting of the Native American LEIS Writers was held on October 9-12,
28 2017 at the Santa Fe Hotel in Las Vegas, NV. The goal of the second and final meeting
29 was to review writing assignments for editing and acceptance as a draft for the resource
30 document. Native American Writers structured their time to maximize results and
31 minimize duplication of efforts which aided greatly in productivity. Again the meeting
32 was facilitated by the NAFB Native American Coordinator (NAC) with support from
33 Bubar and Hall, LLC. Once text was drafted, the NAC worked with the information
34 provided to develop text that would be included in the LEIS.

1 Native American LEIS Writers Text

2 CGTO NATIVE AMERICAN WRITERS TEXT

3 NEVADA TEST AND TRAINING RANGE (NTTR) LAND WITHDRAWAL

4 LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT (LEIS)

5 2017

6 1.1.1 Introduction – Consolidated Group of Tribes and 7 Organizations

8 **Position Statement:** *The Consolidated Group of Tribes
9 and Organizations (CGTO), representing Southern Paiute,
10 Western Shoshone, and Owens Valley Paiute/Shoshone
11 and the Fort Mojave Indian Tribe, believe we are the
12 original caretakers of the land and natural resources
13 located within the boundaries of the Nellis Air Force Base
14 (NAFB) and Nevada Test and Training Range (NTTR). We
15 are opposed to activities which harm the environment or its natural resources or limit
16 our access to traditional use areas. Any action which is detrimental or potentially
17 impacts these areas, should be thoroughly evaluated by the Native American
18 Coordinator with assistance from officially appointed tribal representatives of the CGTO
19 in the spirit of true government-to-government relations.*

20 *Since the beginning of time, the region encompassing the
21 NTTR and the proposed land expansion areas near Beatty,
22 Creech AFB and the Desert National Wildlife Refuge
23 remain central to the lives of Native American Tribes.
24 These lands are known to contain traditional and
25 ceremonial use areas, along with traditional gathering and collection locations for Native
26 American people. The region contains abundant ecological resources and special
27 power places that are crucial in the continuity of Native American culture, religion and
28 society.*

29 The CGTO has a long-standing relationship with the Nellis Air Force Base (NAFB) that
30 began in 1996 with the establishment of the NAFB Native American Interaction Program
31 (NAIP). The NAIP interacts with 17 tribes representing Southern Paiute, Western
32 Shoshone, Owens Valley Paiute/Shoshone and the Fort Mojave Indian Tribe. Each of
33 these groups has distinct cultural and historic ties to the NTTR that are reflected in
34 traditional stories and songs. (Steward 1938, Myhrer 1993; 2002; Fowler 2010, 2012;
35 Spoon, et.al, 2011, 2012, 2014; Stoffle, 1982, 1989, 2001, 2012, 2016, 2017).

36 In 2008, Southern Paiute/Chemehuevi tribes (most of whom are members of the CGTO)
37 formed the Nuwuvi Working Group (NWG) to reaffirm their ancestral ties to Desert

The numbering of the paragraphs in this section (“Native American LEIS Writers Text”) represents the number of the paragraph as it would appear if it were added to the main body of the LEIS. For example, the paragraph numbered 1.1.1 here would be inserted just after Section 1.1 in the LEIS.

This paragraph 1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 1.1, Introduction.

1 National Wildlife Refuge Complex Spring Mountains National Recreation Area managed
2 by the US Fish and Wildlife Service and Forest Service, respectively. The NWG works
3 closely with both federal agencies as a mechanism for providing tribal insight relating to
4 the interpretation, management and preservation of culturally significant resources
5 within their respective boundaries.

6 Several federal regulations support tribal involvement through the CGTO and NWG
7 including but not limited to: American Indian Religious Freedom Act (P.L. 95-341);
8 Native American Graves Protection and Repatriation Act (P.L. 101-601); National
9 Historic Preservation Act (P.L. 89-665 as amended); and Executive Order 13007,
10 Access to Sacred Sites. Concurrent legislation includes the addition of Department of
11 Defense Instruction 4710.02, DOD Interactions with Federally Recognized Tribes; 2012
12 Sacred Sites Memorandum of Understanding with DOD, DOI, USDA, DOE, and ACHP;
13 and lastly, Air Force Instruction 90-2002 Air Force Interactions with Federally
14 Recognized Tribes.

15 Collectively, these regulations are the basis for tribal interactions and supporting tribal
16 involvement through the Consolidated Group of Tribes (CGTO) in developing tribal text
17 relating to the NTTR Land Withdrawal – Legislative Environmental Impact Statement
18 (LEIS). Throughout the development of this document, DOD provided the CGTO with
19 opportunities to create text that summarizes tribal perspectives responding to the
20 affected environment, resource descriptions, cumulative effects to proposed activities,
21 proposed alternatives and potential mitigation strategies under consideration.

22 Information produced by the CGTO for inclusion in the LEIS is presented in text boxes
23 such as this to distinguish Native American perspectives related to resources and
24 alternatives being evaluated and presented in *Appendix K - CGTO Native American*
25 *Assessments: Nevada Test and Training Range Legislative Environmental Impact*
26 *Statement - October 2017.*

27 To accomplish the writing task, the CGTO appointed a subcommittee comprised of tribal
28 representatives from the Western Shoshone, Southern Paiute, Owens Valley
29 Paiute/Shoshone and Fort Mojave Indian Tribe. The Native American Writers evaluated
30 information from previous documents that were blended with the collective thoughts of
31 tribal representatives who formulated corresponding text for inclusion into the LEIS.
32 Tribal text was developed on an accelerated schedule that relied upon available
33 resources and information provided in the draft LEIS to the extent practicable. Those
34 sections that were unavailable during the review process will be subsequently
35 addressed in a similar manner upon receipt.

36 Information provided by the CGTO uses the terms Native American, American Indian or
37 Indian people or tribal interchangeably to reflect varying tribal perspectives. In addition
38 to the text within the body of the LEIS, Native American perspectives related to

1 resources and proposed alternatives that are evaluated in this LEIS and presented in
2 *Appendix K – CGTO Native American Assessments: Nevada Test and Training Range*
3 *Legislative Environmental Impact Statement - October 2017.*

4 **1.1.1.1 Purpose and Need for Action - Consolidated** 5 **Group of Tribes and Organizations**

This paragraph 1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 1.4, Purpose and Need.

6 The Consolidated Group of Tribes and Organizations
7 (CGTO) knows Native American people are charged by the
8 Creator to interact with the environment and its resources in culturally appropriate ways
9 to maintain ecological balance regardless of the intentions stated in the Purpose and
10 Need for Action. Native Americans further believe these lands are personified and
11 contain resources with life-sustaining characteristics that require cultural intervention to
12 promote proper respect and nurturing to insure harmony and balance.

13 While tribal interaction has existed over the past 21 years, the CGTO does not support
14 harmful land disturbing activities currently conducted or planned within the NTTR,
15 including areas described in the proposed land expansion areas. These lands are part
16 of the traditional Holy Lands of the Southern Paiutes, Western Shoshone, Owens Valley
17 Paiute/Shoshone, and Mojave people. Harmful land-disturbing activities threaten the
18 health and welfare of Indian people and will limit our access to culturally important
19 locations and resources because of conflicting schedules, along with potential cultural
20 contamination or resource destruction.

21 Native Americans are culturally obligated to manage the land and its resources for
22 future generations. This means we evaluate and guide our actions and the level of our
23 involvement in terms of what will be available or affect future generations that can
24 sustain our culture. The CGTO takes this obligation very seriously and has provided
25 information throughout the LEIS to fulfill our purpose and need to care for these lands
26 (*Appendix K – CGTO Native American Assessments: Nevada Test and Training Range*
27 *Legislative Environmental Impact Statement - October 2017*).

28 **2.1.1 Description of Alternatives - Consolidated Group** 29 **of Tribes and Organizations**

This paragraph 2.1.1 provides the Native American perspective regarding the information presented in LEIS Section 2.1, Alternative Development and Screening Process.

30 The Consolidated Group of Tribes and Organizations
31 (CGTO) is concerned about culturally perceived harmful
32 land disturbing Air Force actions described in this chapter
33 of this Legislative Environmental Impact Statement (LEIS).

34 We are concerned because many of these actions adversely impact the NTTR land and
35 the proposed expansion areas, which in turn affect the Native American cultural
36 landscape and lifeways.

37 Since 1996, Nellis Air Force Base has worked closely with 17 culturally affiliated tribes
38 to provide opportunities for tribally appointed representatives through the Native

1 American Interaction Program. Tribal representatives are provided opportunities to visit
2 areas within the NTTR to help identify resources as part of their co-management
3 responsibilities to protect the land and its abundant cultural resources. The NTTR and
4 proposed expansion areas described in the Nevada Test and Training Range (NTTR)
5 Land Withdrawal contain important places, spiritual trails and landscapes of traditional
6 and contemporary cultural significance. Air Force actions to engage tribes in a long-
7 standing relationship are considered positive steps towards fulfilling its trust
8 responsibility and incorporating co-management opportunities with the CGTO.

9 To further avert or minimize potential impacts, the CGTO recommends the Air Force
10 and CGTO collectively develop co-management strategies to help protect the land
11 through the following actions before continuing current or proposed activities:

- 12 • Conduct systematic ethnographic studies by a qualified ethnographer to work in
13 collaboration with designated tribal representatives to study and understand
14 resources on the NTTR for enhancing co-management opportunities.
- 15 • Identify areas that tribes consider are not culturally maintained or are out of
16 balance from disrespect, isolation, or damage so balance can be restored in
17 culturally appropriate ways.
- 18 • Avoid further harmful ground-disturbing activities to the extent practicable.
- 19 • Make mitigation of restorable areas a top priority by working closely with the
20 CGTO.
- 21 • Avoid or minimize damage to geological formations, notwithstanding hydrological
22 and biological resources that are integral to sustaining cultural and ecological
23 landscapes, songscapes or storyscapes.
- 24 • Implement collaborative environmental restoration projects using techniques
25 guided by traditional ecological knowledge and minimizing ground disturbance.
- 26 • Continue to pursue systematic consultations with Native Americans on a regular
27 basis so potentially impacted resources can be readily identified and alternative
28 solutions can be discussed and adverse impacts averted.
- 29 • Provide Native American people increased access as appropriate to interact with
30 culturally significant areas for religious or ceremonial purposes to effectively
31 restore ecological balance to the natural and spiritual harmony that lives within
32 the boundaries of the NTTR.

33 The CGTO believes the continuation of Air Force and the CGTO annual meetings vital
34 to upholding trust responsibility and providing briefings about current and proposed
35 actions in greater depth to deliberate on potential impacts, while developing mutually
36 acceptable mitigation measures. Accordingly, the Air Force must support activities that

1 sustain tribal interactions and systematically evaluate resources in culturally appropriate
2 ways to build capacity for addressing areas important to Native Americans. This is
3 particularly important for those actions requiring analysis under National Environmental
4 Policy Act (NEPA), including but not limited to target or emitter placement or other
5 development that has the potential to impact important cultural resources on lands
6 managed by the NTTR.

7 In the view of Native Americans, avoidance of any action that further disturbs the land or
8 its resources on the NTTR or proposed expansion areas is desirable. The CGTO
9 believes we have been created and placed on these lands to serve as its voice needed
10 to sustain life. Because of our birth-right and strong cultural ties to our ancestral land,
11 the CGTO believes we have undeniable rights to interact with its precious resources,
12 coupled with the continuous obligation to protect it. The CGTO takes this responsibility
13 very seriously and has provided input for the alternatives presented throughout Chapter
14 3 so we may fulfill this important obligation.

15 **2.2.1.1 Increase MCO Test and Training Capability to** 16 **Meet the Demands of Strategic Guidance and Alleviate** 17 **Competition for Critical MCO Electronic Assets –** 18 **Consolidated Group of Tribes and Organizations**

This paragraph 2.2.1.1 provides the Native American perspective regarding the information presented in LEIS Section 2.2.1, Increase MCO Test/Training Capability to Meet the Demands of Strategic Guidance and Alleviate Competition for Critical MCO Electronic Assets.

19 The LEIS references tribal interactions with the CGTO to
20 evaluate cultural concerns relating to impacts from
21 overflights to rockshelters and “petroglyphics” [sic]. The
22 CGTO is unaware of any such term. Based on the
23 description applied to *petroglyphics*, it is presumed the text is referencing *petroglyphs* or
24 *pictographs commonly referred to as rock writings or storied rocks*. The CGTO
25 suggests a modification to the text is necessary and requests a reference source and
26 introduction to properly introduce any new terminology.

27 **Table 3-49.1 Summary of Impacts Affected Environment Table 3-149 (Page 2-280)** 28 **– Consolidated Group of Tribes and Organizations**

This paragraph provides the Native American perspective regarding the information presented in LEIS Table 3-49, Summary of Impacts.

29 The CGTO understands the baseline results identified in
30 Summary of Impacts Affected Environment Alternative 1 do
31 not accurately represent tribal perspectives or account for
32 the culturally perceived impacts presumed to be limited or
33 non-existent. The CGTO is aware of multiple impacts to the cultural landscape that
34 relates to existing military activities that occurs within the NTTR and proposed
35 expansion areas that cannot be minimized.

3.1.1.1.1 - Air Space – Consolidated Group of Tribes and Organizations

The Consolidated Group of Tribes and Organizations (CGTO) understands the existing air space will not change under the proposed land withdrawal. However, cultural views about the air within the proposed air space are described under Air Quality 3.3.1.1.1.

This paragraph 3.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.1.1.1, Description of Resource.

3.2.1.1.1. Noise – Consolidated Group of Tribes and Organizations

The CGTO is comprised of tribes with deep-rooted epistemological beliefs that connect us to the land. The CGTO believes noise is created by unnatural or man-made sounds that can intensify the effects on the land. Central to the Indian experience of viewsapes is isolation and serenity in an uncompromised landscape. If construction and operation of the proposed activities proceed in a culturally inappropriate manner, then visual resources within the NTTR will be adversely impacted, further perpetuating an unbalanced environment. (See 3.4.1.5.1 Visual Resources - CGTO Comments).

This paragraph 3.2.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.2.1.1, Description of Resource.

Indian people know the land is a sentient being with eyes to see, ears to hear and feelings to express or react. The land must be kept in balance or else it will react and not have the ability to sustain the cultural and ecological balance needed to survive. The CGTO knows echoes can be intensified by man-made sounds such as sonic booms or other noises that occur from military activities that resonate through the landscape. This disturbance causes the land to become sick and out of balance. When sickness occurs, Indian culture is adversely impacted in the same way. Noise can cause a disruption to the serenity or can affect animals when solitude is needed to maintain resources that will ultimately have far reaching or long lasting effects beyond the NTTR.

Noise can create vibration that brings harm to the land, mountains, water, springs, rocks, rock writings (petroglyphs/pictographs), and other cultural resources including but not limited to plants and animals. Noise from sonic booms send shockwaves through the land and can cause echoes that travel through the mountains and canyons, thus becoming the voices of the land to provide warnings to everything within the region. If ignored or not understood, ecological imbalance will be inevitable creating lack of cultural continuity.

Echoes that resonate over the landscape are perceived as the voices of the land that mimic the sounds and can become a distraction to the serenity of the land. Unnatural sounds from military activities bring harm to the resources that can deteriorate them and cause an imbalance to the cultural landscape. The CGTO knows understands the cultural divisions between day time and night time and how they can act differently with different powers but have the ability to work together to sustain ecological balance in the

1 world. When noise is continuous or high intensive, the land reacts from being sick or out
2 of balance. When this occurs, animal behavior changes, which can effect stress levels
3 or animal mortality rates. The CGTO knows that cultural intervention is necessary to
4 conduct traditional balancing ceremonies to heal the land.

5 **3.3.1.1.1 Air Quality – Consolidated Group of Tribes and Organizations**

6 The CGTO knows that the air is alive and can be affected
7 by military activities. The Creator puts life into the air,
8 which is shared by all living things. When a child is born,
9 he pulls in the air to begin their life. The mother watches
10 carefully to make sure that the first breath is natural and
11 that there is no obstruction in the throat. It is believed if the day of birth is a windy day, it
12 is a good day and the child will have a good life.

This paragraph 3.3.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.3.1.1, Description of Resource.

13 According to the tribal elders' perspectives expressed during visits to the NTTR, "...You
14 can listen to the wind. The wind talks to you. Things happen in nature. Our people have
15 weather watchers, who know when inclement weather conditions are imminent or when
16 crops and things should occur. They watch the different elements in nature and pray to
17 ask the winds to come and talk about these things. Sometimes you ask the north wind
18 to come down and cool the weather. The north wind is asked to blow away the footsteps
19 of the people who have passed on to the afterlife. That kind of wind helps people and it
20 is considered positive. The wind also brings you songs, stories and messages.
21 Sometimes the messages are about healing people, a sign that the sickness is gone
22 now from the person or the land. Other times, we know change is coming to get the
23 sickness and take it away. Other times the wind and other changes to the air can bring
24 you the strength that you will need to confront the illness."

25 *Dead Air* - Indian people know air can be destroyed, causing pockets of *dead air*. There
26 is only so much living air that surrounds the world. If you kill the energy, it is gone
27 forever and cannot be restored.

28 *Dead air* lacks the spirituality and life necessary to support other life forms. Aircraft
29 mishaps occur when they hit *dead air*. During a previous CGTO evaluation of the area,
30 one member of the CGTO compared this Indian view of killing air with what happens
31 when a jet flies through the air and consumes all of the oxygen, producing a condition
32 where another jet cannot fly through it.

33 As one tribal elder noted, "*The spiritual journey of the Southern Paiute Salt Songs are*
34 *affected as the air quality is not the same as in the days of old. This Salt Singer*
35 *wonders what is going to happen if the situation isn't corrected. Southern Paiutes need*
36 *this spiritual journey to ascend their deceased to the next life.*"

37 As people are emitting things into the air that are unnatural, such as past radiative tests,
38 climatic changes such as droughts are occurring because the air is being disrespected.

1 As the air continues to be disrespected, it perpetuates and intensifies imbalance
2 throughout the environment. This impacts many resources, including the land, soil,
3 water, plants, and animals.

4 Dust devils in various forms and sizes are culturally significant to Indian people and
5 known to bring harm. The CGTO knows the frequency and intensity of dust devils have
6 increased within the NNSS and the surrounding area. Dust devils contain negative
7 energy, and can disperse hazardous and radioactive contaminants from the soil at the
8 NTTR. Their spirits can bring harm if the air is disrespected and if you watch it or allow
9 them to come near or pass through you. If this occurs, a person will become ill and must
10 seek cultural intervention to heal.

11 Native Americans who were present during past above ground nuclear tests at the
12 nearby Nevada National Security Site (formerly the Nevada Test Site) that is adjacent to
13 the NTTR, believe that the sickness many illnesses may have been derived from
14 radiation. To some, the effects of the radiation was in addition to what happened when
15 the air itself was killed. Some tribal elders believe that even when the plants survived
16 the initial effects of radiation or other sicknesses, the *dead air* altered or killed many of
17 them or made some lose their spiritual power to heal things.

18 As noted by tribal elders, *“Sheep and other animals are being born out of season, which
19 places them at greater risk from predators and inhibits living full lives. Consequently,
20 their loss adversely impacts our cultural survival, as many of our stories and traditions
21 surround these animals. Weather is out of balance. For example, when it snows, one
22 can also hear thunder. Native people observe the changed nature of the vegetation and
23 blame the atmospheric change on the air quality derived from the bomb testing on the
24 NNSS.”*

25 The CGTO recognizes that climatic change is occurring and will continue to impact the
26 natural resources of the NNSS and the surrounding region. When rain gauge
27 (anemometer) data are averaged over a decade they can mask the reality that plants
28 and animals are adjusted to regular cycles of rain and snow. Isolated heavy rain events
29 can increase the annual rainfall amounts, but are largely not useful for sustaining life.
30 Plants and animals need the climate to return to its historic, normal annual rainfall,
31 which is more evenly dispersed by season.

32 The CGTO knows that ceremonies have historically helped manage the climate in the
33 NTTR region. Unfortunately, we have not been able to perform these ceremonies at the
34 frequency needed as our holy land continues to suffer. To facilitate the healing of this
35 area, the Air Force must make provisions for the CGTO to access the land and perform
36 these rituals, which are further described below.

1 **3.4.1.1.1 Land Use, Recreation and Visual Resources – Consolidated Group of** 2 **Tribes and Organizations**

3 The CGTO considers access issues (including the ability to
4 visit, view or recreate) to have two key aspects that have
5 significant cultural implications:

This paragraph 3.4.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.4.1.1, Description of Resource.

- 6 • Increased access to cultural resource locations may
7 increase for contractors and/or military personnel
8 identified under all of the proposed Alternatives. These individuals have the
9 potential to disturb cultural resources or intrude on ceremonies without proper
10 coordination/consultation.
- 11 • Access by Indian people to culturally important locations when requested will be
12 limited under any action alternative.

13 The CGTO recognizes there are conflicting aspects with this issue; the desire for
14 unlimited access by Indian people and the protection that is provided by restricting
15 access for recreationalists.

16 Under each alternative, visual intrusions or scheduling will adversely impact resources
17 important to Native Americans. According to the CGTO all landforms, mountain ranges
18 and playas within the NTTR have high cultural sensitivity levels for Native Americans.
19 The ability to see the land without obstruction or the distraction of aircraft, buildings,
20 towers, cables, roads, and other objects related to military activities is essential for
21 sustaining the spiritual connection between Indian people and their traditional
22 homelands. Landscape modifications should be done in consultation with Native
23 Americans.

24 **3.4.1.4.1 Land Use – Consolidated Group of Tribes and Organizations**

25 The Nevada Test and Training Range is within the
26 traditional Holy Lands of the Western Shoshone, Southern
27 Paiute, and Owens Valley Paiute/Shoshone and Mojave
28 people. These ethnic groups rely on these lands for
29 medicinal purposes, religious activities and ceremonies,
30 food, recreational use, and other integral places described in traditional narratives and
31 religious ceremonies.

This paragraph 3.4.1.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.4.1.4, Recreation and Special Use Areas.

32 Indian people know these lands not only contain important archaeological remains left
33 by our ancestors but natural resources and geologic formations, such as plants,
34 animals, water sources and minerals; Natural landforms that mark or identify important
35 locations necessary for keeping our history alive and are necessary for teaching our
36 children about our culture. We use traditional knowledge about sites in the NTTR region
37 that are embedded in tribal stories and songs. Many locations or resources on the

1 NTTR are needed for making tools, stone artifacts, and creating ceremonial objects
2 associated with traditional healing ceremonies and power places.

3 For thousands of years throughout contemporary times, the area that encompasses the
4 NTTR and the surrounding region has been a central place in the lives of American
5 Indian tribes. NTTR has been continuously used by our people until encroachment
6 occurred in the late 1800s up until the mid-1900s when Indian people were not
7 permitted to access the area. In 1863, the United States entered into the Treaty of Ruby
8 Valley of 1863 with the Western Shoshone giving certain rights to the United States in
9 the Nevada Territory. The Western Shoshone did not cede land under this treaty but
10 agreed to allow the US the "right to traverse the area, maintain existing telegraph and
11 stage lines, construct one railroad and engage in specified economic activities. The
12 Treaty would continue to be contested for decades and remaining unresolved by many
13 Western Shoshone. (See Treaty of Ruby Valley 1863 in Appendix K Native American
14 Assessments: Nevada Test and Training Range Legislative Environmental Impact
15 Statement - October 2017)

16 Throughout our existence, traditional festivals involving religious and secular activities
17 attracted American Indian people to the area from as far as northern Nevada and San
18 Bernardino, California. Similarly, groups came to the area from a broad region during
19 the hunting season and used animal and plant resources that were crucial for their
20 survival and cultural practices.

21 Several areas within the NTTR region are recognized as traditionally or spiritually
22 important locations including: Black Mountain, Stonewall Mountain, Mount Helen, Pillar
23 Springs, Kawich Range, Belted Range, Airfield Canyon, and Pintwater Cave.

24 Thirsty Canyon is an equally important crossroad where trails from such distant places
25 as Owens Valley, Death Valley, Ash Meadows, southern Nevada and the Avawatz
26 Mountain come together. Black Cone, located in Crater Flats is a significant religious
27 site that is considered to be a portal to the underworld (AIWS 2005). Due to the religious
28 significance of these culturally sensitive areas, tribal representatives recommend the Air
29 Force avoid affecting this area (Stoffle et al. 1988). Oasis Valley was historically an
30 important area for trade as well as ceremonial use that still continues. Other areas
31 throughout the NTTR are considered important because of the abundance of artifacts,
32 traditional-use plants and animals, rock writings (petroglyphs/pictographs), and possible
33 burial sites. Despite the current physical separation of tribes from the NTTR and
34 neighboring lands, we continue to recognize the meaningful role of these lands in our
35 culture and continued survival.

36 The CGTO maintains we have Creation-based rights to protect, use, and have access
37 to lands within the NTTR and the immediate area. These rights were established at
38 Creation and persist forever. Despite the loss of many traditional lands on the NTTR to

1 cultural pollution and reduced access, Indian people have neither lost our ancestral ties
2 nor have we forgotten our responsibilities to care for it. As one elder noted, “*Land is to
3 be respected. It sustains us economically, spiritually, and socially.*”

4 During the past two decades, CGTO representatives have visited selected portions of
5 the NTTR and continue to identify places, spiritual trails, and cultural landscapes of
6 traditional and contemporary cultural significance. Because this is a public document,
7 the exact locations of these areas will not be revealed; however, they do include
8 culturally significant and sensitive resources that are addressed in the American Indian
9 Religious Freedom Act (AIRFA); Native American Graves Protection and Repatriation
10 Act (NAGPRA); Access to Sacred Sites; and Air Force Instruction 90-2002 Air Force
11 Interactions with Federally Recognized Tribes. The Air Force continues to take positive
12 steps towards facilitating co-stewardship arrangements with the CGTO to help co-
13 manage important tribal resources found on the NTTR and regain cultural, ecological
14 and spiritual balance

15 One elder from Nevada responded to the potential impacts of his traditional land as
16 follows: “*Non-Indians can move if you pollute or change the land on which you live, but
17 we were created for this place, so we must face whatever happens here. We cannot
18 move and continue to be tribal people-this is our land-we are this land*” (Stoffle and
19 Arnold 2003). This view is shared by other culturally affiliated tribes within the CGTO
20 who believe we have Creation-based rights to protect, use, and have access to land.

21 **3.10.1.3.1 Geology – Consolidated Group of Tribes and Organizations**

22 During previous visits to the NTTR, the Consolidated
23 Group of Tribes and Organizations (CGTO) noted culturally
24 severe disturbances to the geology, soils, or minerals
25 stemming from previous military activities. This seemingly
26 irreparable damage has made certain areas unfit for
27 human use and inaccessible to Native Americans who have relied on the earth, soil and
28 minerals for medicine and religious purposes.

This paragraph 3.10.1.3.1 provides the Native American perspective regarding the information presented in LEIS Section 3.10.1.3, Geology.

29 In general, the CGTO knows mitigation measures must be proposed by the Air Force for
30 geology and soils to address erosion control through stabilization and revegetation. The
31 CGTO is concerned about the unnatural erosion control methods proposed by the Air
32 Force. In particular, the CGTO struggles with activities that require relocating rocks and
33 soil away from where they were originally placed by the Creator and using them
34 contrary to the Creator’s intention. Native Americans know relocating soil in a culturally
35 unacceptable manner can cause adverse impacts to the environment, such as the
36 increased potential for noxious weed growth. This could potentially threaten nearby
37 native vegetation and harm people and wildlife that rely on it for survival

1 Therefore, the CGTO recommends the Air Force implement culturally-appropriate
2 stabilization efforts and revegetation techniques based on traditional ecological
3 knowledge. Indian people stabilize our lands by offering prayers to explain to the soil
4 why it is being removed, how we intend to use it, and by thanking it for its use. We then
5 remove and protect the topsoil for future use. We replace the soil with dirt and gravel
6 from nearby land only after once again offering prayers, and re-contour the land out of
7 respect to the visual landscape and unseen song and storyscapes. Indian people
8 revegetate our land by determining suitable locations, and offering prayers to bless the
9 seeds and plants so they can grow strong. We take great care in placing the seedlings
10 in the direction of the morning sun and give thanks for the opportunity to plant them and
11 for the water that is used to provide nourishment. Plants must be compatible with their
12 new homes, neighboring plants, animal habitats, and soil composition. We believe a
13 holistic approach helps to sustain balance and protects and restores our ancestral
14 lands.

15 Based on previous visits to the NTTR, the CGTO believes the geology and soils are in
16 even poorer condition than they were during their earlier visits due to the continued
17 drought. Drought conditions, ground disturbing site activities, and damage to the soil
18 from previous underground nuclear testing are significantly enhancing erosion. Negative
19 impacts to these resources are long-lasting.

20 Activities that alter geological structure also alter hydrologic systems. Such actions
21 result in changes to important geologic and soil features that directly connect the tribes
22 to their homelands in specific, spiritual ways. These changes require spiritual and
23 cultural intervention to restore balance.

24 According to tribal elders, *“Bombs have melted the soil. It turned to glass....Severe
25 disturbances are still out there. Everything is still suffering from it. ...The CGTO is in
26 agreement that they must be here to do what they can to help stop this terrible pressure
27 put on the earth through traditional ceremonies. The land has its own songs and when
28 you sing the songs to the land, it’ll sing back to you. These songs must be sung to help
29 heal the earth and to restore harmony and balance.”*

30 **3.4.1.5.1 Visual Resources – Consolidated Group of Tribes and Organizations**

31 Unobstructed views from locations to and from the NTTR
32 are an important cultural resource that contributes to the
33 significance and performance of traditional ceremonialism.
34 Views combined with other cultural resources produce
35 special places where power is sought for medicine and
36 other types of ceremony. Views can be of or from any landscape, but more central
37 viewscapes are experienced from high places, which are often the tops of mountains
38 and the edges of mesas. Indian viewscapes tend to be panoramic and are made special

This paragraph 3.4.1.5.1 provides the Native American perspective regarding the information presented in LEIS Section 3.4.1.5, Visual Resources.

1 when they contain highly diverse topography. These viewsapes or panoramas are
2 further enhanced by the presence of volcanic cones and lava flows.

3 Viewsapes are tied with songsapes and storysapes especially when the vantage
4 point has a panorama composed of multiple locations described by traditional songs or
5 stories. Our traditional songsapes and storysapes can be compromised if projects like
6 geothermal or solar energy development are pursued. If geothermal resources are
7 altered on or near NTTR, our songs and stories will be impacted and will no longer
8 accurately reflect key traditional aspects of the viewscape.

9 Central to the Indian experience of viewsapes is isolation and serenity in an
10 uncompromised landscape. If construction and operation of the proposed activities
11 proceed in a culturally inappropriate manner, then visual resources within the NTTR will
12 be adversely impacted, further perpetuating an unbalanced environment. To restore
13 balance to the environment and its visual resources, the Air Force must provide access
14 for Native Americans to conduct religious and cultural ceremonies to fulfill traditional
15 obligations. In this manner, we can restore and preserve our spiritual harmony as a
16 whole.

17 The CGTO recognizes the cultural significance of viewsapes and has identified a
18 number of these associated with the NTTR. The Kawich, Belted, Spotted, Desert, and
19 Pahranaagat Ranges along with Black Mountain and Mount Helen contain a number of
20 significant vantage points with different panoramas including other nearby areas but not
21 limited to Mount Charleston, Scrugham Peak, White Mountains, Telescope Peak and
22 Buckboard and Pahute Mesas. The CGTO feels revisiting sites within the viewsapes
23 are essential for Indian people to interact with the land, communicate with the spirits
24 who watch over the land, conduct religious ceremonies with prayers and songs, and
25 monitor the condition of each site. Special considerations should be given to tribal
26 elders and youth to provide an educational experience and reinforce positive
27 connections with our culture. (*Appendix K – CGTO Native American Assessments:
28 Nevada Test and Training Range Legislative Environmental Impact Statement - October
29 2017*).

30 The CGTO knows many of the activities described in this LEIS including facility
31 construction and environmental restoration, will adversely impact visual resources. For
32 Native Americans, the adverse impact to visual resources will most certainly impact the
33 spiritual harmony of the environment as a whole. Facility construction and operation will
34 impede visual resources and affect the solitude and cultural integrity of the land.

35 In particular, visual resources may be negatively impacted if proposed solar and
36 geothermal projects are pursued on or near the NTTR. The CGTO must be part of any
37 additional future discussions of these projects at a minimum as these may impact visual
38 resources and may degrade traditional and cultural ceremonies.

1 Although the Air Force proposes to mitigate visual resource impacts by painting
2 structures to reduce visibility, the CGTO knows additional mitigation measures are
3 necessary. The CGTO recommends that landscape modifications, including those
4 associated with environmental restoration activities, be done in consultation with tribal
5 representatives. Specifically, Air Force should make provisions for Indian people to
6 participate in regular monitoring of land-disturbing activities through the duration of the
7 project. Finally, the CGTO recommends that the Air Force make provisions for Indian
8 people to conduct ceremonies and offer prayers and songs in an effort to re-balance
9 this adversely impacted resource. (*Appendix K – CGTO Native American Assessments:
10 Nevada Test and Training Range Legislative Environmental Impact Statement - October
11 2017*).

12 **3.5.1.1.1 Wilderness and Wilderness Study Area – Consolidated Group of Tribes 13 and Organizations**

14 The CGTO remains concerned about the expansion of
15 public lands for inclusion in the NTTR into wilderness areas
16 including the Desert National Wildlife Refuge. Tribal
17 representatives would no longer be afforded the necessary
18 opportunity to use culturally sensitive areas when needed
19 without restriction or involvement from the Air Force. Solitude is an essential component
20 to preventing intrusion during tribal ceremonies in sacred areas. The CGTO has stated
21 the potential for cultural discord from visual or audible intrusion of aircraft or associated
22 activities that could impact wilderness resources important to Indian people. The CGTO
23 will struggle with limited access to important resource locations within Wilderness or
24 Wilderness Study Areas.

This paragraph 3.5.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.5.1.1, Description of Resource.

25 Both tribal and non-tribal recreationalists will be challenged by limited or denied access
26 to previously visited locations. Biological and botanical resources used or needed by the
27 CGTO will be unavailable and affect the cultural and ecological balance of withdrawn
28 lands.

29 **3.6.1.1.1 Socio-economics – Consolidated Group of Tribes and Organizations**

30 The CGTO knows the socio-economic conditions
31 addressed in the NTTR LEIS are inadequate in revealing
32 the true impact upon Native people. The LEIS does not
33 provide a full understanding of the tribal values, which are
34 different and unique for sustaining tribal lifeways.
35 Consideration must be given to examining tribal impacts on employment, earnings,
36 agriculture, mining, recreation, grazing and energy corridors. Tribes have influence on
37 these conditions however, the measure of meaning may not always be monetarily
38 driven.

This paragraph 3.6.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.6.1.1, Description of Resource.

1 The CGTO knows value or significance is based on tribal identity and their spiritual
2 relation to places used for sustaining traditional lifeways. For example, tribes have the
3 ability to use a natural area for ceremonial activities to sustain balance within the
4 cultural landscape. The CGTO believes generations upon generations of tribal people
5 have sustained a way of life that relies upon the natural resources provided by the
6 Creator. Rather than depleting resources, tribal practices promote active conservation
7 to return balance to our natural world. Tribes place high value on the health and pristine
8 nature of the land and prefer the least intrusive approach to minimize environmental
9 change. We are the stewards who serve as the voices of the land, water, air and other
10 living things. Thus, tribal governments are mindful of the importance of our own pursuit
11 of economic development in culturally compatible ways that are in the best interest of
12 the health and welfare of our people.

13 Native Americans prefer to live or use locations within our traditional homelands
14 because of our special ties to the land and the unique relationship that can be severed
15 or adversely impacted if a disconnection occurs. When Native Americans receive
16 employment near their reservation, tribal people can reside on the reservation while
17 commuting to work. This pattern of employment tends to have positive benefits for both
18 the tribal communities and/or tribal enterprises like housing, health coverage and other
19 tribal programming. The tribal community has increased participation from the individual
20 and their financial contribution. The individual payment for tribal housing is tied to
21 income level; when a person earns more from a job, rent is adjusted accordingly and
22 revenues increase for housing programs; resulting in making tribally supported housing
23 more economically sustainable and attractive for tribal governments.

24 Conversely, when employment opportunities decline on the reservation, Native
25 American families must relocate from the tribal community to seek employment
26 elsewhere. As tribal members move away, Native American culture is threatened
27 because the number of families living on the reservation declines. Tribal members who
28 move from their reservations impact reservation economies, schools, housing and
29 emergency services. Both schools and tribal economies are impacted because federal
30 funding for tribes is based on population statistics.

31 When local employment opportunities are offered through the Air Force for eligible tribal
32 representatives to support land expansion activities, prices of tribal housing rise and
33 tribal economies benefit, because of the increased revenue stream. If a positive balance
34 occurs between increased income and increased cost of living in tribal communities is
35 achieved, both the individual tribal member and their family including the tribe benefit
36 from employment opportunities.

37 Tribal housing programs become jeopardized if vacancies occur in rental properties and
38 dwellings remain unoccupied. If vacancies occur, tribal revenues diminish and federal

1 funding is adversely impacted, making it more difficult to expand housing programs in
2 future years.

3 Vacant units require more maintenance and security at tribal expense. If tribal members
4 are unavailable to occupy a tribal housing unit, then tribes make units available to non-
5 Indians, and potentially impact Native American culture. The increased presence of
6 non-Indians on a reservation or within the tribal community reduces the privacy needed
7 to conduct certain ceremonies and traditional practices. When non-Indian children are in
8 constant interaction with tribal children, it creates a disruption in cultural continuity by
9 minimizing cultural learning opportunities that occur in everyday life.

10

11 When Native Americans move away from the reservation several dilemmas occur.
12 Typically, Native Americans experience a feeling of isolation from their tribe, culture,
13 and family. When an Native American relocates to an off-reservation area, the individual
14 finds that there are fewer people of their tribe and culture to which they can connect. As
15 a result, Native Americans must decide on the appropriateness of practicing traditional
16 ceremonies in the presence of non-Indian people. Native Americans are continually torn
17 between the decision to stay in the city or return to the reservation to participate in
18 traditional ceremonies and interact with other tribal members. This dilemma occurs on a
19 regular basis and potentially impacts the livelihood and cultural well-being of off-
20 reservation employees and their families. When off-reservation individuals choose to
21 return to their homelands to participate in traditional ceremonies or renew familial ties,
22 they risk losing their jobs or being subjected to disciplinary actions against their children
23 who attend public schools due to excessive absenteeism.

24 Under federal and tribal law, Native American children can be educated in tribally
25 controlled and federally certified schools located on Indian reservations (also known as
26 Indian Trust Land). Federal funds are available through Title VII Indian, Native Hawaiian
27 and Alaskan Native Elementary and Secondary Education, which focuses on tribal
28 communities with Indian special education and cultural needs for the Indian children.
29 Compensation from the federal government is provided to any school district that has
30 eligible students and has entered into a cooperative agreement with federally-
31 recognized tribe(s), whether at a public, private, or an Indian-controlled school.

32 In addition to these potential impacts to housing and education, small rural Indian
33 reservations must have a sufficient number of people to generate emergency
34 management capability. The need for emergency services will decline as people move
35 away from the reservation. Tribal members employed in these emergency services
36 occupations may move away because of their marketable skills or that availability of
37 increased income. Tribal revenues for administration, school, housing, and emergency
38 services are reduced accordingly, due to a decline in eligible population.

1 Indian reservations within the CGTO region of influence are primarily located in remote
2 areas with limited access by standard and substandard roads. Should an emergency
3 situation occur resulting from NTTR related activities, including the transportation of
4 munitions or hazardous materials, closure of the main or only transportation artery to
5 our land could occur. If a major transportation corridor into a reservation closes,
6 numerous adverse social and economic impacts could occur. For example, Indian
7 students who have to travel an unusually high number of miles to or from school could
8 suffer substantial delays. Delays also could occur for regular or essential deliveries of
9 necessary supplies for inventories needed by medical services, tribal enterprises or
10 personal use. The ability to deliver emergency medical services in route to or from the
11 reservation, as well as purchases by patrons of tribal enterprises could be dramatically
12 affected. Potential investors interested in expanding tribal enterprises and other ongoing
13 considerations for future tribal enterprises, may significantly diminish because of the
14 real and perceived risks related to access or the transportation of hazardous materials
15 associated with NTTR related activities.

16 **3.7.1.1.1 - Environmental Justice – Consolidated Group of Tribes and** 17 **Organizations**

18 Environmental Justice concerns identified by the CGTO
19 and members of the public regarding effects on Native
20 Americans include sacred land violations, perceived risks
21 from munitions and electronic training activities, protection
22 of Native American artifacts, cultural survival, access
23 violations, and a request for government-to-government negotiations.

This paragraph 3.7.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.7.1.1, Description of Resource.

24 The CGTO has identified to important concerns that result in a disproportionate impact
25 to tribal communities and perpetuate violations to tribal Holy Lands, which are at a
26 critical state. Generations have been subjected to mistreatment and neglect without
27 consideration and true recovery efforts required to sustain tribal religious practices.
28 Future tribal generations must be afforded opportunities to practice native religions
29 including access to key locations without access limitations.

30 The United Nations Declaration on the Rights of Indigenous Peoples was adopted by
31 the United Nations General Assembly in 2007. The Declaration reflects the affirmation
32 of tribal rights and offers powerful insight into understanding the value of traditional
33 lifeways.

34 In consideration of the Declaration, the CGTO knows the vast landscape that
35 encompasses the NTTR land withdrawal and proposed expansion areas is comprised of
36 mountains, springs, dry lakes, trails, shrines, and rock writings (petroglyph/pictographs),
37 considered integral to tribal lifeways. These elements are teaching resources upon
38 which we rely upon. The learning and teaching of these resources is what native people

1 uniquely experience as sacred elements. Only through these resources, can one
2 holistically approach the Creator. Removal or relocation from our homelands doesn't
3 mean these places are removed from our heart as believed from past withdrawals; the
4 NTTR land withdrawal will have an increased burden on tribal people. The recurrence of
5 direct, indirect and cumulative impacts on the cultural landscape further diminishes the
6 integrity of these resources effects are detrimental to tribal communities especially
7 considering that generations upon generations have been continued to be adversely
8 affected in some way or another.

9 To achieve equity in Environmental Justice, the Air Force must fulfill its trust
10 responsibility and protect the cultural landscape while reducing the burden of sustaining
11 the cultural values of 17 culturally affiliated tribes with ties to this region. The LEIS
12 provides only a broad overview of the potential impacts and discounts the
13 disproportionate affect to Native culture without acknowledging the unknown and
14 potential risk of adversely affecting cultural transmission attributed to the NTTR
15 withdrawal and accompanying alternatives.

16 Further, the following concerns associated with the intent of Executive Order (E.O.)
17 12898 Environmental Justice have been raised by the CGTO as noted below:

- 18 • Centrality and Continuity. Because the CGTO considers the NTTR to comprise a
19 portion of their traditional lands, the NTTR is central to the functioning of
20 American Indians from the surrounding region.
- 21 • Usurpation of All Resources. The CGTO sees the military land withdrawal,
22 including the proposed lands in Alternatives 3 A-C, as a process that resembles
23 what began with moving American Indians onto reservations and off the land,
24 thereby causing a complete disruption of their way of life and a disconnect from
25 important resources and culturally sensitive areas.

26 According to the CGTO, Air Force activities on the NTTR constitute sacred land
27 violations, derived from perceived risks associated with munitions and electronic training
28 activities that disturb culturally sensitive areas and cultural survival violations.

29 Although the Air Force and the CGTO are working together through the NAIP to provide
30 access to certain portions of the NTTR that are not dangerous or will not conflict with
31 training exercises, the CGTO has stated that "land disturbance and irreparable damage
32 of cultural landscapes, traditional cultural properties and cultural resources may render
33 certain locations unusable" (AIWS 1997).

34 The Air Force has initiated formal consultation with the 17 tribes and American Indian
35 organizations through the CGTO and with the Nevada SHPO. The Air Force is working
36 with these groups to identify cultural and traditional resources on the NTTR to co-
37 manage. Increased participation in the LEIS process through the inclusion of tribal text
38 and other ongoing efforts is considered a positive step towards enhancing tribal
39 involvement. The CGTO knows the proposed Alternatives 1 (Extend Existing Land

1 Withdrawal and Management on North and South Range - Status Quo), 2 (Extend
2 Existing Land Withdrawal and Provide Ready Access in the North and South Range),
3 and 3 (Expand Withdrawal of Public Lands for the NTTR) will all restrict access to
4 Native Americans due to scheduling conflicts and other safety or security concerns
5 associated with military training and testing missions.

6 Access denial will have a disproportionate and adverse effect on the cultural integrity
7 and sacred nature of culturally sensitive areas due to increased land disturbance.
8 Native Americans have stated that land withdrawals, test and training activities, and
9 land management activities by DOD and Air Force may cause further land disturbance
10 and preclude access by Native Americans. The CGTO believes these activities create a
11 cumulative impact that falls disproportionately upon tribal communities, by imposing
12 access restrictions preventing use and interacting with the land and natural resources of
13 the area that are considered critical to maintaining traditional, cultural and historic
14 practices.

15 The CGTO knows that federal agencies are directed by Executive Order (EO) 12898,
16 Environmental Justice, to detect and mitigate potentially disproportionately high and
17 adverse human health or environmental effects of its planned programs, policies, and
18 activities to promote nondiscrimination among various populations in the United States.

19 In the Record of Decision associated with the Final Environmental Impact Statement for
20 the nearby Nevada Test Site and Off-Site Locations in the State of Nevada (1996 NTS
21 EIS), the US Department of Energy (DOE) recognized the need to address
22 Environmental Justice concerns of the CGTO based on disproportionately high and
23 adverse impacts to their member tribes from the nearby DOE Nevada National Security
24 Site (NNSS) activities.

25 Equally, in the 2002 Supplement Analysis for the Final Environmental Impact Statement
26 for the Nevada Test Site and Off-Site Locations in the State of Nevada (2002 NTS SA),
27 DOE concluded that the selection and implementation of the Preferred Alternative would
28 impact its member tribes at a disproportionately high and adverse level, perpetuating
29 Environmental Justice concerns. The CGTO maintains that Environmental Justice
30 concerns continue to exist. Of special concern to the CGTO is the potential for Holy
31 Land violations, cultural survival-access violations, and disproportionately high and
32 adverse human health and environmental impacts to the Indian population. These
33 Environmental Justice issues need to be addressed in the LEIS.

34 There is no question that the Native American Holy Lands have been, continue to be,
35 and will be impacted by activities on the NTTR. It is also well known that only Indian
36 people have lost cultural traditions because they have been denied free access to many
37 places on the NTTR where ceremonies need to occur, where plants need to be
38 gathered, and where animals need to be hunted in a traditional way.

1 Prior to undertaking or approving activities on the NTTR, the CGTO recommends that
2 the Air Force comply with E.O. 12898 by facilitating tribal access to the NTTR,
3 sponsoring an Indian subsistence consumption study, and sponsoring a study to
4 determine perceived health risks and environmental impacts resulting from NTTR
5 activities to CGTO member tribes. The CGTO has concerns that fall within the context
6 of E.O. 12898, such as subsistence consumption. Subsistence consumption requires
7 the Air Force to collect, maintain, and analyze information on consumption patterns
8 such as those of culturally affiliated tribal communities who rely principally on wildlife for
9 existence. Most importantly, the E.O. mandates each federal agency apply equally their
10 Environmental Justice strategy to Native American programs and assume the financial
11 costs necessary for compliance.

12 To date, Air Force has not shared its design and implementation strategy for
13 Environmental Justice with the CGTO, nor has it identified and analyzed subsistence
14 consumption patterns of natural resources by Indian people within the region of
15 influence. Since the E.O., specifically addresses equity to Indian people and low-income
16 populations, it is critical that the Air Force immediately address the concerns of Indian
17 Tribes and communities by conducting systematic ethnographic studies and eliciting
18 input necessary for administrative compliance and in the spirit of the Air Force
19 Instruction 90-2002. This policy outlines the principles in its decision making and
20 interaction with federally recognized tribal governments. It requests that all departmental
21 and installation elements ensure tribal participation and interaction regarding pertinent
22 decisions that may affect the environmental and cultural resources of tribes. Of
23 particular interest within these guiding principles is Section 1.5. Activities Typically
24 Involving tribes which states:

25 *1.5.1. Air Force planning actions that may affect tribes include, but are not limited to (a)*
26 *land- disturbing activities, (b) construction, (c) training, (d) over-flights, (e) management*
27 *and protection of properties of traditional religious and cultural importance including*
28 *historic properties and sacred sites, (f) activities involving access to sacred sites, (g)*
29 *disposition of cultural/funerary items in accordance with the Native American Graves*
30 *Protection and Repatriation Act (NAGPRA), (h) natural resources management*
31 *activities, (i) educational and public affairs activities linked to tribal topics, and (j) other*
32 *land use/military airspace operations in general.*

33 In the Record of Decision for the 1996 NTS EIS, nearby DOE recognized the need to
34 address Environmental Justice concerns of the CGTO based on disproportionately high
35 and adverse impacts to their member tribes tied to the adjacent Nevada National
36 Security Site. In 2002 DOE concluded that the selection and implementation of the
37 Preferred Alternative would impact its member tribes at a disproportionately high and
38 adverse level, perpetuating Environmental Justice concerns. Similarly, the CGTO
39 maintains that Environmental Justice concerns continue to exist on the NTTR and will

1 continue with the proposed land withdrawal and expansion areas. These concerns
2 include (1) Holy Land violations, (2) cultural survival-access violations, and (3)
3 disproportionately high and adverse human health and environmental impacts to the
4 Indian population. Similarly, the CGTO knows the same circumstances persist on the
5 NTTR that must be considered as noted below:

6 **Holy Land Violations**

7 The CGTO consider the NTTR lands to be as central to their lives today as they have
8 been since the creation of their people. The NTTR lands are part of the Holy Lands of
9 Western Shoshone, Southern Paiute, Owens Valley Paiute/Shoshone and Fort Mojave
10 people. The CGTO perceives that the past, present, and future cultural pollution of
11 these Holy Lands constitutes both Environmental Justice and equity violations. No other
12 people have had their Holy Lands impacted by NTTR-related activities. Prior to
13 undertaking or approving new activities, the CGTO should be funded to design,
14 conduct, and produce a systematic American Indian Environmental Justice study with
15 qualified ethnographer(s) that have experience with the CGTO.

16 **Cultural Survival-Access Violations**

17 One of the most detrimental consequences to the survival of Native American culture,
18 religion, and society has been the denial of free access to Native people's traditional
19 lands and resources. Loss of access to traditional food sources and medicine has
20 greatly contributed to undermining the cultural well-being of Indian people. These Indian
21 people have experienced, and will continue to experience, breakdowns in the process of
22 cultural transmission due to lack of free access to government-controlled lands and
23 resources such as those in the NTTR area. No other people have experienced similar
24 cultural survival impacts due to lack of free access to the NTTR area.

25 In 1996, President Clinton signed E.O. 13007, Indian Sacred Sites. The E.O. promotes
26 accommodation of access to American Indian sacred sites by Indian religious
27 practitioners and provides for the protection of the physical integrity of such sites
28 located on federal lands. The CGTO recommends that open access be allowed for
29 Native Americans who must conduct their traditional ceremonies and obtain resources
30 within the NTTR study area. Unfortunately, however, land disturbance and irreparable
31 damage of cultural landscapes, potential Traditional Cultural Properties (TCPs), and
32 cultural resources may render certain locations unusable.

33 **Disproportionately High and Adverse Human Health and Environmental Impacts** 34 **to the Indian Population**

35 It is widely known that many tribal representatives still collect and use plants and
36 animals that are found within the NTTR region. Many of the plants and animals cannot
37 be gathered or found in other places. Consumption patterns of Indian people who still
38 use plants and animals for food, medicine, and other cultural or ceremonial purposes

1 force the CGTO to question if its member tribes are still being exposed pollution, and
2 potentially hazardous waste located at the NTTR.

3 **3.8.1.1.1 Biological Resources – Consolidated Group of Tribes and Organizations**

4 The Consolidated Group of Tribes and Organizations
5 (CGTO) knows the NTTR contains ancient playas,
6 surrounded by mountain ranges . The runoff from these
7 ranges serves to maintain a healthy desert floor and
8 environment. Animals frequent the area, and there are
9 numerous animal trails. Animals and the places where they live play a significant part in
10 Indian history and lifestyle. The CGTO knows Indian people have lived on these lands
11 since Creation and value all plants and animals, yet some of these may have more
12 cultural significance in our lives. It is widely known that many Indian people still collect
13 and use plants and animals that are found within the NTTR region. We describe these
14 plants, animals and insects in this section in an effort to demonstrate their importance to
15 our well-being and survival, and their role in maintaining ecological balance to our Holy
16 Land.

This paragraph 3.8.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.8.1.1, Description of Resource.

17 The CGTO knows, based on previous ethnobotany studies in the region, that there are
18 at least 364 American Indian traditional use plants on the NTTR. (See *Appendix K –*
19 *CGTO Native American Assessments: Nevada Test and Training Range Legislative*
20 *Environmental Impact Statement - October 2017 – Table 1 Three Hundred and Sixty*
21 *Four Native American Traditional Use Plants on NNSS and NTTR*). Plants are still used
22 for medicine, food, basketry, tools, shelter, clothing, fire, and ceremonies - both socially
23 and for healing purposes. One example is Sage, which is used for spiritual ceremonies,
24 smudging and medicine. Indian ricegrass and wheatgrass are used for nutritional
25 supplements.. Joshua tree is important for hair dye, basketry, footwear, and rope. Globe
26 mallow had traditional medicinal uses, but in recent times is also used for curing
27 European contagious diseases. In order to convey the Native American meaning of
28 these plants, a series of ethnobotany studies were conducted and the findings used to
29 establish a set of criteria for assessing the cultural importance of each plant and of
30 places where plant communities exist. The CGTO provided these cultural guidelines so
31 that National Environmental Policy Act analyses and other agency decisions could be
32 assessed from a Native American perspective.

33 The CGTO knows, based on previous ethno-fauna studies in the area that there are at
34 least 170 Indian-use animals on the NTTR (See *Appendix K – CGTO Native American*
35 *Assessments: Nevada Test and Training Range Legislative Environmental Impact*
36 *Statement - October 2017 - Table 2 One Hundred and Seventy Native American*
37 *Traditional Use Animals on NNSS and NTTR*). All are culturally important to Indian
38 people. The CGTO knows if they care for the earth and its resources, the Creator will
39 always provide for them. The area comprising the NTTR and proposed land expansion

1 was among the tribes' places to hunt and trap a variety of animals. It is known that
2 special leaders within each tribe would organize large hunts where many Indian people
3 participated. The Indian people would use these animals for many purposes, including
4 food, clothing, bones for tool making, fur for warm blankets, and ceremonial purposes
5 as referenced in traditional winter stories.

6 Indian people refrain from eating coyote, wolves, and some birds because these
7 animals are fundamental to stories and songs that teach us life lessons to heal, to build
8 character and to become better people. The relationships between the animals, the
9 Earth, and Indian people are represented by the respectful roles they play in the stories
10 of our lives then and now. For example, the NTTR contains some valleys where
11 important spiritual journeys occurred. One such journey involved Wolf (*Tavats* in
12 Southern Paiute, *Bia esha* in Western Shoshone, *Wi gi no ki* in Owens Valley Paiute)
13 and is considered a Creation or origin story. Out of respect to our traditional teachings,
14 only parts of this story are represented here. When Wolf and Coyote had a battle over
15 who was more powerful, Coyote killed Wolf and felt glorious. Everyone asked Coyote
16 what happened to his brother Wolf. Coyote felt extremely guilty and tried to run and hide
17 but to no avail. Meanwhile the Creator took Wolf and made him into a beautiful Rainbow
18 (*Paro wa tsu wu nutuvi* in Southern Paiute, *Oh ah podo* in Western Shoshone,
19 *Paduguna* in Owens Valley Paiute.) When Coyote saw this special privilege he cried to
20 the Creator in remorse and he too wanted to be a Rainbow. Because Coyote was bad,
21 the Creator changed Coyote to a fine, white mist at the bottom of the rainbow's arch.
22 This story and the spiritual trails discussed in the full Winter version are connected to
23 the Spring Mountains and the large sacred cave within the NTTR in addition to the
24 surrounding lands. These areas comprise the home of Wolf, whose spirit is still present
25 and watches over Indian people and our Holy Land.

26 Stink bugs, willows, frogs, hummingbirds, and *snow fleas* are all important to Indian
27 people and are used to show our respect for the rain and snow. (For additional
28 information on these plants and animals, please see Water Resources. Section
29 3.11.1.1.1. The desert bighorn sheep and the desert tortoise are both culturally sensitive
30 animals to Indian people. When used ceremonially, these animals have special qualities
31 that enable them to alter the weather when needed to nourish the land. The desert
32 tortoise has further significance to Indian people because of its healing powers,
33 longevity, and wisdom. It is integral to our traditional stories, well-being and
34 perpetuation of our native culture. (See *Appendix K – CGTO Native American*
35 *Assessments: Nevada Test and Training Range Legislative Environmental Impact*
36 *Statement - October 2017* for more details).

37 The CGTO knows the current 100-year drought has increasingly stressed the physical
38 and spiritual nature of the plants and animals on the NTTR. Its environmental impacts
39 are unprecedented in the history of the operation and management of these lands. The

1 CGTO knows the 100-year drought has modified the abundance and distribution of all
2 animals and plants. The quality, quantity, and distribution of indigenous plants, animals,
3 and insects necessary to sustain a healthy environment and to maintain a productive
4 animal habitat are clearly affected.

5 Water - both as free flowing springs and absorbed by plants and distributed to animals -
6 has diminished. Certain springs have dried up making animals travel into other
7 unfamiliar lands. Food foraging becomes difficult and land dries up. Wildlife has less
8 body fat, which results in shorter hibernation cycles. Native Americans have observed
9 that ground squirrels are becoming cannibalistic to survive. Other animals are changing
10 their habits as the environment continues to be impacted by this drought. For example,
11 rabbits are now forced to eat unusual foods like Yucca. According to one tribal elder,
12 *“The cries of some birds have changed since the drought began.”*

13 Traditional use of plants and animals are an important aspect for Native Americans. The
14 loss of important species dates back to the arrival of early settlers. Invasive species
15 continue to threaten the natural ecosystem and resources on the lands which creates
16 negative impacts on the growth of natural plants, trees and wildlife habitats.

17 The mitigation measures presented by the Air Force focus on avoidance of biological
18 resources, relocation of animals species and monitoring plants, animals, and their
19 habitats. The CGTO recommends the Air Force mitigate adverse impacts to biological
20 resources through interaction with the CGTO with the goal of avoidance, culturally
21 appropriate revegetation efforts, reintroduction of native animals, and traditional plant
22 and animal management methods. Native Americans have extensive traditional
23 ecological knowledge and deep concern for the biological resources of the area and
24 should participate directly with the Air Force to mitigate impacts and protect their
25 resources.

26 According to tribal elders, *“Prior to re-vegetation efforts, we must talk to the land to let it*
27 *know what we plan to do and ask the Creator for help. We choose our seeds from the*
28 *sweetest and best plants and store them for the winter to dry. When the winter is over,*
29 *we place the seeds in a moist towel or sock until they are ready to transplant into the*
30 *ground. This is a long and delicate process, requiring patience, skill and knowledge*
31 *passed down from our ancestors. If the plants are struggling to grow, we tag them and*
32 *move them to face the same direction of the sun.”* The Air Force would benefit from this
33 knowledge to enhance their re-vegetation efforts. The CGTO knows the Air Force
34 struggles with success rates regarding the density and diversity of native plants during
35 re-vegetation efforts. A co-stewardship approach with the CGTO continues to enable
36 the Air Force to enhance revegetation efforts, thus saving time, money, and resources.

37 Mitigation measures presented by the Air Force includes notifying the US Fish and
38 Wildlife Service (FWS) of incidental taking of desert tortoises. The desert tortoise is a

1 culturally significant reptile to Native Americans because of its healing powers, longevity
2 and wisdom. It is an integral part of traditional winter stories, along with our well-being
3 and the perpetuation of our native culture. Incidental taking of this traditionally important
4 animals is particularly disturbing to Native Americans. Accordingly, the Air Force must
5 initiate action to concurrently notify the CGTO in tandem with FWS so traditional
6 ceremonies can be conducted to prepare our tribal people and the environment for this
7 loss.

8 According to the LEIS, over the past 14 years, various initiatives have been undertaken
9 to restore animal habitats and reintroduce certain animals including desert bighorn
10 sheep on portions of the NTTR without ceremonial intervention from the CGTO.
11 Modification of habitats or the restocking of certain species is considered a highly
12 culturally sensitive religious act and requires involvement from Native Americans
13 through the CGTO. For these activities to be successful, it is essential to have tribal
14 representatives involved throughout the process allowing proper access to conduct
15 ceremonial activities. (See *Appendix K – CGTO Native American Assessments: Nevada*
16 *Test and Training Range Legislative Environmental Impact Statement - October 2017*
17 for more details).

18 **3.9.1.1.1 Cultural Resources - Consolidated Group of Tribes and Organizations**

19 The CGTO knows cultural resources are interconnected.
20 They encompass more than physical structures and are
21 not limited to sacred sites. Natural resources within the
22 NTTR are considered culturally sensitive and include but
23 are not limited to plants and animals, natural formations,
24 waterways, weather and astronomy that must all be kept in balance in culturally
25 appropriate ways. Native Americans rely on these resources to sustain life and to
26 interact with the spiritual world as described in our traditional beliefs to keep the world in
27 balance. If balance is not sustained, the land will react and change will occur, thus
28 impacting cultural resources on the NTTR. The CGTO knows the complex views of
29 tribal people must be respected in order to protect the area from contamination and
30 other adverse effects that may destroy the cultural integrity of the landscape.

This paragraph 3.9.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.1.1, Description of Resource.

31 **3.9.1.2.1 Region of Influence – Consolidated Group of Tribes and Organizations**

32 Although land withdrawal alternatives have been identified
33 in the LEIS, the CGTO cannot give specific comments on
34 any of the areas as stated in the 2017 LEIS proposal on
35 page 3-183, line 11-13 "...land proposed to be withdrawn
36 have not yet been determined..." More information is
37 needed for the CGTO to provide a corresponding

This paragraph 3.9.1.2.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.1.2, Region of Influence.

1 response. Once information is received, tribal text will be developed by the tribal writers
2 using a similar evaluation process for other sections of the LEIS.

3 The LEIS defines the APE for the proposed action to be assumed not to extend beyond
4 the footprint of the activity boundaries as defined for Alternatives 1, 2, 3A, 3A-1, 3B and
5 3C and associated airspace (LEIS 3.9.1.2 Region of Influence). The CGTO knows
6 NEPA extends beyond proposed activity boundaries and requires systematic
7 evaluations of “visual, auditory, social, and land use effects; impacts on community
8 cultural integrity; impacts to cultural uses of the biophysical environment; and so on.”
9 (National Preservation Institute).

10 Native Americans describe cultural resources differently than federal agencies because
11 of our epistemological view of the personified environment that encompasses life. To list
12 and describe all the items that are considered a resource would be extremely difficult to
13 describe. However, some examples include foods and medicines, unobstructed visual
14 horizons of the cultural landscape to include view of the mountains or sunrise for
15 morning blessings, water, rock shelters, and the wind to breathe air needed for songs or
16 for the mountains, trees and insects to hear them. Connections between places are
17 culturally critical because they constitute the foundations of cultural landscapes, which
18 in turn define how the world is significantly interwoven into a whole. Like a net, if one
19 place or combination of places is broken, the whole is proportionally weakened. There is
20 no secular way to describe how the cultural resources sustain and interact to support
21 each other -- it is only noticed once something dies or ceases to exist.

22 **3.9.2.1.1 Analysis of Methodology – Consolidated Group of Tribes and** 23 **Organizations**

24 The CGTO knows it is difficult to describe the impact on
25 physical sites without identifying locations of specific sites.
26 However, Native Americans are able to comment on the
27 impact of increased activities that support simulated
28 combat directly or indirectly within the NTTR as it relates to
29 the natural, physical, and spiritual worlds.

This paragraph 3.9.2.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.1, Analysis Methodology.

30 Native Americans have and always will rely on the entire environment for life, including
31 air, wind, water, animals, plants, trees, rocks and anything within the cultural landscape
32 that is visible and not visible, including unobstructed landscapes. It is essential that
33 consultation with Native Americans through the CGTO must be maintained to discuss
34 the impacts of any proposed or actual land disturbing activities that increase air traffic or
35 alteration to the land. Disturbance to any one element affects the connectedness of all.
36 For example, limiting access or tribal involvement perpetuates tribal separation from the
37 land and negatively affects the natural balance of the land and all living things. Our

1 languages, traditional prayers, songs and stories help maintain the natural balance and
2 are necessary to sustain harmony.

3 **3.9.2.2.1 Alternative 1 – Consolidated Group of Tribes and Organizations**

4 According to the LEIS, “Battis (1983) indicates that sonic
5 booms are unlikely to cause damage to archeological
6 features.” The CGTO knows sonic booms can disturb the
7 cultural balance and physical environment by bringing
8 harm to the spirits of the land and to culturally sensitive
9 sites. The Air Force acknowledges the potential impact and
10 disturbance from sonic booms over populated areas.
11 Similarly, the CGTO believes the same impacts and
12 disturbance occur to the living landscape.

This paragraph 3.9.2.2.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of NTTR (North and South Range) – Status Quo.

13 There is no accurate way to describe the impact on animals and the spiritual world to
14 include air currents when considering the results of Battis study without a systematic
15 ethnographic study that involves Indian people. It is important to note that the Battis
16 study is based on measurements taken 33 years ago when different technology was
17 used. Today aircraft produce louder noise at different frequencies than in the past.
18 Current data is needed to accurately assess the proposed impacts of sonic booms to
19 the cultural landscape so the CGTO can develop a corresponding response.

20 **3.9.2.2.1. Alternative 1 – Consolidated Group of Tribes and Organizations**

21 Construction of new sites or activities used to support
22 military operations always creates new risks. While
23 government agencies seek to “mitigate” possible
24 disturbance, the CGTO looks for ways to avoid, prevent or
25 minimize additional disturbance to the cultural landscape.
26 Tribal consultation with the CGTO is required throughout
27 the planning and implementation process associated with
28 new undertakings that may impact the cultural landscape.

This paragraph 3.9.2.2.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of NTTR (North and South Range) – Status Quo.

29 It is impossible to continue operation on the NTTR without disturbing the spiritual world
30 and the interconnectedness to which Native Americans are charged with keeping the
31 land in balance.

3.9.2.3.1 Alternative 2 – Consolidated Group of Tribes and Organizations

The CGTO knows a 30% increase in flight operations will have increased impacts on the land. The presence of additional aircraft will increase stress to the entire cultural landscape both visible and non-visible. There is no way to measure the true cultural impacts on air movement, effects on animal behavior, and impacts of increased operations that may further restrict Native American access to the NTTR for traditional ceremonies and other religious activities.

This paragraph 3.9.2.3.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.3, Alternative 2 – Extend Existing Land Withdrawal and Provide Ready Access in the North and South Ranges.

3.9.2.4.1. Alternative 3 – Consolidated Group of Tribes and Organizations

The CGTO disagrees that a 30% increase in flight operations will have minimal impacts. The presence of additional aircraft will increase stress to the entire cultural landscape both visible and non-visible. There is no way to measure the true cultural impacts on air movement, effects on animal behavior and increased operations that may further restrict Native American access to the NTTR for traditional ceremonies and other religious activities.

This paragraph 3.9.2.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.4, Alternative 3 – Expand Withdrawal of Public Lands for the NTTR.

3.9.2.5.1 Alternative 4 – Consolidated Group of Tribes and Organizations

Restricting public access to culturally sensitive sites has a potential benefit for protecting those sites and resources, however it severely restricts access of tribal people to sites of importance when ceremonial use is needed. Currently, the Archaeological Resources Protection Act and other regulations protect lands and sites from desecration.

Protection resulting from restrictive measures further limits Native American access to certain locations when needed. Protective measures should be consistent with the American Indian Religious Freedom Act and E.O. 13007 Access to Sacred Sites and in compliance with AFI 90-2002 Tribal Consultation with Federally Recognized Tribes and lastly, E.O. 13007 Access to Sacred Sites

This paragraph 3.9.2.5.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.5, Alternative 4 – Establish the Period of Withdrawal.

3.9.2.6.1 No Action Alternative - Consolidated Group of Tribes and Organizations

Native American lands have been exploited, desecrated or impacted from the time of the first settlers. Regardless of the proposed alternative, the CGTO believes it does not give the right for anyone to cause irreparable harm to our traditional homelands including the resources or the deities that protect the land. It is our responsibility to co-exist and

This paragraph 3.9.2.6.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.2.6, **No Action Alternative**.

1 nurture the land for those who follow us as we have done for thousands of years.
2 Involvement with the Air Force is an example how Native Americans can live, use and
3 visit the land that contains archaeological evidence of our past and present existence
4 over thousands of years. While the land has changed as a result of military presence,
5 many of the areas remain nearly the same as they have for thousands of years.

6 **3.9.1.3.1 Cultural Resources - Consolidated Group of Tribes and Organizations**

7 Native Americans consider cultural resources to include
8 not only archaeological remains left by our ancestors but
9 also natural resources and geologic formations in the
10 region, such as plants, animals, water sources, minerals,
11 and natural landforms that mark important locations for
12 keeping our history alive and for teaching our children about their culture. The CGTO
13 knows, based on its collective knowledge of Native American culture and the universal
14 tribal view of cultural resources and their interconnectedness is considered inseparable.
15 In 2008, an ethnographic study of the Black Mountain area on NTTR was conducted
16 that reaffirmed ceremonial trails, sacred sites and how they are tied together (Stoffle,
17 Arnold, Van Vlack, O'Meara and Medwied-Savage 2009).

This paragraph 3.9.1.3.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.1.3, Cultural Resources.

18 Contrary to descriptions in the LEIS relating to cultural affiliation by a single group rather
19 than all, the NTTR and nearby lands are significant to Western Shoshone, Southern
20 Paiute, Owens Valley Paiute/Shoshone and Fort Mojave people. The lands are central
21 in the lives of these people and were mutually shared for religious ceremony, resource
22 use, and social events (Stoffle et al., 1990a and b). When Europeans encroached on
23 these lands, the numbers of Indian people and their relationship with one another
24 changed, and the condition of their homelands began to be out of balance. European
25 diseases killed many Indian people; European animals replaced Indian animals and
26 disrupted fields of natural plants; Europeans were guided to and then assumed control
27 over Indian minerals; and Europeans took Indian agricultural areas. Indian people
28 believe that the natural state of their homelands was what existed before European
29 contact, when Indian people were fully responsible for the continued use and
30 management of these lands.

31 The withdrawal of Nevada's lands for military purposes occurred in the 1940's, followed
32 by the continued process of Euro-American encroachment on Indian lands and impacts
33 on our resources. The forced removal of Indian people from the land was combined with
34 their involuntary removal to distant reservations. Land-disturbing activities followed,
35 causing some places to become unusable or out of balance for Indian people. On the
36 other hand, many places were protected by the land withdrawal because "pothunters"
37 were kept from stealing artifacts from rock shelters and European animals were kept
38 from grazing on Indian plants. The forced removal of Indian people from the land was
39 combined with their involuntary registration and removal to distant reservations in the

1 early 1940s. Indian people were thus removed from their homelands that had been
2 central to their lives for thousands of years.

3 Nellis Air Force Base has supported several cultural resource studies relating to NTTR,
4 most occurring as a result of recommendations made by the CGTO and commitments
5 made by the Air Force. Many of these studies are cited throughout this document.
6 These studies were also designed to comply with various federal laws and executive
7 orders, including the American Indian Religious Freedom Act, Native American Grave
8 Protection and Repatriation Act, Executive Order 13007, Indian Sacred Sites and Air
9 Force Instruction 90-2002 Interactions with Federally Recognized Tribes. Through these
10 studies, the CGTO reaffirmed that American Indians used traditional sites on the NTTR
11 to make tools, stone artifacts, and ceremonial objects; Many sites are also associated
12 with traditional healing ceremonies and power places

13 Several areas within the NTTR and the proposed land expansion areas are recognized
14 as traditionally or spiritually important. For example, the Kawich, Belted, Spotted,
15 Desert, and Pahranaagat Ranges along with Black Mountain and Mount Helen, contain a
16 number of significant vantage points with different panoramas including but not limited
17 to Mount Charleston, Scrugham Peak, and Buckboard and Pahute Mesa. Black
18 Mountain and an inter-related cinder cone comprise an important religious site that is
19 considered to be a portal to the underworld. Prow Pass on the nearby NNSS is
20 considered an important ceremonial site and, because of this religious significance,
21 tribal representatives have recommended the DOE make attempts to minimize
22 disturbance that may affect this area (Stoffle et al. 1988). Oasis Valley near Beatty,
23 Nevada is considered another important area for trade and ceremonies. In 1993, tribal
24 members visited a rockshelter site containing perishable basketry and crookneck staff
25 on the NNSS, and recommended that the items be left in place, with annual monitoring
26 to assess their condition. Similarly, Gold Meadows near the NTTR and NNSS boundary
27 is extremely important to the Indian people. Other areas are considered important
28 based on the abundance of artifacts, traditional-use plants and animals, rock writing,
29 and possible burial sites. (See *Appendix K – CGTO Native American Assessments:
30 Nevada Test and Training Range Legislative Environmental Impact Statement - October
31 2017* for more details).

32 The CGTO recommends the Air Force make provisions for Native Americans to
33 continue to identify culturally significant locations so potentially impacted resources can
34 be identified, alternative solutions discussed, and adverse impacts averted. These
35 studies will address and guide the Air Force in developing culturally appropriate Best
36 Management Practices to protect cultural resources and more effectively implement
37 mitigations measures in accordance with Council on Environmental Quality regulations
38 (40 CFR 1508.20 1 through 5). To accomplish best practices, Native Americans must
39 be involved with the following actions:

- 1 • Assess and determine culturally appropriate measures to protect geological
2 formations important to the spiritual landscape.
- 3 • Implement culturally appropriate environmental restoration techniques that
4 require minimal ground disturbance.
- 5 • Restore impacted plant and animal species essential to the spiritual and cultural
6 landscape.
- 7 • Provide Native Americans access to CGTO designated areas so we can conduct
8 purification and balancing ceremonies in an attempt to restore the natural and
9 spiritual harmony of the NTTR landscape.
- 10 • Develop and implement systematic American Indian ethnographic studies to
11 better understand the interconnectedness of the cultural landscape, and
12 implement culturally appropriate methods to protect the landscape and sustain
13 spiritual and cultural balance.
- 14 • Initiate tribal re-vegetation efforts to help restore disturbed areas on the NTTR.

15 In addition, the CGTO recommends areas near the NTTR/NNSS boarder be set aside
16 for exclusive Indian use because of significant cultural resources.. Efforts should be
17 made to forego any additional land disturbances within these areas and provide access
18 to Native Americans.

19 The CGTO agrees site monitoring is essential to preserving cultural resources on the
20 NTTR, and recommends Native Americans continue to serve as site monitors. As a
21 minimum, the CGTO recommends annual tribal visits to monitor the condition of
22 sensitive cultural sites located within the NTTR. The CGTO further recommends visits to
23 areas designated or potentially designated for repatriation. Finally, the CGTO
24 recommends Native Americans conduct periodic assessments in accordance with the
25 Native American Graves Protection and Repatriation Act (NAGPRA) and other federal
26 mandates.

27 **3.9.1.4.1 Alternative 3C Alamo Withdrawal – Consolidated Group of Tribes and** 28 **Organizations**

29 The CGTO knows the Nuwuvi Working Group (NWG) is
30 comprised of 7 Southern Paiute/Chemehuevi Tribes that
31 work closely with the US Fish and Wildlife and Forest
32 Services. The NWG is a separate entity of tribally
33 appointed representatives of which many are active
34 participants in the CGTO. In February 2017, federally recognized tribes working with the
35 NWG wrote a letter to the Air Force and US Fish and Wildlife expressing concerns
36 about the impending LEIS and the proposed land expansion into the Desert National
37 Wildlife Refuge Complex. In preparation for the LEIS, the Air Force developed a Historic
38 Property Identification Plan (HPIP) that did not address nor consider Southern Paiute or
39 other tribal concerns relating to religious ties to the area or impacts to traditional tribal

This paragraph 3.9.1.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.9.1.4, Archeological Resources.

1 song and storyscapes. The NWG expressed additional concerns about an outdated
2 methodology using predictive modeling to identify areas of cultural significance in pre-
3 determined locations.

4 In response to NWG concerns, the University of Arizona-Tucson entered into a contract
5 with Far Western Anthropological Research Group (FWARG) in September 2017 at the
6 request of the Nellis Air Force Base to conduct an ethnographic study for the proposed
7 land expansion areas. This region of influence is known to contain many important
8 culturally sensitive resources, objects and places. Some key examples of these
9 resources include religious trail systems that connect the Spring Mountains to the
10 Pahranaagat Valley and ceremonial locations that fall within a geologic constriction that
11 lead into Desert Dry Lake playa. Other areas include numerous other important power
12 spots and related locations that are commonly used to support traditional religious and
13 ceremonial activities.

14 **3.10.1.1.1 Earth Resources – Consolidated Group of Tribes and Organizations**

15 The CGTO considers Earth Resources as defined in the
16 LEIS to be interconnected with the land and inseparable
17 from cultural resources described in 3.9.1.3.1. The CGTO
18 knows it is charged with the cultural responsibility of
19 serving as the voices of those elements described as Earth
20 Resources. As such, the CGTO does not support those
21 activities that creates sickness to the land or causes an imbalance to the cultural
22 landscape.

This paragraph 3.10.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.10.1.1, Description of Resource.

23 **3.10.1.3.1 Volcanism and Seismic Activity – Consolidated Group of Tribes and** 24 **Organizations**

25 The CGTO knows the NTTR is located within a moderately
26 active seismic zone that has been visited because of its
27 culturally significant attributes to the 17 tribes. The CGTO
28 has observed many inter-related sites both on and near the
29 NTTR that contain deep-rooted religious significance
30 necessary to sustain balance within our Holy Lands. Ethnographic studies have
31 documented how and why volcanic formations are used as destinations for vision
32 questing, medicine, quarrying sacred minerals and acquiring ceremonial songs and
33 protocols (e.g., Carrol et al. 2006; Stoffle et al. 2009; Stoffle, Zedeno et al; 2001).
34 Extensive and previously unknown ethnographic information was collected between
35 1997 and 2008 that described the area before and after the arrival of Europeans. The
36 areas specific to the NTTR are derived from volcanic activity where sentient beings that
37 travel through the magma to maintain cultural equilibrium and keeps the cultural
38 landscape in balance. If disrespected, the land reacts prompting volcanic activity to

This paragraph 3.10.1.3.1 provides the Native American perspective regarding the information presented in LEIS Section 3.10.1.3, Geology.

1 occur and causing upheaval that requires cultural intervention. The cultural centrality of
2 volcanoes is well known and described using traditional ecological knowledge that can
3 never be underestimated.

4 Minerals are culturally important and have significant roles in many aspects of Indian
5 life. For example, the Chalcedony would have made an attractive offering that could be
6 acquired on the NTTR, then left at the vision quest or medicine site located to the north
7 on top of a cinder cone or peak like Black Mountain. Upon return, traditional Indian
8 people would bring other offerings back to the initial site where a previous offering was
9 acquired.

10 Obsidian is a glass-like stone produced by volcanoes. Indian people used a green
11 volcanic glass during curing ceremonies that involved bleeding the patient. Volcanic
12 glass was found below Obsidian Butte and used in the first arrow-making lessons for
13 young men. Such lessons were held in small rock shelters found along the base of the
14 basalt flow that constitutes Buckboard or Pahute Mesa. Obsidian flakes were placed
15 before important rock art panels as offering to the spirits that lived on the other side of
16 the passageway provided by the panel. Small obsidian stones, commonly called
17 Apache Tears, have been found in large quantities in southern Nevada. These massive
18 deposits of obsidian stones are interpreted by Indian people as being provided by the
19 mountain as both a spiritual backdrop and a location rationale for vision quests (Stoffle
20 et al. 2001).

21 Volcanic rocks are used in a wide range of ceremonial activities. Indian women enhance
22 the quality of breast milk by squirting it on heated rocks (Stewart 1940; Miller 2004).
23 They are used for medicine society sweat lodge meetings (Zedeno et al. 2001:146).
24 Indian people call some volcanic rocks “grandfather stones,” a designation that reflects
25 reverence as well as wisdom. Such rocks are sought in special places of power and
26 carried over long distances to serve as heated stones in sweat lodges.

27 **3.11.1 Water Resources Affected Environment – Consolidated Group of Tribes** 28 **and Organizations**

29 Information in the LEIS does not adequately address
30 adverse effects to water resources and the environment.
31 Factors such as heavy metals from bombs and other
32 munitions must be evaluated to thoroughly understand the
33 effects to water. The effects are far-reaching and impact
34 animals that drink water from water sources in different areas. No consideration is given
35 to chemical, biological and cultural adverse effects to other interconnected resources.

36 The CGTO knows when water is respected, it sustains all life forms. Conversely, when
37 water is mistreated, it withdraws life-giving support and returns to the underworld. The
38 Consolidated Group of Tribes and Organizations (CGTO) knows we are in a drought

This paragraph 3.11.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11, Water Resources.

1 because humans have disrespected the earth. It is affecting the balance of our earth's
2 climate. One inevitable implication of the current 100-year drought is surface water on
3 the NTTR and surrounding areas have diminished and become more sporadic. The
4 modification and availability of surface water has the ability to affect all trophic levels on
5 the NTTR.

6 The CGTO knows drainage patterns have been unnaturally altered from Air Force
7 operations and will continue to be impacted if no change occurs. The CGTO has
8 observed places on the NTTR where the rain falls but does not nurture the plants and
9 the animals cannot rely on it. The water within these features is central to our
10 ceremonies in restoring balance. Tribal elders have noted, "*Water has been*
11 *disrespected and therefore it is disappearing. It is a medicine--used to heal and used for*
12 *healing. It is used for ceremonial purposes in prayer. It is alive and must be awakened.*
13 *It is spiritual--an essential component to begin religious ceremonies, and part of sweat*
14 *ceremonies. Historically, water was pure and available to those who respected it.*
15 *Bathing was a ritual. Now we do not trust the purity of the water because it has been*
16 *disrespected. Hot springs have been affected and are no longer at the temperatures*
17 *they used to be."*

18 In the 1997 Nellis Air Force LEIS, the CGTO emphasized the importance of involving
19 the tribes in the co-management opportunities to help sustain balance through
20 traditional practices needed to protect the resources before, during and after water
21 monitoring or surveys. No comprehensive systematic and collaborative ethnographic
22 studies specific to water resources have been conducted on the NTTR to fully assess
23 the potential effects to cultural resources derived from the military presence. By
24 supporting the CGTO in a proposed collaborative ethnographic water management
25 project, the Air Force would help reduce drought conditions and gain a better
26 understanding of traditional land management practices. In turn, this project would
27 provide spiritual, cultural and ecological benefits to the land and the environment,
28 thereby facilitating our obligation to sustain the spiritual and ecological balance.
29 Implementation will require cultural experts to identify locations, inventory and evaluate
30 site resources, examine extenuating conditions, and implement culturally-appropriate
31 mitigation measures. (See *Appendix K – CGTO Native American Assessments: Nevada*
32 *Test and Training Range Legislative Environmental Impact Statement - October 2017*
33 for more details)

34 Until such time as these studies are completed, the Air Force will remain challenged in
35 understanding the cultural complexities associated with protecting culturally sensitive
36 resources on the NTTR.

1 **3.11.1.4.1 Surface Water - Existing NTTR Boundary Alternatives 1 and 2**
2 **Hydrology – Consolidated Group of Tribes and Organizations**

3 The LEIS provides information about the origin of the water
4 that occurs on the NTTR, beginning with springs, seeps or
5 winter snowpack which aligns with CGTO perspectives.
6 Tribes rely on the winter snow accumulation that begins
7 before the winter starts by incorporating traditional prayers
8 and ceremonies. In relation to the living creatures, the *snow fleas* are the ones that
9 make the water in the springtime to keep things in balance.

This paragraph 3.11.1.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.1.4, Surface Water.

10 The CGTO was not included in water studies during the project survey conducted by the
11 NTTR. Water is sacred to Native people. The Air Force should work closely with the
12 CGTO to develop co-management strategies including systematic monitoring and
13 intervention from participating tribes.

14 **3.11.1.4.1 Jurisdictional Surface Waters – Consolidated Group of Tribes and**
15 **Organizations**

16 According to the LEIS, surface water are navigable which
17 is somewhat misleading since most of the rivers on or
18 near NTTR are subsurface hydrologic systems that are
19 too small to be used by vessels as described in the
20 Webster dictionary. Hydrologic basins are identified as
21 the Amargosa River and Las Vegas Wash which neither
22 is navigable by vessel although used by cultural deities
23 who rely on these waterways to protect the land. The CGTO knows that these
24 supernatural beings rely on these basins to sustain the hydrological balance located in
25 the NTTR cultural landscape. Any activities that disrupt the delicate balance of the
26 resources and deities require tribal intervention to restore the cultural equilibrium of the
27 area.

This paragraph 3.11.1.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.1.4, Surface Water.

28 **3.11.1.6.1 Groundwater Water Quality – Consolidated Group of Tribes and**
29 **Organizations**

30 Historic nuclear testing at the Nevada National Security
31 Site (formerly known as Nevada Test Site) adjacent to the
32 NTTR, resulted in areas of radioactive groundwater
33 contamination that is monitored within the boundaries of
34 the NTTR. The CGTO knew the water would be contaminated, and according to S&B
35 Christ Consulting, LLC 2016, a small trace of tritium was detected in an early detection
36 well. This finding confirms the CGTO concerns relating to adverse effects onto the
37 cultural integrity of resources on the NTTR.

This paragraph 3.11.1.6.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.1.6, Groundwater.

1 According to tribal elders, "*Water is life. Water is needed by the plants and animals.*
2 *Indian people bless themselves with it. It purifies the body. Water is medicine and must*
3 *be respected. American Indians need it to conduct religious ceremonies. It cleans the*
4 *earth. It has a vast connection to the underground. Water shouldn't be contaminated or*
5 *it will die and lose its spirit.*" Each of the distinct underground hydrological basins, has
6 its own origin story that describes its personality. One tribal story tells of a distinct
7 underground water network created by Ocean Woman where she placed her feet.
8 According to the traditional story, there are points where the water emerges at the
9 surface in springs and seeps. It was here that Ocean Woman placed her medicine staff
10 into the ground and water emerged.

11 At other points, the surface water in low playa lakes meets the underground water
12 channels. These points are like doorways between the surface world and the
13 underworld. Rain calling is a basic aspect of American Indian life and culture. Rain
14 ceremonies from the spiritual world help facilitate rain production, and were led by rain
15 callers, often called rain shamans or rain doctors in the English language. The rain
16 caller calls upon the rain by singing songs, and is aided by his spirit helper, which is
17 usually in the form of a mountain sheep. The mountains also had important roles in this
18 activity, and were called upon to interact with the clouds and the sky to call down the
19 rain.

20 Even today, individual traditional Indian people can bring rain which transforms into
21 groundwater. One way this is done is by turning a stinkbug on his back. The rain will
22 come, provided the stinkbug allows a person to tickle his belly with a small stick. This
23 person then prays for rain, and tells the stinkbug why he is asking for rain in a respectful
24 manner.

25 If too much rain falls that could cause flooding, certain precautions are taken. For
26 example, the children are not allowed to shake willows that will be used for weaving or
27 to kill frogs as this brings more rain. Hummingbirds were not killed for many reasons, if
28 they are killed, there will be flooding and lightning storms, with lightning killing the
29 person who brought harm onto the hummingbird.

30 In the old days, a Snow Ceremony was performed to ensure a good winter with heavy
31 snow fall. The spiritual leader, often called a weather doctor in the English language
32 would call the people together and meet at a special place in the mountains, sometimes
33 near a pine nut gathering area. The spiritual leader would sing songs and offer, prayers.

34 According to Indian tradition, the Snow Ceremony is performed during the late fall when
35 the weather becomes cold A part of this ceremony involves calling on the *snow fleas*.
36 They represent a special category of American Indian environmental knowledge
37 because they are almost invisible and live at the highest elevations on the mountains.
38 The *Snow Fleas* are the ones that make the snow wet and absorb into the mountain.

1 Without them, the snow is dry and evaporates quickly, and there is less water for the
2 mountains and the valleys below. The Snow Ceremony is conducted in relationship with
3 a ceremony for the seeds where young girls dance with seeds in winnowing trays and a
4 spiritual person sings songs to bring whirlwinds, which surround the dancers and scatter
5 the seeds as a gesture of fertilizing the earth. Water is called upon to nourish the soil
6 and the seeds to make them fertile.

7 Because water is a powerful being it is associated with other powerful beings, such as
8 *water babies*, supernatural beings like the people of the water. They are highly
9 respected by American Indian culture. If water is contaminated the water babies will
10 move to other areas that are not contaminated. Proof of their existence has been
11 depicted in historic rock drawings throughout Nevada, including several pecked image
12 at various locations including the volcanic butte at Black Canyon, Pahranaagat Valley.

13 According to a tribal elder, "*Water babies are important to our culture. They are*
14 *supernatural. They connect everything and you don't want to disrespect them. The*
15 *springs are all connected and they follow the water flow Water babies are supernatural*
16 *beings and are the guardians of the water. They can make sounds like a baby. and you*
17 *don't want to startle them because they can disturb life. We are taking their native*
18 *environment away when we drill and contaminate the water. It angers them. When they*
19 *get mad, there are adverse impacts to wildlife as they can drain you spiritually and*
20 *physically.*"

21 Playas - The CGTO knows playas occupy a special place in American Indian culture.
22 Playas are often viewed as empty and meaningless places by western scientists, but to
23 Native Americans playas are lakes that come back during excessive precipitation and
24 contribute to the ground water. When the lake is replenished they have an important
25 role because it contains special resources that do not occur anywhere else. The CGTO
26 knows that playas were used in traveling or moving to places where work, hunting, pine
27 cutting, or gathering of other important foods and medicine could be done. One elder
28 remembers crossing over dry lake beds and traveling around near the edges.
29 Oftentimes, provisions were left there including at nearby springs that previous travelers
30 used at these important locations.

31 According to tribal elders, who were interviewed during previous evaluations, "*Indian*
32 *people left caches in playa areas for people who crossed valleys when water and food*
33 *was scarce. Frenchman playa is such a place. Indian people took advantage of*
34 *traveling through this playa as mountains completely surround this area. The CGTO*
35 *knows that most dry lakes are not known to be completely dry. Some examples are*
36 *Indian Springs Valley, Dog Bone Lake, Three Lakes Valley, Cactus Flats and Soda*
37 *Lake near Barstow, California. Often, the Mojave River which flows near Barstow and*
38 *Victorville is culturally significant to Indian people including those from Fort Mojave. The*
39 *river is intermittent and flows into this dry lake that looks dry but actually flows*

1 *underground. Although some people continue to view these playas as a wasteland or*
2 *unimportant, the CGTO knows they are not.” If these areas are disrespected, the*
3 *resources will disappear and the world will be out of balance. (See Appendix K – CGTO*
4 *Native American Assessments: Nevada Test and Training Range Legislative*
5 *Environmental Impact Statement - October 2017 for more details)*

6 **3.11.2.1 Analysis Methodology – Consolidated Group of Tribes and Organizations**

7 What are the potential impacts to the water resources
8 under each of the alternatives? The CGTO knows historic
9 nuclear testing at the NNSS adversely impacted cultural
10 resources within the traditional homelands of Southern
11 Paiute, Western Shoshone, Owens Valley
12 Paiute/Shoshone and Fort Mojave people and resulted in
13 radiological contamination and a cultural imbalance to the land. Even though an
14 agreement is in place with the NNSS and the State of Nevada, the CGTO should be
15 signatories to a similar agreement in principle with DOE and the NTTR.

This paragraph 3.11.2.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.2.1, Analysis Methodology.

16 **3.11.2.2.1 Alternative 1 - Extend Existing Land Withdrawal and Management of** 17 **NTTR (North and South Range) - Status Quo – Consolidated Group of Tribes and** 18 **Organizations**

19 Any munition or debris from military activities that leave
20 conventional metal residue or Depleted Uranium (DU) is
21 always a concern of the CGTO. Storm models and
22 projections do not accurately reflect the day-to-day and
23 cumulative impact to the land. There is no study that
24 identifies the cultural impacts to culturally sensitive areas
25 from radioactive materials. Personnel working in certain
26 areas must monitor exposure using dosimeters to identify
27 exposure over the lifetime of human presence in a controlled environment. No
28 systematic ethnographic studies have been conducted on the NTTR to evaluate the
29 cultural impacts for munition or debris associated with military activities. Until such a
30 study is conducted, the long-term effects cannot be thoroughly evaluated or understood.

This paragraph 3.11.2.2.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of NTTR (North and South Range) – Status Quo.

31 Contaminated water introduces direct exposure to animals and insects of varying sizes
32 that may be consumed by larger predators. The introduction of DU to the food chain for
33 an untold number of years is not supported by the CGTO. Residual effects from
34 contaminated pools of water require tribal intervention through traditional cultural
35 practices to regain ecological balance.

1 **3.11.2.3.1 Alternative 2 – Extend Existing Land Withdrawal and Provide Ready**
2 **Access in the North and South Ranges – Consolidated Group of Tribes and**
3 **Organizations**

4 As with Alternative 1, the potential impacts will be generally
5 the same as in Alternative 2, the CGTO remains opposed
6 to the introduction of DU or other debris. The CGTO
7 recommends removal of debris that can introduce F.O.
8 (Foreign Objects) into the cultural landscape as described
9 and understood by Native Americans. The Air Force
10 understands that F.O. that are introduced into aircraft
11 intake and/or cockpits can have catastrophic results
12 immediately or over time if not removed quickly as they can interfere with the proper
13 function and safety of the aircraft. Equally, the same is true for impacts to the Native
14 American cultural landscape from objects or material that are left behind or discarded
15 and result in contamination or what is referred to as cultural pollution.

This paragraph 3.11.2.3.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.2.3, Alternative 2 – Extend Existing Land Withdrawal and Provide Ready Access in the North and South Ranges.

16 **3.11.2.4.1 Alternative 3 – Expand Withdrawal of Public Lands for NTTR –**
17 **Consolidated Group of Tribes and Organizations**

18 The CGTO disagree with the LEIS analysis that increased
19 aircraft and emitter operations over and through the land,
20 water sources and airspace will not have an adverse
21 impact on culturally sensitive areas and resources. The
22 CGTO knows Increased air traffic, ground personnel,
23 munitions residue or structures will continue to disturb culturally significant wildlife,
24 water, air and spiritual serenity of the environment. Equally, numerous locations within
25 the cultural landscape have not been systematically evaluated archaeologically,
26 ethnographically and biologically. Once areas are finally identified, cultural and scientific
27 analysis will be necessary to properly evaluate those locations. Water quality must be
28 sustained to remain clean and uncontaminated to maximize protection of the entire
29 cultural landscape.

This paragraph 3.11.2.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.11.2.4, Alternative 3 – Expand Withdrawal of Public Lands for the NTTR.

30 **3.12.1.1.1 Hazardous Materials and Solid Waste –**
31 **Consolidated Group of Tribes and Organizations**

32 The CGTO knows cultural resources are interconnected
33 and encompass more than physical structures or sacred
34 sites. Natural resources within the NTTR are considered
35 culturally sensitive and include but are not limited to plants
36 and animals, natural formations, waterways, weather and astronomy that must be kept
37 in balance in culturally appropriate ways. Native Americans rely on these resources to
38 sustain life and to interact with the spiritual world as described in our traditional beliefs

This paragraph 3.12.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.1, Hazardous Materials and Solid Wastes.

1 to keep the world in balance. If balance is not sustained, the land will react and change
2 will occur, thus impacting cultural resources on the NTTR. The CGTO knows the
3 complex views of tribal people must be respected in order to protect the area from
4 contamination and other adverse effects that may destroy the cultural integrity of the
5 landscape. It is the right and duty of Native Americans to protect these culturally
6 sensitive resources from any contamination, pollution and other activities that seek to
7 degrade or interfere with their existence.

8 **3.12.1.5.1 Department of Defense Environmental Monitoring Program –** 9 **Consolidated Group of Tribes and Organizations**

10 The CGTO acknowledges that the Air Force has made
11 improvements to identify ways to enhance their efforts in
12 restoring the land. Native Americans play an essential co-
13 management role in understanding the complexities of the
14 cultural landscape. Involvement in this process is one that
15 advocates on behalf of the resources and protection of them. Restoration can never be
16 achieved if the original soil on sites is contaminated, affecting plants, animals, air,
17 climate and water. Traditional prayers and cultural ceremonies for the land can help
18 heal it and bring spiritual balance using complex spiritual approaches. The CGTO
19 knows the Air Force must continue to recognize that these interactions are not just
20 limited to singular ritually based events and cannot be rushed or abbreviated. When
21 access is limited, opportunities are affected that prevent the CGTO from engaging in co-
22 management activities to make the land is whole again.

This paragraph 3.12.1.5.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.5, Department of Defense Environmental Monitoring Program.

23 **3.12.1.5.1.1 Areas of Concern – Consolidated Group of Tribes and Organizations**

24 The CGTO knows any hazardous or industrial waste left at
25 the NTTR is always a concern. Cultural and ecological
26 balance is essential and must be maintained by removing
27 debris before the land can heal and be fully restored. The
28 LEIS suggests the location of two AOCs that are as yet
29 unknown and along with the other 73 AOCs that contain
30 “disposal pits” and associated items that may be stored within them. The disclosure of
31 this information prompts the CGTO to question when these areas will be unearthed,
32 cleaned up and visited by Natives to conduct ceremonial activities to help heal the land
33 and keep it in balance. Tribal involvement is an essential component for understanding
34 the area and identifying new sites with the same concern about how they will be treated.

This paragraph 3.12.1.5.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.5, Department of Defense Environmental Monitoring Program.

1 **3.12.1.5.1.1.1 Resource Conservation and Recovery Act Facility Assessment –**
2 **Consolidated Group of Tribes and Organizations**

3 Similar to other locations, the CGTO discourages any
4 consideration for supporting landfills and underground
5 storage tanks that can easily corrode or contaminate water
6 and other resources that the land and wildlife rely on for
7 survival. Contamination creates imbalance for the entire
8 ecosystem and places unnecessary strain on resources
9 throughout the NTTR. When animals are forced to share water that doesn't know them
10 or wasn't meant to be shared, an imbalance occurs which brings sickness to the land.
11 Cumulative impacts over time will have an irreversible effect on the entire ecosystem
12 that cannot be restored, repaired, or mitigated.

This paragraph 3.12.1.5.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.5, Department of Defense Environmental Monitoring Program.

13 **3.12.1.5.1.1.1.1 Munitions Residue – Consolidated Group of Tribes and**
14 **Organizations**

15 The CGTO knows that the Air Force has made great
16 strides in eliminating lead from water, gas, and paint, yet
17 NTTR lands continue to contain lead from training rounds
18 or other hazardous waste. The CGTO knows when
19 hazardous material is left on the land in any training area,
20 the land will react and the material becomes a major threat
21 to the environment. The CGTO knows these materials harm animals, contaminate water
22 and pollute the environment in such a way that has permanent and lasting effects.

This paragraph 3.12.1.5.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.5, Department of Defense Environmental Monitoring Program.

23 **3.12.1.5.1.1.1.1.1 Depleted Uranium Target Assessment – Consolidated Group of**
24 **Tribes and Organizations**

25 The CGTO knows the seriousness of Depleted Uranium
26 (DU) should not be minimized as "mildly radioactive." The
27 CGTO knows the USAF, DOD, DOE and other agencies
28 take preventative measures to permanently ban the use of
29 equipment or munitions that contain any form of radioactive
30 material. These elements are extremely dangerous and
31 pose a significant health hazard to all living things that
32 cannot be restored, thus the land is permanently scarred, sterile and/or dead. Animals
33 rely on food sources and water on the NTTR to support themselves and to sustain the
34 food chain--once contamination is introduced, the far reaching effects will remain
35 permanent and worsen with time. The cumulative effect cannot be accurately forecasted
36 by studies or models. In time, these effects cause sickness where increased cancer
37 rates can be elevated and become a concern. Equally, water sources may become

This paragraph 3.12.1.5.1.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.5, Department of Defense Environmental Monitoring Program.

1 **3.12.1.5.1.1.1.1.1.1.1 Spills and Aircraft Crashes – Consolidated Group of Tribes**
2 **and Organizations**

3 It is impossible to guarantee that spills will never occur.
4 With that understanding, the CGTO finds it necessary to be
5 notified when and where a spill occurs, and how it will be
6 cleaned up. Tribal consultation is essential in the
7 restoration process for evaluating potential effects,
8 conducting traditional prayers and initiating mitigation to
9 aide any disturbed cultural resources (all-inclusive of water,
10 air, animals, plants, or soil affected) to help bring closure to the restoration process.

This paragraph
3.12.1.5.1.1.1.1.1.1.1
provides the Native American
perspective regarding the
information presented in LEIS
Section 3.12.1.5, Department
of Defense Environmental
Monitoring Program.

11 **3.12.1.5.1.1.1.1.1.1.1.1 Aircraft Mishaps – Consolidated Group of Tribes and**
12 **Organizations**

13 Aircraft mishaps of manned and unmanned aircraft have
14 occurred in the past 10 ten years. The CGTO was never
15 consulted or notified of restoration, mitigation, or cleanup
16 efforts related to any of these. For example, the F-16
17 operates with hydrazine, a chemical that causes asthma-
18 like conditions to humans and has unknown effects on
19 animals and plant resources upon exposure. Equally, graphite and other materials are
20 introduced when an aircraft is lost due to a mishap. Systematic human health and
21 biological evaluations must be conducted to determine the effects on cultural resources,
22 including archaeological sites, wildlife, groundwater and soils.

This paragraph
3.12.1.5.1.1.1.1.1.1.1
provides the Native American
perspective regarding the
information presented in LEIS
Section 3.12.1.5, Department
of Defense Environmental
Monitoring Program.

23 The CGTO is aware that human life has been lost in the NTTR. The CGTO knows that
24 *Dead Air* occurs when air is destroyed, causing pockets of *dead air* to cause anomalies
25 in the air currents. There is only so much living air that surrounds the world. If you kill
26 the living air, it is gone forever and cannot be restored.

27 *Dead air* lacks the spirituality and energy necessary to support other life forms. Aircraft
28 mishaps occur when they hit *dead air*. During a previous CGTO evaluation of the area,
29 one member of the CGTO compared this Indian view of killing air with what happens
30 when a jet flies through the air and consumes all of the oxygen, producing a condition
31 where another jet cannot fly through it.

32 The CGTO knows in order to maintain balance not only in the physical environment, but
33 among interrelated spiritual elements, cultural ceremonies must be conducted to restore
34 the integrity of the area in culturally appropriate ways. Without these traditional
35 blessings, the air continues to be sick and out of balance and cannot understand what
36 has happened or how to bring itself back into harmony.

3.12.1.6.1 Department of Energy Environmental Restoration Program – Consolidated Group of Tribes and Organizations

Plutonium is a serious concern of the CGTO, as are the consistent monitoring activities associated with atomic testing. The CGTO continues to work with the Air Force and NNSA to gain access to the land and review associated studies to determine exposure of radioactive materials to all-inclusive cultural resources that supports life.

This paragraph 3.12.1.6.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.6, Department of Energy Environmental Restoration Program.

The CGTO knows that any areas affected by radioactive materials will always be contaminated and bring sickness to the land. Once these materials are released into the air, detonated under the ground and spread across the land, permanent contamination occurs that requires ceremonial intervention. No amount of restoration will ever remove these radioactive elements as long as they remain on the NTTR. The radioactivity poses a threat to all cultural resources from the associated effects that can neither be predicted nor mitigated.

3.12.1.7.1 Solid Waste Management – Consolidated Group of Tribes and Organizations

The CGTO does not support disposing solid waste on the NTTR and believes all solid waste should be removed from NTTR as it is generated in order to prevent further environmental hazards. Many times during tribal monitoring visits, sites have been discovered that were previous landfills for similar waste streams that eventually became compromised during excessive precipitation events or flash flooding. These events left large debris fields that caused further pollution to the environment and our traditional homelands.

This paragraph 3.12.1.7.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.7, Solid Waste Management.

The CGTO continues to strongly oppose the transportation, storage, and disposal of radioactive waste but knows environmental restoration occurs on the NTTR. The CGTO believes cultural intervention must continue to fulfill our birth-rite obligation to care for our Holy Land and do what we can to restore balance in contaminated locations.

The CGTO knows Native Americans hold traditional views that are sometimes challenged by scientific views of radioactive materials and waste. As an example, the former builds on the view that all resources, including the rocks that Native Americans treat as sentient beings. Radioactive rocks are powerful but they can become “*angry rocks*” if they are removed without proper ceremony, used in a culturally inappropriate way, disposed of without ceremony, or placed where they do not want to be. (Stoffle et al., 1989a and 1990c). The practice of dealing with “*bad medicine*” or neutralizing negative forces is a part of our traditional culture. Indian knowledge and use of

1 radioactive rocks, or minerals, in the western United States goes back for thousands of
2 years. Areas with high concentrations of these minerals are called dead zones. Such
3 areas contain places of power or energy and can only be visited or certain minerals
4 used under the supervision of specially trained Indian people, who are sometimes
5 referred to in the English language as a shaman or medicine man (Stoffle and Arnold
6 2003). Therefore, the Air Force would benefit from incorporating traditional ecological
7 knowledge if applied correctly.

8 A former head Salt Song singer and religious leader for the Chemehuevi Paiutes once
9 explained the impacts of radiation as follows:

10 *“Our spirits will paint their faces and become angry because they are disturbed by the*
11 *presence of angry rocks. When we are out there now, it is still and peaceful; it is like*
12 *being in a church chamber. Radiation will disturb the harmony...It will no longer be the*
13 *same. It will be violated. All the previous songs stories that have been shared in the*
14 *area will be disturbed. Once a song is sung it continues to be there. When you sing a*
15 *song you are on the trail--your spirit is making that trip. You are describing where you*
16 *are at and what is happening. You tell in the song where you are and what you are*
17 *doing. When people go to these areas today a person can get a song. Previous songs*
18 *actually hear it...There are still areas today where you can go and hear the song. Some*
19 *people hear the songs and it scares them because they do not know what it is. Young*
20 *people need to be told what it is they are hearing. The places need to be protected from*
21 *damage so the songs continue to be there for future generations. It is like a delayed*
22 *echo that never goes away and can come again and again to new people.”*

23 The CGTO is very concerned about radioactive contamination on the NTTR that is left
24 or buried in place and could become airborne residue that adversely impacts the
25 environment.

26 According to tribal elders, *“Environmental restoration of man-made radioactive elements*
27 *is not a natural process. The natural environment is altered. The wildlife could become*
28 *contaminated. Water and birds could disperse the elements over the land causing*
29 *insects and vegetation to become contaminated. This contamination would then*
30 *adversely impact the food chain. The CGTO is concerned about the animals that will*
31 *become contaminated or sick if they ingest other contaminated species in the food*
32 *chain.”*

33 The CGTO is concerned about adverse impacts to the land, animals, plants, water, air,
34 and insects from the waste and noise generated during explosive detonations on the
35 NTTR. The CGTO understands the destructive force of explosive detonations and the
36 resulting destruction to the environment. For example, animals relocate to unfamiliar
37 habitats, which adversely impact their survival rate. Air is adversely impacted,

1 increasing the occurrence of *dead air*. Noise and vibration from the detonations impact
2 the insects, and disrupt vegetative growth.

3 The CGTO knows if the earth and environment are being disrespected, the spirits that
4 protect and watch over these can become upset and respond negatively. This can result
5 in the characteristics of the environment changing, causing animals to leave their
6 natural habitats, reducing the native vegetation, further reducing water resources, and
7 increasing occurrences of perceived mishaps.

8 The CGTO is concerned about transporting hazardous and radioactive waste
9 associated with environmental restoration activities on the NTTR and through traditional
10 homelands that could adversely impact their health and environment. Tribal homelands
11 within the region of influence are located in remote areas with limited access by
12 standard and substandard roads. Should an emergency situation resulting from NTTR
13 related activities, including the transportation of hazardous and radioactive waste occur,
14 it could result in the closure of a major reservation road. If a major (and sometimes only)
15 road into a reservation is closed, numerous adverse social and economic impacts could
16 occur. For example, Indian students who have to travel an unusually high number of
17 miles to or from school could suffer delays. Delays also could occur for regular
18 deliveries of necessary supplies for inventories needed by tribal enterprises and
19 personal use. Purchases by patrons of tribal enterprises and emergency medical
20 services in route to or from the reservation could be dramatically impeded. Potential
21 investors interested in expanding tribal enterprises and on-going considerations by tribal
22 governments for future tribal developments may significantly diminish because of the
23 perceived risks associated with NTTR related activities including the transportation of
24 radioactive waste associated with environmental restoration activities.

25 Finally, the CGTO struggles with the ethics of handling radioactive waste during
26 environmental restoration activities without tribal intervention, which would allow people
27 to live without fear of radioactivity. The CGTO is greatly concerned about the adverse
28 spiritual, environmental, and health impacts associated with relocating these angry
29 rocks from their current locations to our Holy Land. We believe continual disrespect to
30 our land perpetuates animosity and discord among tribal governments.

31 **3.12.2.1.1 (Environmental Consequences) Analysis Methodology – Consolidated** 32 **Group of Tribes and Organizations**

33 The CGTO agrees the release of hazardous materials
34 poses challenges for preventing related health problems
35 and an imbalance to the cultural landscape in the future
36 due to the absence of tribal involvement. Prevention is
37 necessary for timely and full removal of all hazardous
38 materials and waste as they are generated. Sustainment of the cultural integrity of these

This paragraph 3.12.2.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.1, Analysis Methodology.

1 locations can be accomplished through tribal intervention and involvement from
2 designated tribal monitor(s) to validate the removal process and help protect the
3 ecosystem.

4 **3.12.2.2.1 Hazardous Materials (Alternative 1 - Extend Existing Land Withdrawal** 5 **and Management of the NTTR (North and South Range) - Status Quo) –** 6 **Consolidated Group of Tribes and Organizations**

7 The CGTO knows hazardous materials can cause
8 problems to the environment. The CGTO must be notified
9 of spills or contamination releases to determine culturally
10 appropriate activities that should be integrated into the
11 remediation process. The CGTO remains committed to
12 working closely with the Air Force in co-managing cultural
13 resources and minimizing the effects from pollution,
14 damage and imbalance that result from introducing
15 hazardous chemicals into the living environment.

This paragraph 3.12.2.2.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of the NTTR (North and South Range) – Status Quo.

16 **3.12.2.2.1.1 Hazardous Waste Management – Consolidated Group of Tribes and** 17 **Organizations**

18 The CGTO knows it is necessary to be actively involved in
19 the review of disposal plans of newly identified waste
20 streams in order to become more proactive in managing
21 cultural resources rather than becoming involved after a
22 disturbance occurs and hazardous materials are released
23 into the environment.

This paragraph 3.12.2.2.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of the NTTR (North and South Range) – Status Quo.

24 The CGTO disagrees that “no significant impacts would occur.” According to Air Force
25 reports, lead munitions residue does in fact migrate over time. Disposal pits erode and
26 buried solid waste is unearthed from burrowing animals or precipitation events. The
27 CGTO knows all living things are tied to the land and are considered Native American
28 cultural resources.

29 The CGTO strongly believes that co-management or consultation is necessary to
30 sustain cultural and ecological integrity before the action occurs. Collaborative methods
31 should be examined to identify approaches for preventing further damage or
32 contamination to important cultural resources.

3.12.2.2.1.1.1 Environmental Restoration and Monitor Programs - ERP and AOCs – Consolidated Group of Tribes and Organizations

Although many sites have been cleaned up to comply with NDEP standards, the CGTO is typically not consulted on the final disposition of “cleaned up or restored sites.” Native Americans are the stewards of cultural resources and help co-manage the cultural resources found on the NTTR. Although sites may have been restored to an acceptable scientific level by regulators, the CGTO plays an important role in cultural restoration of the land that requires cultural intervention using traditional ceremonies based on traditional ecological knowledge.

This paragraph 3.12.2.2.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of the NTTR (North and South Range) – Status Quo.

3.12.2.2.1.1.1.1 Munitions Residue – Consolidated Group of Tribes and Organizations

The CGTO believes that all munitions debris especially those containing lead and Depleted Uranium (DU) must be removed from the NTTR to prevent harm and damage to the natural and biological resources. Cultural intervention using traditional ceremonies must occur to restore the ecological balance to the cultural landscape that encompasses the NTTR.

This paragraph 3.12.2.2.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of the NTTR (North and South Range) – Status Quo.

3.12.2.2.1.1.1.1.1 Depleted Uranium Target Assessment – Consolidated Group of Tribes and Organizations

The CGTO knows Depleted Uranium (DU) poses a threat to all living animals, plant life, water and air. The continued use of this material puts the environment and cultural landscape at risk and creates challenges for proper mitigation strategies. The CGTO must be called upon to intervene by conducting traditional ceremonies to restore ecological balance of the cultural landscape within the NTTR.

This paragraph 3.12.2.2.1.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of the NTTR (North and South Range) – Status Quo.

3.12.2.2.1.1.1.1.1.1 Spills and Aircraft Mishaps – Consolidated Group of Tribes and Organizations

The CGTO recognizes it is impossible to guarantee that spills will never occur on the NTTR. As co-stewards of the land, the CGTO must be notified when spills occurs and how they will be cleaned up. The CGTO plays an integral role in the restoration process and must properly evaluate

This paragraph 3.12.2.2.1.1.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.2, Alternative 1 – Extend Existing Land Withdrawal and Management of the NTTR (North and South Range) – Status Quo.

1 appropriate cultural intervention needed to restore ecological balance within the cultural
2 landscape that encompasses the NTTR.

3 **3.12.2.2.1.1.1.1.1.1 Department of Energy Environmental Restoration Program –** 4 **Consolidated Group of Tribes and Organizations**

5 The CGTO knows it is necessary to visit contaminated
6 sites and be notified when cleanup begins and concludes.
7 As co-managers of these lands, we share the responsibility
8 of protecting our traditional homelands. The CGTO knows
9 complete restoration of contaminated sites is essential for
10 completely restoring cultural resource integrity.

This paragraph
3.12.2.2.1.1.1.1.1.1
provides the Native American
perspective regarding the
information presented in LEIS
Section 3.12.2.2, Alternative 1
– Extend Existing Land
Withdrawal and Management
of the NTTR (North and South
Range) – Status Quo.

11 **3.12.2.2.1.1.1.1.1.1.1.1 Solid Waste – Consolidated** 12 **Group of Tribes and Organizations**

13 The CGTO does not support the disposal of solid waste at
14 the NTTR and recommends that all solid waste be
15 removed as it is generated to prevent further environmental
16 hazards. Many times, during tribal monitoring sites have
17 been discovered that were previous landfills for waste that
18 became unearthed during major precipitation events.
19 Under these circumstances, large debris fields developed
20 that further polluted the environment and cultural
21 landscape.

This paragraph
3.12.2.2.1.1.1.1.1.1.1
provides the Native American
perspective regarding the
information presented in LEIS
Section 3.12.2.2, Alternative 1
– Extend Existing Land
Withdrawal and Management
of the NTTR (North and South
Range) – Status Quo.

22 **3.12.2.3.1.1 Alternative 2 - Extended Existing Land Withdrawal and Provide Ready** 23 **Access in the North and South Ranges - Hazardous Materials – Consolidated** 24 **Group of Tribes and Organizations**

25 The CGTO disagrees with limited impacts associated with
26 providing ready access and the continued use of
27 hazardous materials in the North and South ranges. The
28 CGTO believes with a projected increase in operations by
29 30%, it is reasonable to expect there will a proportionate
30 impact or result of increased introduction of hazardous
31 materials, munitions or other non-natural materials
32 corresponding to increased activities. While there may not
33 be a direct correlation, it can be reasonably assumed an increase is inevitable.

This paragraph 3.12.2.3.1.1
provides the Native American
perspective regarding the
information presented in LEIS
Section 3.12.2.3, Alternative 2
– Extend Existing Land
Withdrawal and Provide Ready
Access in the North and South
Ranges.

34 The CGTO knows hazardous materials can cause problems to the environment. The
35 CGTO must be notified of spills or contamination releases to determine culturally
36 appropriate activities that should be integrated into the remediation process. The CGTO
37 remains committed to working closely with the Air Force in co-managing cultural

1 resources and minimizing the effects from pollution, damage and imbalance that result
2 from introducing hazardous chemicals into the living environment.

3 The CGTO knows cultural resources are interconnected and encompass more than
4 physical structures or sacred sites. Natural resources within the NTTR are considered
5 culturally sensitive and include but are not limited to plants and animals, natural
6 formations, waterways, weather and astronomy be kept in cultural equilibrium in
7 culturally appropriate ways. Native Americans rely on these resources to sustain life and
8 to interact with the spiritual world as described in our traditional beliefs to keep the world
9 in balance. If balance is not sustained, the land will react and change will occur, thus
10 impacting cultural resources on the NTTR. The CGTO knows the complex views of
11 tribal people must be respected in order to protect the area from contamination and
12 other adverse effects that may destroy the cultural integrity of the landscape. It is the
13 right and duty of Native Americans to protect these culturally sensitive resources from
14 any contamination, pollution and other activities that seek to degrade or interfere with
15 their existence.

16 **3.12.2.3.1.1.1 Hazardous Waste Management – Consolidated Group of Tribes and** 17 **Organizations**

18 The CGTO recognizes the importance of working
19 collaboratively with the Air Force in its shared co-
20 management responsibility to assist in the siting and
21 disposal plans of newly identified waste streams. The
22 CGTO knows to fulfill its cultural obligations to sustain our
23 traditional homelands, tribal representatives must become
24 proactive in managing important cultural resources rather
25 than reacting after hazardous materials are released into
26 the environment.

This paragraph 3.12.2.3.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.3, Alternative 2 – Extend Existing Land Withdrawal and Provide Ready Access in the North and South Ranges.

27 The CGTO knows cultural resources are interconnected and encompass more than
28 physical structures or sacred sites. Natural resources within the NTTR are considered
29 culturally sensitive and include but are not limited to plants and animals, natural
30 formations, waterways, weather and astronomy that must be kept in balance in
31 culturally appropriate ways. Native Americans rely on these resources to sustain life and
32 to interact with the spiritual world as described in our traditional beliefs to keep the world
33 in balance. If balance is not sustained, the land will react and change will occur, thus
34 impacting cultural resources on the NTTR. The CGTO knows the complex views of
35 tribal people must be respected in order to protect the area from contamination and
36 other adverse effects that may destroy the cultural integrity of the landscape. It is the
37 right and duty of Native Americans to protect these culturally sensitive resources from
38 any contamination, pollution and other activities that seek to degrade or interfere with
39 their existence.

1 **3.12.2.3.1.1.1 Environmental Restoration and Monitoring Programs –**
2 **Consolidated Group of Tribes and Organizations**

3 The CGTO disagrees there will be “no adverse impact” on
4 the environment with increased operations and failure to
5 clean up or restore contaminated sites. Currently, there are
6 certain locations on NTTR that are contaminated and pose
7 threats to the our traditional homelands. It can be
8 reasonably assumed that threats to culturally sensitive
9 areas will continue without cultural intervention by the
10 CGTO.

This paragraph 3.12.2.3.1.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.3, Alternative 2 – Extend Existing Land Withdrawal and Provide Ready Access in the North and South Ranges.

11 **Solid Waste**

12 The CGTO does not support disposing of solid waste at the
13 NTTR and recommends that all solid waste be removed as
14 it is generated to prevent further environmental hazards.
15 The CGTO knows during Tribal monitoring activities,
16 former landfill sites have been identified that were used for
17 disposing waste. These sites were revealed after major
18 precipitation events left behind large debris fields that
19 caused further cultural pollution onto the environment and
20 within the cultural landscape.

This paragraph provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.3, Alternative 2 – Extend Existing Land Withdrawal and Provide Ready Access in the North and South Ranges.

21 Restoration of solid waste sites and debris fields requires tribal involvement in
22 consultation with the CGTO. Solid waste is derived from an unnatural occurrences that
23 create ecological imbalance that cannot be ignored. The Air Force should work closely
24 with the CGTO to develop a solid waste management plan the is culturally acceptable to
25 the extent practicable.

26 **3.12.2.4.1 Alternative 3 - Expand Withdrawal of Public Lands for the NTTR -**
27 **Hazardous Materials, Hazardous Waste Management, Environmental Restoration**
28 **and Monitoring Program Sites and Solid Waste – Consolidated Group of Tribes**
29 **and Organizations**

30 The CGTO needs further explanation as to why two
31 runways would be constructed but would not be used for
32 aircraft as described in Alternative C. Construction of
33 runways will disturb the land, minerals, plant life, and
34 wildlife. Negative impacts to the physical, spiritual, and
35 visual integrity will occur for no apparent reason. Therefore, it is not understood why
36 construction or alteration to the cultural landscape is necessary.

This paragraph 3.12.2.4.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.4, Alternative 3 – Expand Withdrawal of Public Lands for the NTTR.

37 The CGTO has strong cultural ties to the NTTR. An alteration to the natural environment
38 requires tribal notification and involvement in any construction and/or survey of the land

1 prior to the commencement of construction activities associated with runway
2 development and fence installation.

3 The CGTO disagrees with the LEIS analysis that hazardous materials, hazardous waste
4 management, environmental restoration and monitoring program sites and solid waste
5 will not be impacted because no maintenance will occur in the expanded lands. The
6 CGTO asserts with a projected increase in operations, it is reasonable to expect there
7 will be a proportionate impact or result of increased introduction of hazardous materials,
8 munitions, or other non-natural materials corresponding with increased activities. While
9 there may not be a direct correlation, it can be reasonably assumed an increase is
10 inevitable.

11 The CGTO knows hazardous materials can cause problems to the environment. The
12 CGTO must be notified of spills or contamination releases to determine culturally
13 appropriate activities that should be integrated into the remediation process. The CGTO
14 remains committed to working closely with the Air Force in co-managing cultural
15 resources and minimizing the effects from pollution, damage and imbalance that result
16 from introducing hazardous chemicals into the living environment.

17 The CGTO knows cultural resources are interconnected and encompass more than
18 physical structures or sacred sites. Natural resources within the NTTR are considered
19 culturally sensitive and include but are not limited to plants and animals, natural
20 formations, waterways, weather and astronomy that must be kept in cultural equilibrium
21 in culturally appropriate ways. Native Americans rely on these resources to sustain life
22 and to interact with the spiritual world as described in our traditional beliefs to keep the
23 world in balance. If balance is not sustained, the land will react and change will occur,
24 thus impacting cultural resources on the NTTR. The CGTO knows the complex views of
25 tribal people must be respected in order to protect the area from contamination and
26 other adverse effects that may destroy the cultural integrity of the landscape. It is the
27 right and duty of Native Americans to protect these culturally sensitive resources from
28 any contamination, pollution and other activities that seek to degrade or interfere with
29 their existence.

30 **3.12.2.5.1. Alternative 4 – Establish the Period of Withdrawal – Consolidated** 31 **Group of Tribes and Organizations**

32 The CGTO understands military activities on the NTTR are
33 necessary and integral to national security and protecting
34 the interests of the United States. The proposed period of
35 withdrawals range from 20 and 50 years period to an
36 indefinite withdrawal, spans a wide range of time with
37 multiple variables to the traditional homelands of the CGTO possible.

This paragraph 3.12.2.5.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.5, Alternative 4 – Establish the Period of Withdrawal.

1 At the same time, the CGTO has a cultural obligation to look after the best interests of
2 the land and to sustain the perpetuation of Native culture. The CGTO maintains that a
3 collaborative relationship is vital with the Air Force is vital in protecting culturally
4 sensitive resources and the cultural equilibrium that is necessary for both to co-exist on
5 the NTTR. Communication with the CGTO remains ongoing with special consideration
6 given to addressing tribal concerns in advance, while maintaining reasonable access to
7 the cultural resource locations on the NTTR. Special provisions must be made to
8 access sacred sites and other culturally sensitive areas to continue religious
9 ceremonies, achieve access to traditional foods and medicines and most importantly to
10 care for the land, animals and other resources.

11 While there is great disparity between the proposed periods of withdrawal, the CGTO
12 knows the NTTR will always fall within our traditional homelands as we fully integrate
13 co-management opportunities of the resources that are vital to our mutual interests and
14 co-existence. The CGTO believes, provisions must be included to fund and sustain
15 tribal interactions through an institutionalized Native American Program with culturally
16 affiliated tribes.

17 **3.12.2.6.1 No Action Alternative Hazardous Materials (3-258: 1-8) – Consolidated** 18 **Group of Tribes and Organizations**

19 The CGTO finds it necessary to work with all federal
20 agencies on a government-to-government basis and
21 serving as co-managers to monitor hazardous materials
22 use, disposal and reclamation necessary to preserve the
23 land regardless of future decisions pertaining to land
24 status.

This paragraph 3.12.2.6.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.6, No Action Alternative.

25 The CGTO disagrees that the analysis of hazard materials would cease completely and
26 asserts with a projected increase in operations, it is reasonable to expect there will be a
27 proportionate impact or result of increased introduction of hazardous materials,
28 munitions or other non-natural materials corresponding to increased activities. While
29 there may not be a direct correlation, it can be reasonably assumed an increase is
30 inevitable.

31 The CGTO knows hazardous materials can cause problems to the environment. The
32 CGTO must be notified of spills or contamination releases to determine culturally
33 appropriate activities that should be integrated into the remediation process. The CGTO
34 remains committed to working closely with the Air Force in co-managing cultural
35 resources and minimizing the effects from pollution, damage and imbalance that result
36 from introducing of hazardous chemicals into the living environment.

37 The CGTO knows cultural resources are interconnected and encompass more than
38 physical structures or sacred sites. Natural resources within the NTTR are considered

1 culturally sensitive and include but are not limited to plants and animals, natural
2 formations, waterways, weather and astronomy that must be kept in cultural equilibrium
3 in culturally appropriate ways. Native Americans rely on these resources to sustain life
4 and to interact with the spiritual world as described in our traditional beliefs to keep the
5 world in balance. If balance is not sustained, the land will react and change will occur,
6 thus impacting cultural resources on the NTTR. The CGTO knows the complex views of
7 tribal people must be respected in order to protect the area from contamination and
8 other adverse effects that may destroy the cultural integrity of the landscape. It is the
9 right and duty of Native Americans to protect these culturally sensitive resources from
10 any contamination, pollution and other activities that seek to degrade or interfere with
11 their existence.

12 **Hazardous Waste Management (3-258: 10-24)**

13 The CGTO finds it necessary to work with all federal
14 agencies on a government-to-government basis and work
15 closely with the Air Force as co-managers to monitor
16 hazardous materials use, disposal and reclamation to
17 preserve the land regardless of future decisions pertaining
18 to land status.

This paragraph provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.6, No Action Alternative.

19 **3.12.2.6.1 Environmental Restoration and Monitoring Programs – Consolidated** 20 **Group of Tribes and Organizations**

21 The NTTR falls within the traditional homelands of the
22 CGTO. The existing and proposed areas must include
23 provisions for involving the CGTO in projects to restore
24 traditional homelands to a condition that is culturally
25 compatible with the CGTO and Air Force mission. The
26 CGTO knows tribal epistemology is based on sustaining the natural ecosystem and the
27 resources provided on the land which in turn give back to all life in the NTTR.

This paragraph 3.12.2.6.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.6, No Action Alternative.

28 In an attempt to sustain environmental restoration and monitoring programs, the CGTO
29 and Air Force must work in tandem as co-managers to restore the land using traditional
30 ecological knowledge to sustain a healthy ecosystem. This collaborative project
31 supports the NTTR mission and can be mutually beneficial for the CGTO and Air Force.

32 **3.12.2.6.1.1 Solid Waste – Consolidated Group of Tribes and Organizations**

33 The CGTO believes the cultural integrity of our traditional
34 homelands is vital to perpetuating and sustaining tribal
35 culture. The CGTO continues to advocate that any waste
36 generated on the NTTR be removed to preserve the
37 cultural integrity and restore balance of the resources
38 within the traditional homelands of the CGTO.

This paragraph 3.12.2.6.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.2.6, No Action Alternative.

1 **3.12.1.1.1 Hazardous Materials and Solid Waste**

2 Although American Indian languages in the NTTR region
3 have no words equivalent to the concepts of radiation and
4 radioactive materials, the term “angry rocks” expresses the
5 cultural perception. American Indians with experience with
6 the NTTR, believe that breaking or disturbing a rock,
7 without accompanying the action with a full explanation, may release the rock’s power
8 and upset its natural balance. This action will “anger” the rock and result in “the creation
9 of a source for cultural anomalies, which upsets the balance of the cultural ecosystem
10 and affects Indian people” (AIWS 1997). American Indians believe that radiation, or the
11 power released by the “angry rock,” can hurt, damage or kill plants, animals, people,
12 water, or the air.

This paragraph 3.12.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.12.1.1, Description of Resource.

13 Indian people believe that past releases of radiation have already contaminated plants
14 and animals used in traditional cultural practices. Some Indians feel they can detect
15 radiation; if an area is determined by whatever means to be contaminated, then Indian
16 people can no longer use its resources.

17 The CGTO remains concerned with other hazardous materials and solid waste found on
18 Nellis and Creech AFB as well as other areas within the boundaries of the NTTR.
19 Transporting hazardous waste and/or other materials can cause long-term effects and
20 disrupt the cultural integrity and ecological balance needed for resources to flourish.

21 **3.13.1.1.1 Health and Safety – Consolidated Group of Tribes and Organizations**

22 The CGTO believes health and safety applies to all living
23 things within the affected environment, including but not
24 limited to: socio economics related to tribal communities;
25 cultural resources; air space; noise; air quality; visual
26 resources; wilderness; biology; earth resources, including
27 geology, soils, minerals; and paleontological resources;
28 and water resources. The CGTO knows equal consideration must be applied to
29 culturally perceived impacts that affect tribal communities and the resources associated
30 with the land on which they rely upon. The health of tribal communities can be impacted
31 by an imbalance in the cultural equilibrium that is derived from the land or its resources
32 within our traditional homelands when it is sick or out of balance. If tribal communities
33 are denied or granted limited access to culturally important areas as prescribed
34 according to traditional protocol, sickness occurs raising health risks. When the land or
35 related resources are disrespected and not treated in culturally appropriate ways, those
36 resources will react, elevating safety concerns for individuals that rely on resources on
37 the NTTR or proposed expansion areas.

This paragraph 3.13.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.13.1.1, Description of Resource.

3.14.1.1.1 Transportation – Consolidated Group of Tribes and Organizations

The CGTO knows transportation resources, include infrastructure required for the movement of people, materials, and goods. This infrastructure within the context of the 2017 LEIS, includes the public roadways and culturally important access points that provide access to and from our homelands, including those on the NTTR.

This paragraph 3.14.1.1.1 provides the Native American perspective regarding the information presented in LEIS Section 3.14.1.1, Description of Resource.

The road and trail network within the NTTR, and include culturally significant songscapes and storyscapes that also fall within the proposed expansion areas. These locations are vital for access areas to sustain cultural equilibrium. When transportation infrastructure is developed or considered to support Air Force activities without CGTO involvement, the potential for inadvertent damage to culturally sensitive resources and locations increases greatly.

Portions of the current road system within the western US is based on ancient pathways developed by Indian people. The Southwestern Desert Trail System was not used for trivial activities, but for important trade, commerce, pilgrimage, and most often for a hasty retreat or pursuit of an enemy in the event of warfare or intrusion. Trails were used to relay important messages to distant tribal groups in times of trouble or when cultural imbalance occurred within the traditional homelands.

In an attempt to minimize potential impacts to trail systems and sustain their cultural integrity, the CGTO and Air Force must work together to exchange information and develop plans based on systematic ethnographic studies designed to evaluate the culturally perceived impacts associated with the effects of transportation.

Tribal governments support safe transportation practices and believe ongoing consultation with tribal governments must occur and include a ethnographic perceived risk study to evaluate cultural implications associated with transportation impacts to culturally sensitive resources and locations. Such studies must be facilitated by a qualified ethnographer and the CGTO. [AIWS 1997].

4.1.4. Cumulative Effects Analysis – Consolidated Group of Tribes and Organizations

The CGTO believes the Cumulative Effects Analysis does not adequately address nor represent the tribal perspectives with respect to effects of impacts on the traditional homelands or impacts to the cultural landscape encompassing the NTTR. No cultural consideration is applied to: Airspace Use and Management 4.4.1; Noise 4.1.4.2; Air Quality 4.1.4.3; Land Use 4.1.4.4 (including Visual Resources); Wilderness and Wilderness Study Area 4.1.4.5; Socioeconomics 4.1.4.6; Environmental Justice 4.1.4.7; Biological Resources

This paragraph 4.1.4 provides the Native American perspective regarding the information presented in LEIS Section 4.1.4, Cumulative Effects.

1 4.1.4.8; Cultural Resources 4.1.4.9; Earth Resources 4.1.4.10; Water Resources
2 4.1.4.11; Hazardous Materials and Solid Wastes 4.1.4.12; Health and Safety 4.1.4.13;
3 and Transportation 4.1.4.14. The CGTO believes that systematic ethnographic studies
4 should be conducted on the aforementioned section to more accurately assess the
5 cultural cumulative effects to these resources.

6 **4.1.4.4.1 Land Use – Consolidated Group of Tribes and Organizations**

7 The CGTO is aware of tribal initiatives within the proposed
8 Region of Influence near the NTTR and proposed land
9 expansion areas that are omitted from consideration. The
10 LEIS fails to mention the Moapa Tribal Enterprises Travel
11 Plaza and Retail Store in addition to the Moapa Southern
12 Paiute Solar Project that lies near Interstate 15 and the proposed Alamos Land
13 Expansion Area within the traditional homelands of the Moapa Band of Paiutes. Further,
14 there is no mention of the Las Vegas Paiute Tribe-Snow Mountain Reservation, which
15 currently operates three 18-hole championship golf courses, a gas station and a retail
16 smoke shop and is planning an 800-acre solar project located on the southwest corner
17 of the tribal lands nearby US 95 and within close proximity to Creech Air Force Base.
18 The Las Vegas Paiute Tribe-Snow Mountain Reservation is adjacent to the Desert
19 National Wildlife Refuge encompassing the proposed Alternative 3C Alamo land
20 expansion areas.

This paragraph 4.1.4.4.1 provides the Native American perspective regarding the information presented in LEIS Section 4.1.4.4, Land Use.

21 **4.1.4.9.1 Cultural Resources – Consolidated Group of Tribes and Organizations** 22 **(page 4-24 (8))**

23 The LEIS indicates there are 2,889 cultural resource
24 locations (prehistoric, historic and ethnographic) currently
25 on the NTTR. The CGTO believes this universal definition
26 of cultural resources applies only to the following:

This paragraph 4.1.4.9.1 provides the Native American perspective regarding the information presented in LEIS Section 4.1.4.9, Cultural Resources.

27 *prehistoric and historic sites, structures, artifacts and any other physical or traditional*
28 *evidence of human activity considered relevant to a particular culture or community for*
29 *scientific, traditional, religious or other reasons to the evaluation.* This interpretation
30 does not account for intangible traditional and religious areas or culturally sensitive
31 resources that are integral to Native American epistemology but not understood by
32 archaeologists. Equally, geologic formations may be embedded in traditional or religious
33 activities that are often overlooked and consequently not considered in any analysis.

34 Lastly, no systematic ethnographic studies have been conducted that are designed to
35 identify, document and understand culturally sensitive resources or locations within the
36 proposed land expansion of Alternatives 3 A near Beatty, NV or 3C in the Alamos. In an
37 attempt to gain a better understanding, the University of Arizona initiated scoping
38 meetings in September 2017 as part of expanded ethnographic studies to document

1 tribal perspectives that can contribute to baseline data for analyzing perceived impacts
2 within the proposed land expansion areas. While the study is underway and will not be
3 completed to fully understand the cultural impacts, the Native American Writers are
4 unable to provide a systematic review and analysis of the findings of the study.

5 **Mitigation**

6 Indian people bring a unique perspective based on our traditional ecological knowledge,
7 which guides us on how and where to interact with the land and its resources. In an
8 attempt to minimize impacts to these precious resources, the CGTO continuously
9 strives to maintain a delicate balance of the land while sustaining its spiritual integrity.
10 According to tribal elders, *“Indian people have the conviction that the ecology of the*
11 *natural environment is inter-connected. We have been blessed from the beginning of*
12 *creation as having a unique understanding of being good stewards, and a clear path to*
13 *care for the land and its resources. The songs, stories, traditions, and customs provide*
14 *the foundation for this conviction. It is like the world is a huge stage and there are many*
15 *cast members using their roles to create a successful event.”*

16 The CGTO supports culturally appropriate resource management strategies for the
17 NTTR based on traditional Indian perspectives and ecological knowledge. The CGTO's
18 long-term objective is to enhance existing government-to-government relationships
19 through innovative approaches for expanding co-management opportunities for bringing
20 the NTTR lands into balance. The CGTO believes the existing relationship with the Air
21 Force is built on transparency and trust that promotes positive interactions.

22 One example of integrating tribal views is in the Installation Cultural Resources
23 Management Plan (ICRMP) that serves as a framework for the Air Force to manage
24 cultural resources on the NTTR. The CGTO believes a blended approach that
25 incorporates two world views will provide a better understanding of cultural perspectives
26 through progressive management strategies. In turn, this collaboration will promote
27 awareness and understanding of culturally sensitive resources and management
28 strategies that are mutually beneficial for the Air Force and the culturally affiliated tribes.
29 The CGTO understands the ICRMP is a dynamic, living document that requires periodic
30 evaluation and updates. Accordingly, the CGTO recommends the Air Force use the
31 CGTO Document Review Committee to evaluate the draft ICRMP before the plan is
32 approved and implemented. Further, the Air Force must continue to hold mid-year and
33 annual tribal update meetings to provide opportunities to discuss current and proposed
34 activities on the NTTR, as well as periodic updates on the ICRMP, mitigation measures
35 associated with adverse impacts, along with the supporting opportunities for field
36 observations.

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1 property and the lives and property of passengers in the stages and of the
2 employes (sic) of the respective companies, shall be protected by them. And
3 further, it being understood that provision has been made by the government of
4 the United States for the construction of a railway from the plains west to the
5 Pacific ocean (sic), it is stipulated by the said bands that the said railway or its
6 branches may be located, constructed, and operated, and without molestation
7 from them, through any portion of country claimed or occupied by them.

8 ARTICLE 4.

9 It is further agreed by the parties hereto, that the Shoshonee country may be
10 explored and prospected for gold and silver, or other minerals; and when mines are
11 discovered, they may be worked, and mining and agricultural settlements formed,
12 and ranches established whenever they may be required. Mills may be erected and
13 timber taken for their use, as also for building and other purposes in any part of the
14 country claimed by said bands.

15 ARTICLE 5.

16 It is understood that the boundaries of the country claimed and occupied by said
17 bands are defined and described by them as follows:
18 On the north by Wong-goga-da Mountains and Shoshonee River Valley; on the
19 west by Su-non-to-yah Mountains or Smith Creek Mountains; on the south by Wi-
20 co-bah and the Colorado Desert; on the east by Po-ho-no-be Valley or Steptoe
21 Valley and Great Salt Lake Valley.

22 ARTICLE 6.

23 The said bands agree that whenever the President of the United States shall deem
24 it expedient for them to abandon the roaming life, which, they now lead, and
25 become herdsmen or agriculturalists, he is hereby authorized to make
26 such reservations for their use as he may deem necessary within the country above
27 described; and they do also hereby agree to remove their camps to such
28 reservations as he may indicate, and to reside and remain therein.

29 ARTICLE 7.

30 The United States, being aware of the inconvenience resulting to the Indians in
31 consequence of the driving away and destruction of game along the routes
32 travelled by white men, and by the formation of agricultural and mining
33 settlements, are willing to fairly compensate them for the same; therefore, and in
34 consideration of the preceding stipulations, and of their faithful observance by the
35 said bands, the United States promise and agree to pay to the said bands of the

1 Shoshonee nation parties hereto, annually for the term of twenty years, the sum of
2 five thousand dollars in such articles, including cattle for herding or other purposes,
3 as the President of the United States shall deem suitable for their wants and
4 condition, either as hunters or herdsmen. And the said bands hereby acknowledge
5 the reception of the said stipulated annuities as a full compensation and equivalent
6 for the loss of game and the rights and privileges hereby conceded.

7 ARTICLE 8.

8 The said bands hereby acknowledge that they have received from said
9 commissioners, provisions and clothing amounting to five thousand dollars as
10 presents at the conclusion of this treaty.

11 Done at Ruby Valley the day and year above written.

12 James W. Nye.

13 James Duane Doty.

14 Te-moak, his x mark.

15 Mo-ho-a.

16 Kirk-weedgwa, his x mark.

17 To-nag, his x mark.

18 To-so-wee-so-op, his x mark.

19 Sow-er-e-gah, his x mark.

20 Po-on-go-sah, his x mark.

21 Par-a-woat-ze, his x mark.

22 Ga-ha-dier, his x mark.

23 Ko-ro-kout-ze, his x mark.

24 Pon-ge-mah, his x mark.

25 Buck, his x mark.

26 Witnesses:

27 *J.B. Moore, lieutenant-colonel Third Infantry California Volunteers.*

28 *Jacob T. Lockhart, Indian agent Nevada Territory.*

29 *Henry Butterfield, interpreter.*

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1 Memoranda listed in Attachment 1. This AFI applies to all Air Force (AF) installations within the
2 United States, Headquarters United States Air Force (HQ USAF), major commands (MAJCOMs),
3 the Air Force Reserve Command (AFRC), direct reporting units (DRUs), field- operating agencies
4 (FOAs), and Government-Owned, Contractor-Operated (GOCO) facilities, including those not
5 located on AF installations. For the purposes of this AFI, AFRC will operate as a MAJCOM. The
6 National Guard Bureau (NGB) will support the intent of this AFI by preparing an appropriate
7 policy document reflecting its unique legal status and structure, as recognized by the reserve
8 component authorities of Title 10 of the United States Code, Air Force Doctrine and other
9 governing authorities. MAJCOMs and GOCOs, DRUs and FOAs may supplement this Instruction.
10 MAJCOMs, FOAs, and DRUs must send a draft copy of their proposed supplement to HQ USAF
11 Office of the Director of Civil Engineers (HQ USAF/A4C) for coordination; all other component
12 commands excluding NGB send one copy of each supplement to Assistant Secretary of the Air
13 Force, Environment, Safety and Infrastructure (SAF/IEE). The authorities to waive wing/unit
14 level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number
15 following the compliance statement. See AFI33-360, Publications and Forms Management, for a
16 description of the authorities associated with the Tier numbers. Submit requests for waivers
17 through the chain of command to the appropriate Tier waiver approval authority, or
18 alternately, to the Publication OPR for non-tiered compliance items. Ensure that all records
19 created as a result of processes prescribed in this publication are maintained IAW Air Force
20 Manual (AFMAN) 33-363, Management of Records, and disposed IAW Air Force Records
21 Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer
22 recommended changes and questions about this publication to the Office of Primary
23 Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route
24 AF Form 847s from the field through the appropriate functional chain of command.

25 Chapter 1

26 PROGRAM OVERVIEW

27 1.1. Purpose of this AFI. This AFI addresses fundamentals of policy, responsibilities, and
28 essential procedures. It is intended to implement DoDI 4710.02, DoD Interactions with
29 Federally-Recognized Tribes, which supports the unique trust relationship the U.S. government
30 has with tribes and emphasizes aspects of the Air Force’s mission that may affect tribes.
31 Detailed guidance on installation level procedures will be provided in adaptable tools such as
32 the AF’s Civil Engineer Process Playbooks and AF Operational Airspace Instructions.

33 1.2. Definitions. Clear understanding of terminology associated with interaction with tribes is
34 essential. Important terms include the following:

35 1.2.1. Commander. Military O-6 (or above) or equivalent civilian leader of the installation, wing,
36 or other AF organization with the authority to enter into agreements with tribes on
37 installation/organization actions that affect those tribes.

- 1 1.2.2. Indian Lands. Any lands the title to which is either, (1) held in trust by the United States
2 for the benefit of any Indian tribe or Individual, or, (2) held by an Indian tribe or Individual as
3 defined by DoDI 4710.02 and Title 32 Code of Federal Regulations (CFR) Part 229.3(f),
4 Protection of Archaeological Resources, Definitions, 1 July 2011.
- 5 1.2.3. Tribe. A federally-recognized Indian or Alaska Native tribe, band, nation, pueblo, village,
6 or community that the Secretary of Interior published in the Federal Register pursuant to the
7 Federally Recognized Indian Tribe List Act of 1994, as amended, Title 25 United States Code
8 (USC) Section 479a.
- 9 1.2.4. Protected Tribal Resources. Those natural resources and properties of traditional or
10 customary religious or cultural importance, either on or off Indian lands, retained by or
11 reserved by or for Indian tribes through treaties, statutes, judicial decisions, or Executive
12 Orders, including tribal trust resources.
- 13 1.2.5. Tribal Rights. Those rights legally accruing to a tribe or tribes by virtue of inherent
14 sovereign authority, un-extinguished aboriginal title, treaty, statute, judicial decision, Executive
15 Order, or agreement, and that give rise to legally enforceable remedies.
- 16 1.2.6. Government-to-Government. The relationship between federally-recognized tribes and
17 the United States is one between sovereigns, i.e., between a government and a government.
- 18 1.2.7. Consultation. Primarily, a process involving regular meetings, preferably face-to-face,
19 supplemented by written, telephone, and electronic communications about issues and
20 concerns important to the parties involved. Consultation involving tribes is most effective when
21 based on respect, trust, and strong relationships between Air Force leaders and tribal leaders. It
22 is a dynamic, ongoing dialogue including face-to-face communication at both technical and
23 leadership levels, and not necessarily driven by a single need or issue. Achieving consensus,
24 when possible, is a major goal. Legal requirements often prompt specific consultation efforts,
25 resulting in formal agreements.
- 26 1.3. Policy. It is AF policy to:
- 27 1.3.1. Take into consideration the significance that tribes place on protected tribal resources.
- 28 1.3.2. Meet responsibilities to tribes as derived from federal trust doctrine, treaties, and
29 agreements between the United States Government and tribal governments, and comply with
30 federal laws and regulations, Executive Orders, and Presidential Memoranda governing
31 interactions with tribes.
- 32 1.3.3. Build stable and enduring government-to-government relations with federally-
33 recognized tribal governments in a manner that sustains the AF mission and minimizes effects
34 on protected tribal resources and activities.

1 1.3.4. Fully integrate, down to staff officers and civilian staff personnel at the installation level,
2 the principles and practices of meaningful consultation and effective cross-cultural
3 communication with tribal representatives.

4 1.4. General.

5 1.4.1. An Installation Commander's role is similar to that of an ambassador and sets the tone
6 for discussions geared towards building relationship between and of mutual benefit to the Air
7 Force and tribes.

8 1.4.2. Face-to-face engagement with tribes will be facilitated by development of formal
9 agreements identifying mutual goals and general protocols, and/or other formal issue-based
10 agreements. The primary goal of such agreements is to foster relationships aimed at facilitating
11 AF missions while respecting issues of importance to tribes.

12 1.4.3. Installations will consult with tribes early in the planning process when a proposed action
13 may have the potential to significantly affect protected tribal resources, tribal rights, or Indian
14 Lands (e.g., Title 32 CFR Part 989, the Environmental Impact Analysis Process, 20 June 2014).
15 Matters of interest to tribes as well as protocols will be established in advance of the need for
16 issue-based consultation between installation and tribal leaders.

17 1.4.4. Installations will provide regular updates to and seek feedback from interested and/or
18 potentially affected tribes regarding ongoing activities of the installation where such activities
19 might affect protected tribal resources, tribal rights, or Indian Lands.

20 1.5. Activities Typically Involving Tribes.

21 1.5.1. AF planning actions that may affect tribes include, but are not limited to (a) land-
22 disturbing activities, (b) construction, (c) training, (d) over-flights, (e) management and
23 protection of properties of traditional religious and cultural importance including historic
24 properties and sacred sites, (f) activities involving access to sacred sites, (g) disposition of
25 cultural/funerary items in accordance with the Native American Graves Protection and
26 Repatriation Act (NAGPRA), (h) natural resources management activities, (i) educational and
27 public affairs activities linked to tribal topics, and (j) other land use/military airspace operations
28 in general.

29 1.5.2. Installations are required to develop and maintain an Integrated Cultural Resources
30 Management Plan (ICRMP) per AFI 32-7065, Cultural Resources Management Program. Tribes
31 having a historic or cultural affiliation with lands addressed by an installation's ICRMP or
32 otherwise attaching religious and cultural importance to historic properties or sacred sites
33 covered by the ICRMP will be provided opportunities to consult on and participate in the
34 development and maintenance of the ICRMP. Additionally, since most tribes attribute cultural
35 significance to natural resources, tribes should be briefed on the content of the natural
36 resources program, and provided the opportunity to consult on and participate in, as

1 appropriate, update or development of Integrated Natural Resource Management Plans
2 (INRMPs), AFI 32-7064, Natural Resource Management Program in accordance with the
3 Installation Tribal Relations Plan. The ICRMP will include an appended Installation Tribal
4 Relations Plans (ITRP) and/or copies of formal written agreements (Memoranda of
5 Understandings, Comprehensive Agreements, Programmatic Agreements, etc.).

6 Chapter 2

7 ROLES AND RESPONSIBILITIES

8 2.1. The Assistant Secretary of the Air Force for Installations, Environment, & Energy (SAF/IE)
9 through the Deputy Assistant Secretary of the Air Force for Environment, Safety &
10 Infrastructure (SAF/IEE) shall:

11 2.1.1. Serve as the principal AF representative on all tribal-related issues with the Office of the
12 Secretary of Defense (OSD) staff, other federal agencies, and Congress.

13 2.1.2. Serve as, or appoint, an AF Tribal Liaison Officer (AFTLO) who is the OPR for the AF Tribal
14 Relations Program and advocate within the Air Force Corporate Structure for tribal relations
15 resources.

16 2.1.3. Provide guidance, direction, and oversight for all matters pertaining to the formulation,
17 review, and execution of plans, policies, programs, and budgets related to Air Force
18 government-to-government tribal interaction.

19 2.1.4. Delegate authority to the HQ USAF/A4C and all other component commands including
20 ANG for tribal program execution management.

21 2.1.5. Enhance AF organizational understanding of tribal issues through education, training
22 programs and outreach activities.

23 2.1.6. Oversee AF implementation of, and compliance with, this Air Force Instruction (AFI).

24 2.2. The Air Force Tribal Liaison Officer (AFTLO) shall:

25 2.2.1. Promptly notify higher headquarters concerning tribal issues that have the potential to
26 be elevated.

27 2.2.2. Coordinate policy and best practices with other federal agencies and tribal organizations,
28 as appropriate, on tribal issues of regional and national scope.

29 2.2.3. Engage in government-to-government relations with federally-recognized tribes, as
30 appropriate, when requested by installations, installation support teams (ISTs), or tribes.
31 Consult in a time and manner responsive to stakeholder interests and means.

- 1 2.2.4. Identify a single installation that will serve as the designated Point of Contact (POC) for a
2 tribe in cases where more than one installation manages airspace over a specific tribe's land,
3 for that airspace activity.
- 4 2.2.5. Ensure installation commanders receive appropriate senior level training that highlights
5 tribal history, laws, treaties, and government-to-government consultation requirements and
6 techniques.
- 7 2.2.6. Honor treaties and implement trust relationships.
- 8 2.2.7. Work with non-federally-recognized tribes and interest groups, when appropriate.
- 9 2.2.8. Integrate the requirements of federal laws and regulations, Executive Orders, and
10 Presidential Memoranda, regarding AF interactions with tribes into AFIs and guidance.
- 11 2.2.9. Issue specific guidance regarding training and funding opportunities pertinent to this AFI.
- 12 2.2.10. Review and approve Commanders' requests for alternate ITRP to deviate from
13 conducting twice-yearly face-to-face meetings with tribal leaders.
- 14 2.3. The Director, Public Affairs, (SAF/PA) shall:
- 15 2.3.1. Develop Air Force strategic messaging on tribal relations in coordination with the AFTLO.
- 16 2.3.2. Assist AF organizations in developing cross-cultural communication opportunities.
- 17 2.3.3. Develop mechanisms to coordinate communication between tribal leadership,
18 installations, and headquarters leadership with AFTLO.
- 19 2.4. The Deputy Chief of Staff for Operations, Plans and Requirements (AF/A3/5) shall:
- 20 2.4.1. Incorporate the policies of this Instruction into AF operational instructions when
21 installation, airspace and/or range operations may affect tribal lands, rights, resources or
22 interests.
- 23 2.5. The Air Force General Counsel, Installations, Energy and Environmental Law (SAF/GCN) and
24 the Air Force Legal Operations Agency, Environmental Law Field Support Center (AFLOA/JACE-
25 FSC) shall:
- 26 2.5.1. Provide legal counsel to all AF organizations concerning the application of Indian treaties,
27 Indian case law, and DoD policies to AF plans, activities and operations.
- 28 2.5.2. Assist AF organizations in identifying and complying with requirements of federal laws
29 and regulations, Executive Orders, and Presidential Memoranda governing interactions with
30 tribes.

1 2.5.3. Provide subject-matter expertise and assistance to installation legal offices on issues
2 involving American Indian and Alaskan Native tribes.

3 2.6. The Deputy Chief of Staff for Logistics, Installations and Mission Support (AF/A4) through
4 the Office of the Air Force Director of Civil Engineers (AF/A4C) shall:

5 2.6.1. Plan, program, and budget for statutory and regulatory requirements applicable to
6 interactions with tribes within available resources.

7 2.6.2. Develop and implement the AF Tribal Relations Program to monitor, achieve, and
8 maintain compliance with this Instruction, including compliance by installations and their
9 tenant activities. The AF Tribal Relations Program will specify how the AF will coordinate or
10 consult with tribes for various kinds of actions, at different scales of complexity.

11 2.6.3. Prepare and issue guidance for executing tribal relations program policy and
12 supplemental guidance; advocate for resources; and oversee execution of tribal relation
13 programs and management requirements throughout the AF.

14 2.6.4. Review and forward Commanders' requests for alternate ITRP to deviate from conducting
15 twice-yearly face-to-face meetings with tribal leaders to AFTLO for final approval.

16 2.6.5. Provide installation Annual Report to the AFTLO.

17 The Air Force Civil Engineer Center (AFCEC) shall:

18 2.7.1. Assist Commanders in identifying tribes with historic or cultural affiliation with lands
19 controlled, used or overflowed by the AF.

20 2.7.2. Direct and oversee the development and maintenance of ITRPs at AF installations.

21 2.7.3. Develop and provide subject matter experts (SMEs) for installations and reach-back
22 support to HAF and MAJCOMs.

23 2.7.4. Provide support to installations concerning compliance with inventory, reporting,
24 curation, disposal, and notification procedures according to federal laws.

25 2.7.5. Ensure installation pre-publication NAGPRA notices are coordinated through the IST to
26 the AF Cultural Resources SME and AFLOA/JACE-FSC.

27 2.7.6. Develop metrics and evaluate implementation of installation tribal programs where tribal
28 interests or resources may be affected.

29 2.7.7. Ensure tribal relations lesson learned and best practices are institutionalized throughout
30 the AF.

- 1 2.7.8. Provide training to installation personnel on tribal culture, history, laws, and treaties, as
2 well as access, use and privacy issues that may be affected by AF operations, such as low- level
3 flights and access to sacred sites.
- 4 2.7.9. Assist installation personnel in developing information on cross-functional education and
5 economic opportunities that can be shared with tribes.
- 6 2.7.10. Coordinate with installations on alternate ITRPs and Annual Reports.
- 7 2.8. Major Commands (MAJCOMs) shall:
 - 8 2.8.1. Oversee implementation of ITRPs and provide MAJCOM specific guidance to their
9 installations, as appropriate.
 - 10 2.8.2. Review Commanders' requests for alternate ITRP to deviate from conducting twice-
11 yearly face-to-face meetings with tribal leaders and forward to AF/A4C for AFTLO final
12 approval.
 - 13 2.8.3. Provide installation Annual Report through AF/A4C to the AFTLO.
- 14 2.9. Installation Commanders (or designated O-6 representative or equivalent civilian leader,
15 empowered to make decisions for the commander) shall:
 - 16 2.9.1. Conduct at least twice-yearly face-to-face meetings to establish mutually beneficial
17 relationships with tribal leaders, and to periodically discuss installation or tribal issues of
18 interest. If conducting twice-yearly face-to-face meetings with tribal leaders is not practical, the
19 Commander shall develop an alternate ITRP to meet the intent of this Instruction, coordinate
20 with AFCEC CZ, and submit through the MAJCOM and AF/A4C to the AFTLO for final approval.
21 (T-0).
 - 22 2.9.2. Personally initiate consultation when first contacting tribes. Follow-on interaction shall be
23 at a level and using procedures agreed upon by the installation commander and tribal
24 leadership. (T-0).
 - 25 2.9.3. Involve tribal governments early in the planning process for proposed actions that may
26 have the potential to significantly affect protected tribal rights, land, or resources. (T-0).
 - 27 2.9.4. Designate a military or civilian government employee as the Installation Tribal Liaison
28 Officer (ITLO), trained commensurate with the responsibilities of the position, to interface
29 between senior leadership and other staff across the installation. (T-0).
 - 30 2.9.5. Ensure that proponents of actions on installation lands or in installation-managed
31 airspace coordinate tribal issues with the host installation in order to identify and address tribal
32 concerns early in the planning process. (T-0).

- 1 2.9.6. Review and provide an Annual Report coordinate with AFCEC CZ, and submit through the
2 parent MAJCOM and AF/A4C, to the AFTLO, within 90 days following the end of the fiscal year.
3 (T-0).
- 4 2.10. The ITLO shall:
- 5 2.10.1. Develop and oversee the implementation of the ITRP in accordance with this Instruction
6 and supplementary guidance. (T-1).
- 7 2.10.2. Identify, in consultation with tribal leaders, a tribal representative to work routine
8 issues. (T-3).
- 9 2.10.3. Coordinate with the installation Small Business Director to increase local tribal
10 awareness of Small Business Administration and Business Development Program opportunities,
11 for example requirements for prequalification of tribal firms, etc. (T-0).
- 12 2.10.4. Verify tribes having a historic or cultural affiliation with installation-controlled lands or
13 lands under its managed airspace are identified. (T-1).
- 14 2.10.5. Ensure compliance with the installation/tribal written agreement whenever a planned
15 action has the potential to significantly affect protected tribal resources, tribal rights, or Indian
16 lands. (T-1).
- 17 2.10.6. Ensure the ICRMP describe appropriate tribal consultation protocols. Summarize and
18 reference protocols in the INRMP, as appropriate. (T-0).
- 19 2.10.7. Ensure the installation involves tribes in early planning for actions analyzed under the AF
20 Environmental Impact Analysis Process (EIAP). (T-0).
- 21 2.10.8. Educate installation personnel who conduct activities that may affect tribal lands or
22 resources to understand local tribal issues and rights, which may be affected by military plans,
23 activities or operations. (T-0).
- 24 2.10.9. Ensure tribes with historic or cultural affiliations with lands and resources managed by
25 the installation have opportunities to consult in and/or participate in the development and
26 maintenance of the ICRMP and INRMP. (T-0).
- 27 2.10.10. Work with the Installation Cultural Resources Manager and AFCEC specialists to
28 consider and strive to protect cultural resources of concern to tribes. (T-0).
- 29 2.10.11. Work with the installation organizations to ensure information on the locations of
30 sensitive archaeological resources, traditional tribal places, and sacred sites are not disclosed to
31 the general public. (T-0).

1 2.10.12. Prepare an Annual Report for the Installation Commander and report on any other
2 ITRP activities. (T-1).

3 2.10.13. Provide to tribes, upon request, information on acquiring surplus equipment and
4 personal property, through the Defense Logistics Agency (DLA), Reutilization, Transfer and
5 Donation (R/T/D) program. (T-1).

6 2.11. The Installation Staff Judge Advocate shall:

7 2.11.1. Advise the installation commander on relationships with Indian tribes and legal
8 requirements for consultation, when requested. (T-3).

9 2.11.2. Seek assistance from AFLOA/JACE-FSC in resolving new or complex issues requiring a
10 high level of legal expertise. (T-3).

11 2.12. The Installation Contracting Activity, with assistance as necessary from the Air Force
12 Installation Contracting Agency (AFICA), shall:

13 2.12.1. Coordinate with the appropriate AF entities [e.g. SAF Small Business (SAF/SB) and SAF
14 Acquisition (SAF/AQ)] to ensure that the installation is well informed on programs and
15 opportunities of potential interest to tribes. (T-1).

16 2.12.2. Make information available for distribution to tribes on contracting opportunities,
17 grants, and cooperative agreements available to Indian tribes, Native American Corporations,
18 and Indian-owned enterprises. (T-1).

19 2.12.3. Ensure contracts include Defense Federal Acquisition Regulation Supplement (DFARS)
20 clause 252.226-7001, when required by DFARS 226.1. This clause implements the DOD Indian
21 Incentive Program, which is designed to generate business for Indian-Owned Economic
22 Enterprises and Indian Organizations. (T-1).

23 2.13. The Installation Force Support Squadron shall:

24 2.13.1. Provide to tribes, upon request, information on education, training, and employment
25 opportunities. (T-1).

26 Chapter 3

27 REPORTING REQUIREMENTS

28 3.1. Annual Report. Coordinating through the parent MAJCOM and AF/A4C, each Installation
29 Commander shall submit a report on all tribal relations activities from the previous fiscal year.
30 This report is due within 90 days following the end of the fiscal year. See Attachment 2 for
31 report format and content. (T-0).

- 1 Effective Date: This AFI is effective immediately.
- 2 MIRANDA A. A. BALLENTINE Assistant Secretary of the Air Force (Installations, Environment,
3 and Energy)
- 4 Attachment 1
- 5 GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION
- 6 References
- 7 NOTE: The user of this instruction is responsible for verifying the currency of the cited
8 documents.
- 9 25 USC §479a, Federally Recognized Indian Tribe List Act of 1994, Definitions, 2006 Edition,
10 Supplement 4
- 11 25 USC §1544, Indian Financing Act of 1974, Additional compensation to contractors of Federal
12 agency, 2006 Edition, Supplement 3
- 13 32 CFR Part 229, Protection of Archaeological Resources: Uniform Regulations, 1 July 2001 32
14 CFR Part 989, Environmental Impact Analysis Process (EIAP), 20 June 2014
15 FAR Part 26, Federal Acquisition Regulations, Other Socioeconomic Programs, 29 May 2014 EO
16 13175, Consultation and Coordination with Indian Tribal Governments, 6 November 2000 DoDI
17 4710.02, DoD Interactions with Federally-Recognized Tribes, 14 September 2006 AFD 32-90,
18 Encroachment Management Program, 12 April 2012
- 19 AFGM 2014-90-1, Government-to-Government Relations with Federally-Recognized Tribes, 18
20 July 2014
- 21 AFI 32-7065, Cultural Resources Management Program, 1 June 2004
22 AFI 32-7064, Integrated Natural Resources Management, 17 September 2004 AFI 33-360,
23 Publications and Forms Management, 25 September 2013 AFMAN 33-363, Management of
24 Records, 1 March 2008
- 25 Abbreviations and Acronyms
- 26 ACHP—Advisory Council on Historic Preservation AFI—Air Force Instruction
- 27 AFLOA/JACE/FSC—Air Force Legal Operations Agency, Environmental Law Field Support Center
- 28 AFTLO—Air Force Tribal Liaison Officer ARPA—Archaeological Resources Protection Act of 1979
29 CFR—Code of Federal Regulations
30 Council—Advisory Council on Historic Preservation CRM—Cultural Resources Manager EIAP—
31 Environmental Impact Analysis Process EO—Executive Order

- 1 FAR—Federal Acquisition Regulations FR—Federal Register
- 2 HQ USAF A4—Headquarters, The Deputy Chief of Staff for Logistics, Installations and Mission
- 3 Support
- 4 AF/A4C—Air Force Director of Civil Engineers
- 5 HQ AFCEC—Headquarters, Air Force Civil Engineer Center
- 6 HQ USAF—Headquarters, United States Air Force
- 7 ICRMP—Integrated Cultural Resources Management Plan
- 8 IST—Installation Support Team
- 9 ITLO—Installation Tribal Liaison Officer
- 10 ITRP—Installation Tribal Relations Plan
- 11 MAJCOM—Major Command
- 12 NAGPRA—Native American Graves Protection and Repatriation Act of 1991
- 13 NEPA—National Environmental Policy Act of 1969
- 14 NHPA—National Historic Preservation Act of 1966
- 15 POC—Point of Contact
- 16 SAF/GCN—Air Force General Counsel, Installations, Energy and Environmental Law
- 17 SAF/IE—Assistant Secretary of the Air Force for Installations, Environment, and Energy
- 18 SAF/IEE—Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure
- 19 SHPO—State Historic Preservation Officer SME—Subject Matter Expert THPO—Tribal Historic
- 20 Preservation Officer USC—United States Code
- 21 Terms
- 22 NOTE: The purpose of this glossary is to help the reader understand the terms used in this
- 23 publication. It does not encompass all pertinent terms. Terms defined below are also contained
- 24 in AFI 32—7065, Cultural Resources Management Program.

1 Advisory Council on Historic Preservation (Council or ACHP)— The independent federal agency
2 charged by the NHPA, as amended to advise the President, Congress, and federal agencies on
3 matters related to historic preservation. The Council also administers and implements the
4 Section 106 consultation process of the NHPA through Title 36 CFR Part 800, Protection of
5 Historic Properties. 12 December 2000

6 Archaeological Resources—Any material remains of past human life or activities that are
7 capable of providing scientific or humanistic understandings of past human behavior and
8 cultural adaptation through the application of scientific or scholarly techniques such as
9 controlled observation, contextual measurement, controlled collection, analysis, interpretation,
10 and explanation (see ARPA and 32 CFR Part229.3).

11 Area of Potential Effect (APE)—The land area an undertaking has the potential to affect. The
12 APE includes the footprint of the proposed project, and areas around the footprint that might
13 be affected by visual, auditory, erosional, and other direct and indirect results of the
14 undertaking.

15 Comprehensive Agreement (CA)—An agreement between a federal agency and an Indian Tribe
16 affiliated with NAGPRA remains or cultural objects, concerning all agency land management
17 activities that could result in the intentional excavation or inadvertent discovery of Native
18 American human remains, funerary objects, sacred objects, or objects of cultural patrimony.
19 The CA should establish procedures for consultation, treatment, and disposition of NAGPRA
20 remains or cultural objects likely to be found during any undertaking or action on agency lands
21 [per Title 43 CFR Part10.5(f), NAGPRA, Consultations, 1 October 2008]. The signed agreement,
22 or correspondence related to efforts to reach agreement, constitute proof of consultation. A
23 Contingency Plan of Action is similar to a CA, but deals only with NAGPRA remains and objects
24 likely to be discovered during a specific undertaking or action. Tribal and agency officials (e.g.,
25 the installation commander) must sign CAs, but only the agency official signs Plans of Action
26 [per Title 43 CFR Part 10.5(e)].

27 Consulting Parties—In accordance with Title 36 CFR Part 800.2(c), SHPOs (and THPOs acting in
28 lieu of SHPOs on matters affecting tribal lands), Indian Tribal governments, and the ACHP (when
29 it chooses to participate) have consulting roles in the NHPA Section 106 process. Optional
30 participants include representatives of local governments; applicants for federal assistance,
31 permits, licenses, and other approvals; and members of the public with interests in the
32 undertaking.

33 Curation—The process of managing and preserving an archaeological collection of artifacts and
34 records according to professional museum and archival practices, as defined in Title 36 CFR
35 Part79, National Park Service. Refer to Legacy Resource Management Program Office, Legacy
36 Project No. 98-1714, Guidelines for the Field Collection of Archaeological Materials and
37 Standard Operating Procedures for Curating Department of Defense Archaeological
38 Collections," available through the DENIX and AFCEC websites.

1 Installation Tribal Relations Plan (ITRP)— The ITRP outlines the approach installations will use to
2 establish long-term relationships between the Air Force, specific to a given installation’s
3 mission, and tribes. This AFI gives flexibility to installations to develop their own ITRP for
4 building and maintaining tribal relationships. The Government-to-Government Desk Guide for
5 Native American & Alaska Native Tribal Governments and the U.S. Department of Defense
6 published in 2007 includes information, in Section III, on a tool which can be used as a template
7 for the ITRP and working on a government-to-government basis with the tribes. At a minimum,
8 the ITRP should include (1) how the installation plans to reach out to identified federally-
9 recognized tribes with historic or cultural affiliation to installation lands; (2) specific details on
10 how the installation plans to address areas of concern for tribes; (3) how the installations plans
11 to maintain tribal relationships between regularly scheduled twice-yearly face-to-face
12 meetings; (4) a standard process for consultation whenever issues arise between the tribe(s)
13 and the installations; and (5) a list of current tribal government points of contact.

14 Integrated Cultural Resources Management Plan (ICRMP)—A document prepared by each DoD
15 installation that describes how it defines the procedures and outlines plans for managing
16 cultural resources on that installation. ICRMPs must contain the information required by DoDI
17 4715.16, Enclosure 6.

18 State Historic Preservation Officer (SHPO)—The official appointed by the Governor of each
19 State and territory to carry out the functions defined in the NHPA, and to administer the State
20 Historic Preservation Program. SHPOs provide advice and assistance to federal agencies
21 regarding their Cultural Resources Management programs and historic preservation
22 responsibilities. Throughout this AFI, SHPO is understood to mean THPO where consulting a
23 designated THPO is appropriate.

24 Tribal Historic Preservation Officer (THPO)—The official appointed by an Indian Tribe in
25 accordance with the NHPA to administer the Tribal Historic Preservation Program and assume
26 duties and functions for tribal lands similar to those that the SHPO has for State lands. The
27 Secretary of Interior designates tribes with THPO responsibilities. Air Force installations must
28 consult with the THPO, instead of the SHPO, on undertakings on or over Indian tribal lands
29 where a Tribe has been granted THPO responsibilities by the Secretary of the Interior.

30 Attachment 2 INSTALLATION COMMANDER’S

31 ANNUAL REPORT ON TRIBAL RELATIONS

32 SECTION 1: INSTALLATION TRIBAL RELATIONS PLAN

33 1a. Does the installation have an Installation Tribal Relations Plan (ITRP)? Yes/No If yes, is this
34 an alternate ITRP? Yes/No
35 If no ITRP, please provide explanation.

1 1b. Has the ITRP been updated in the last 6 months? Yes/No
2 If yes, highlight any major changes from the previous ITRP. If no, please provide the date of the
3 last update.

4 1c. Has the installation designated an Installation Tribal Liaison Officer (ITLO)? Yes/No If yes,
5 please provide the ITLO contact information (Name, Rank/Civilian, Phone, Email).
6 If no, please provide explanation.

7 SECTION 2: GENERAL INFORMATION

8 2a. Has the installation identified any tribes with historic or cultural affiliation with lands
9 controlled, used, or overflowed by the AF? Yes/No

10 If yes, please provide the number of tribes identified.
11 If no, please provide an explanation as to why no tribes have been identified.

12 2b. Has the installation identified any other tribal interests related to installation activities
13 within the last year? Yes/No

14 If yes, please identify the relevant tribes and the nature of their interests.

15 2c. Did the installation identify any new tribes within the last year? Yes/No
16 If yes, please provide additional information on the tribe (i.e., Name of Tribe, Address, Tribal
17 Point of Contact Name, Phone Number)

18 2d. Does the installation have a map of its airspace and activity areas in relation to tribal lands
19 or tribal use areas? Yes/No

20 If yes, when was the map last updated? If no, please provide an explanation.

21 SECTION 3: CORRESPONDENCE

22 3a. Did the installation commander (or designated O-6 representative) conduct meetings with
23 tribal leaders during the past year? Yes/No

24 If yes, how many meetings were conducted?

25 3b. Did the installation meet with all identified tribes at least twice face-to-face during the past
26 year? Yes/No

27 If no, please provide an explanation.

28 SECTION 4: AGREEMENTS

1 4a. Did the installation sign any new cooperative agreements, MOUs, MOAs, CAs, or PAs during
2 the past year? Yes/No

3 If yes, please provide additional information (i.e., Date Signed, Title/Subject, Representatives)
4 including a copy of any agreements.

5 SECTION 5: TRAINING

6 5a. Did the installation provide training on-base to personnel specific to tribal relations? Yes/No
7 If yes,

8 How many individuals attended training?
9 How many hours did each individual spend training?

10 5b. Did any installation personnel attend outside training specific to tribal relations? Yes/No If
11 yes,

12 How many individuals attended training?
13 How many hours did each individual spend training?

14 5c. Did the installation provide training to tribal members? Yes/No
15 If yes, please provide information on the type of training provided and how many tribal
16 members attended training.

17 SECTION 6: FEEDBACK

18 6a. Based on your experiences with the AF tribal relations program to date, what is working
19 well, what needs improvement, and/or what needs to be addressed?

**Table 1 Three Hundred and Sixty Four Native American Traditional Use Plants
on NNSS and NTTR**

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Table 1 Three Hundred and Sixty Four Native American Traditional Use Plants on NNSS and NTTR

Scientific Name	Common Name	Southern Paiute Ethnic Group Names	Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Abies concolor</i>	White fir	ca-ta-vee ⁸	wong-govie ⁸	
<i>Abronia turbinata</i>	White sand verbena		nut-zooh-boh-hombe ⁸	
<i>Abronia</i> sp.	White sand verbena		bah-gun-boh-hombe ⁸	
<i>Achillea millefolium</i>	Milfoil yarrow	i'itsikwasipi ^f		
<i>Achillea</i> sp.	Yarrow	i'itsikwasipi ^f todze-tonega ⁸ toe-tee-tone-ga ⁸ wats-ov ⁸	toh-tee-tone-g-gah ⁸ toh-tee-tonega ⁸	coo-see-pah-wah-zip ⁸ dogowah-wan-guh ⁸ donzee-anga ⁸ pah-ronzee-ah ⁸
<i>Agave utahensis</i> var. <i>kaibabhensis</i>	Kaibab agave	kaiva uusiv ^b		
<i>Agave utahensis</i> var. <i>utahensis</i>	Utah agave	yaant ^b	nanta ^f yant ^f	
<i>Agave</i> sp.	Agave, Mescal	yant (mp) ^f		
<i>Agropyron smithii</i>	Western wheat grass	paxankwa ^f		
<i>Agropyron</i> sp.	Wheat grass	paxankwa ^f		
<i>Agrostis exarata</i>	Spike bentgrass	NF ^f		
<i>Allium</i> sp.	Wild onion	kwichasi ^f		un-zee ⁸
<i>Amaranthus albus</i>	Pale amaranth	toki-mont ^f	tokimont ^f	
<i>Amaranthus retroflexus</i>	Redroot pigweed	kumuta ^f		
<i>Amaranthus powellii</i>	Powell's amaranth, Pigweed	kumuta ^f pun-kont ^f		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Amaranthus</i> sp.	Pigweed	toki-mont ^f ku-mont ^f camoot ^f kumutr ^f	tokimont ^f pun-kont ^f punkont ^f		
<i>Ambrosia dumosa</i>	White bursage, Burrobush	kʌtsiav ^f	tʌmpisangwav ^b		
<i>Ambrosia artemisiifolia</i>	Ragweed	NF ^f			
<i>Amelanchier alnifolia</i>	Saskatoon service-berry	toyabe ^f	tʌrvwampʌ ^f		
<i>Amelanchier utahensis</i>	Utah serviceberry	tʌngwump ^f tʌrvwampʌ ^f NF ^c	kwiav ^f toyaba ^f	duh-hee yemba ⁸	
<i>Amelanchier</i> sp.	Serviceberry	tū-ab' (k) ⁴ kwiav ^f tʌngwump ^f kwiav ^f	toyabe ^f tʌrvwampʌ ^f toyaba ^f tʌngwump ^f		
<i>Amsinkia tessellata</i>	Fiddleneck	NF ^c			kua ^c
<i>Androstephium breviflorum</i>	Funnel-lily	NF ^f			
<i>Anemopsis californica</i>	Yerba mansa	cheu-pahn-iv (mp) ⁸ tchupaniv ^e	NF ^f	chew-pon-iv ⁸ NF ^c	tchawanav ^e tsawaniv ^e
<i>Anemone tuberosa</i>	Desert thimbleweed, Windflower	NF ^f			

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Angelica</i> sp.	Angelica	to'nchavi ^f kibah na-tizuah ⁸	tontsabi ^f bogo ⁸	bee-ah-bogo ⁸ be-ah boquah ⁸	
<i>Apocynum cannabinum</i>	Dogbane, Indian hemp	NF ¹			
<i>Arabis pulchra</i>	Pretty rockcress	ak ^e	ahk ^e		
<i>Arabis</i> sp.	Rockcress	toxopakuv ^f		don-zeah ⁸	
<i>Arceuthobium</i> sp.	Mistletoe	San-hap' o-tsav ⁴		Not-toí-yum	
<i>Arctostaphylos patula</i>	Green-leaf manzanita	ararumpipi ^f			
<i>Arctostaphylos pungens</i>	Pointleaf manzanita, Mexican manzanita	ararumpipi ^f	ada'dimpipi ^f		
<i>Arctostaphylos</i> sp.	Manzanita	ki'-app'e (k) ⁴ a-rai'-um-piv (k) ⁶ tim-go'-op (lv) ⁶	ararumpipi ^f ada'dimpipi ^f	yah-he-wat-um ⁸	
<i>Arenaria</i> sp.	Sandwort			boo-ee nut-zoo ⁸	
<i>Argemone</i> sp.	Prickly poppy	esha-ah-goo-wha ⁸		sag-ee-da ⁸ sag-ee-dump ⁸ wya-sag-wee-duh ⁸ wya-sag-gee-gee ⁸	
<i>Artemisia bigelovii</i>	Bigelow sagebrush	sangwav ^b			NF ⁹
<i>Artemisia dracunculus</i>	Tarragon	sangwavi ^f	pas ^f		
<i>Artemisia ludoviciana</i>	Water sage, Louisiana wormwood, Sage herb	huipata- sangwav ^{b,c} sangwa ^f	sangwavi ^f pass-pahs ^f pa'sangwav ^e		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Artemisia nova</i>	Black sagebrush	sangwav ^d sangwav ^c	sua'piv ^c	bah-que-numb ⁸ boh-hoe-be ⁸ du-boh-hobe ⁸ toyabe-behobe ⁸ bahopi ^c	
<i>Artemisia spinescens</i>	Bud sage, Button brush	kuh- <u>eeb</u> tah- <u>cun</u> -oh- <u>guah</u> ⁸	kuh- <u>wepit</u> -tuh- <u>cun</u> -o- <u>guah</u> ⁸	doot-see-ab ⁸ dootsie-up ⁸ koo-buh tah- <u>cun</u> -o-quah ⁸ ku-ba-tah- <u>cun</u> -oh-quah ⁸	
<i>Artemisia tridentata</i>	Big sagebrush	po-ho'-be (lv) ⁴ sahng-wav ⁴ sah-wahb' (k) ⁴ sangwav ^{c, e} pah- <u>eeh</u> sah-wavy ⁸ pah-hoe-be ⁸	sangwavi ^f sangwa ^f sanwa'bi ^f pah-wavy ⁸ sah-wah-be ⁸ sah-wavy ⁸	bah-guh-yoom ⁸ bah-hoe-be ⁸ bah-vah-hoe-be ⁸ boh-hoe-be ⁸ boh-ombe ⁸ sah-wah-be ⁸ wah-gup-pee ⁸ povi ^c pohovi ^c bahopi ^c povi ^c po-ho'-be (ps) ⁴	NF ^{a, c}
<i>Artemisia</i> sp.	Sagebrush	ináp ^{u1} po-ho'-be (lv) ⁴ sahng-wav ⁴ sah-wahb' (k) ⁴ sangwav ^{c, e} pa'sangwav ^e huipata- sangwav ^{b, c} wadzo-ba ⁸ coo-see pah-wah-zip ⁸ coo-see quatz-oh- bah ⁸ coo-see-sah-wah-be ⁸ coo-see sah-wavy ⁸	chumav ^b sangwa ^f sangwavi ^f sanwa'bi ^f pas ^f pass-pahs ^f salmapweep ^f salm-ap-weep ^f coo-see-wy-up ⁸ koh-see-wah-ah ⁸ pah-wadz-oh-buh ⁸ wat-sob ⁸ whood-see-tah- <u>cun</u> -oh- <u>quah</u> ⁸	bah-vah-hoe-be ⁸ hav-oh-hoe ⁸ coo-see-pah-zip ⁸ coo-see-pah-wah-zip ⁸ pah-vah-hobe: pava-hobe ⁸	

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Asclepias speciosa</i>	Milkweed	nah- <u>quee</u> -dah nat- <u>tizuah</u> ⁸ toh- <u>hawk</u> -quee ⁸	ut- <u>sah</u> -av ⁸ wee- <u>ab</u> -a-nuh ⁸	be-ah <u>bee-sha</u> divo-oh-wip ⁸ be- <u>jah</u> -no-ko ⁸ be- <u>sha</u> -no-ko ⁸ bee- <u>sha</u> -wannup ⁸ pee- <u>gee</u> -wanna ⁸	
<i>Asclepias</i> sp.	Milkweed, broad leaf	<u>hewovey</u> ⁸ NF ¹	<u>wa</u> -na ⁸	we-ā'-vimp (ps) ⁴	
<i>Aster frondosus</i>	Leafy aster	tods- <u>e</u> -tonega ⁸			
<i>Aster</i> sp.	Aster	NF ^f		<u>hoo</u> -nut-zoo ⁸ <u>dimbe</u> -be-ett-zee ⁸ duh-na- <u>eye</u> -go ⁸	
<i>Astragalus praelongus</i>	Milkvetch	NF ^b			
<i>Astragalus purshii</i>	Milkvetch	NF ^f			
<i>Astragalus</i> spp.	Locoweed	NF ^b		<u>tim</u> -bah-hay nut-zoo ⁸ <u>coopi</u> -joomb ⁸ gup- <u>wuh</u> -ghu ⁸ <u>tok</u> -quee ⁸	
<i>Atriplex canescens</i>	Four-wing saltbush	skump ^b tono ^b	murunibi ^f	noo- <u>roon</u> -up ⁸	tonoh ^c
<i>Atriplex confertifolia</i>	Shadscale	NF ² oavi ^f	kakumb ^c		
<i>Atriplex lentiformis</i>	Big saltbush	NF ^f			
<i>Atriplex</i> sp.	Saltbush	kakumb ^c skump ^b tono ^b oari ^f	oavi ^f que- <u>aheque</u> ^f murunibi ^f		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names	Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names	
<i>Avena sativa</i>	Wild oats	hoo-wēv' (c) ⁴			
<i>Baccharis</i> sp.	Seepwillow	koauw ^b kanav ^b			
<i>Balsamorhiza</i> sp.	Balsamroot	key-gah-da-goop ⁸ ah-ku-pah ⁸	coo-see quah-soop ⁸ pah-kuk ⁸	ah-kuk ⁸ coo-see ah-kuh ⁸	
<i>Berberis fremontii</i>	Freemont's barberry	tonip ^f			
<i>Berberis repens</i>	Creeping barberry	cor-ren-nup pah-yeē ⁸ poo-heg-wee-dah ⁸	NF ^r	so-go-diem ⁸ so-go-du-yembe ⁸ toh-yuh-tu-yuh-bu-huh ⁸	
<i>Berberis</i> sp.	Oregon grape, Barberry	tonip ^f			
<i>Betula</i> sp.	Birch	un-gai'-yu-nin-jump (lv) ⁶	kai'-shu-imp (k) ⁶	who-ghee-juup ⁸	
<i>Brickellia oblongifolia</i>	Mohave Brickell bush			sahn-a wap ⁸	
<i>Brodiaea pulchella</i>	Desert hyacinth	NF ^e		sigo ^e	
<i>Bryophytes</i>	Moss	NF ^r			
<i>Calochortus bruneaunis</i>	Sego lily	sixo'o ^f		se'go ^e	
<i>Calochortus flexuosus</i>	Weakstem mariposa	sixo'o ^f sixo'o ^e		sigo ^e	kogi ^e
<i>Calochortus nuttallii</i>	Sego lily	sigo'o ^f			
<i>Calochortus</i> sp.	Sego lily, Mariposa lily	sixo'o ^f	sigo'o ^f		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names	Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names	
<i>Carex douglasii</i>	Sedge	NF ^f			
<i>Carex</i> sp.	Sedge	sambiv ^d NF ^f			
<i>Castilleja chromosa</i>	Early Indian paintbrush	NF ^c	angawitambu ^e	NF ^c	
<i>Castilleja linariaefolia</i>	Paintbrush		anga-quee-ah-wee-tumb ⁸ dogowah-die-um ⁸		
<i>Castilleja martinii</i>	Narrowleaf paintbrush			NF ^c	
<i>Castilleja</i> sp.	Indian paintbrush	NF ^d			
<i>Caulanthus crassicaulis</i>	Squaw cabbage	NF ^f	wah-numb ⁸		
<i>Ceratoides lanata</i>	Winterfat		NF ^c		
<i>Cercocarpus ledifolius</i>	Curl-leaf mountain mahogany	tonamp ^f dunumbe ^f (mp) ⁸ toobe- ⁸	Dunumbe ^f too-pee ⁸ toobe-buh-ah ⁸	doh-numbe ⁸ toh-nombe ⁸ toobap-ee ⁸ too-be ⁸ too-bee-boh-ah ⁸ too-nambe ⁸ too-pee ⁸	
<i>Cercocarpus</i> sp.	Mountain-mahogany	to-namp [˘] (k) ⁴ tonamp ^f	dunumbe ^f dunumbe ^f	too-num [˘] -be (ps) ⁴ too-namp [˘] -pe ⁴ toó-nam-be ⁴	NF ⁹
<i>Chaenactis douglasii</i>	Douglas dusty-maiden	hoot-see-eva ⁸ si-af-iv ⁸	toh-hoe-quah ⁸	witch-ah das-ah-dee-ah ⁸ witch-ah-numba ⁸ yahn-gan-gooie ⁸	

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<i>Chamaebatiaria millefolium</i>	Fernbush	par-o-wah tah-cun-o-quah ⁸		ting-wee-buh ⁸	
<i>Chenopodium fremontii</i>	Fremont goosefoot	sax'waticup ^c		u'uphi ^c	
<i>Chenopodium</i> sp.	Goosefoot	sax'waticup ^c			
<i>Chorizanthe rigida</i>	Rigid spine-flower	sanuv ^f	kamuhurusanuv ^f kanumuvusanuv ^f		
<i>Chorizanthe</i> sp.	Spine-flower	sanuv ^f	kamunura ^f		
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	s'kump ^{c,e} sikomp ^b sikamp ^f	sikump ^f pantus'kump ^d	see-bape ⁸ su'pimba ^c NF ^c	
<i>Chrysothamnus viscidiflorus</i>	Little rabbitbrush	see-gu-pee ⁸ tah-bee-she-goop ⁸	tah-beese-see-goop ⁸	nagaha-see-bup-ee ⁸ oh-ha-see-bup-e ⁸	
<i>Chrysothamnus</i> sp.	Rabbitbrush	koo-chum'-ahv (lv) ⁴ koo-tsam'-mah hav' (c) ⁴ sikomp ^f	sikump ^f sikamp ^f s'kump ^{c,e}	sig-um-bip' (ps) ⁴	
<i>Cirsium mohavense</i>	Desert thistle	tsiev ^e			
<i>Cirsium</i> sp.	Pink thistle	manavip ^b			
<i>Claytonia</i> sp.	Spring beauty	NF ^{f,8}			
<i>Clematis ligusticifolia</i>	Virgin's bower, Wild clematis	esha-wanna ⁸		esha-wanna ⁸ esha-wannup ⁸	
<i>Coleogyne ramosissima</i>	Blackbrush	NF ^{f,e}			

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<i>Comandra umbellata</i>	Bastard toad-flax	NF ^f		
<i>Cordylanthus</i> sp.	Birdsbeak		<u>tim</u> -bah-hay <u>nut</u> -zoo ⁸	
<i>Cornus stolinifera</i>	Dogwood	NF ^f		
<i>Cornus</i> sp.	Dogwood	NF ^f		
<i>Coryphantha vivipara</i> var. <i>desertii</i>	Fishhook cactus, Coryphanth cactus	manav ^d		NF ^c
<i>Coryphantha vivipara</i> var. <i>rosea</i>	Foxtail cactus	manav ^d manav ^c	yuav ^c	NF ^c
<i>Cowania mexicana</i> (see <i>Purshia stansburiana</i>)	Cliffrose			
<i>Crepis</i> sp.	Hawksbeard		ah-zah-div-o-wip ⁸ bee-sha-no-go ⁸ bee-jee div-o-wip ⁸	
<i>Cryptantha</i> sp.	Cryptantha	NF ^f		
<i>Cucurbita foetidissima</i>	Coyote gourd, Missouri gourd	ankompi ^f ahn-no-quav (mp) ^{8, r} arno-cup ^{f, 8}	ahn-noquav ^f arnocup ^f	poo-nono ⁸
<i>Cuscuta</i> spp.	Dodder	canaza-kwee-sha ⁸	too-vah-saah ⁸	
<i>Cymopterus globosus</i>	Golfball spring-parsley	ye-duts ⁸	ye-luts ⁸	
<i>Cymopterus</i> sp.	Spring-parsley	nampip ^f		

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<i>Dalea fremontii</i> (see <i>Psoralea fremontii</i>)	Fremont indigo bush				
<i>Dalea polyadenia</i>	Smokebush	ma-good-du-hoo ⁸ ma-good-tu-hoo ⁸	moh- <u>goon</u> -du-hoop ⁸ moh- <u>goon</u> -du-hoopie ⁸	ma- <u>good</u> -tu-hoo ⁸ moh- <u>goon</u> -du-hu ⁸	
<i>Dalea</i> sp.	Indigobush	kaatamon ^f i- <u>era</u> -midja ^f	i-eramidja ^f		
<i>Datura meteloides</i>	Sacred thorn-apple, Sacred datura, Jimsonweed	moa-nump ⁷ momomp ^{b,e} momomp ^f mimip ^f man-op-weep ^f	main-oph-weep ^f mainophweep ^f manopweep ^f moh- <u>mope</u> (mp) ⁸	moh- <u>eep</u> ⁸	
<i>Datura</i> sp.	Jimsonweed	mu-maup' (k) ⁶ moa-nump ⁷ momomp ^{b,e} momomp ^f mimip ^f	main-oph-weep ^f man-op-weep ^f mainophweep ^f manopweep ^f		
<i>Delphinium parishii</i>	Larkspur	NF ^e			
<i>Descurainia pinnata</i>	Tansy mustard	ak ^r aku ^f NF ^b	hahck ^f ku'u ^c	poyah ^e	
<i>Descurainia sophia</i>	Tansy mustard, Herb sophia	ahk ^e		poyah ^e	
<i>Descurainia</i> sp.	Tansy mustard	ahk ^e ku'u ^c ak ^r aku ^f	hahck ^f ak ^f ok ^f		

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<i>Dichelostemma pulchellum</i>	Bluedicks	NF ^f			
<i>Distichlis spicata</i>	Saltgrass	ē'-shū (lv) ⁴ e-soov' (c) ⁴	NF ^f mo-nump' (k) ⁴	pas-shoo-tum (ps) ⁴ ó-hah só-níp ⁴ ō-hah só-níp ⁴	ongavi ^c
<i>Dyssodia pentachaeta</i> (=D. thurberi)	Scale glandweed	sakwapi ^b	NF ^f	ahn-dah-gah nut-tah-zoom ⁸	
<i>Echinocactus polycephalus</i>	Cotton-top cactus	tash ^e		NF ^c	NF ^c
<i>Echinocactus</i> sp.	Barrel cactus	pavio ^f tamar (lv)(p) ^f	tumar (mp) ^f		
<i>Echinocereus engelmannii</i>	Engelmann hedgehog cactus	usivwuits ^f tule ^e	manav ^d		
<i>Echinocereus triglochidiatus</i>	Claretcup cactus	chuamanav i'mamanavi ^b ova'xobi ^f	cacuosov'xobi ^f		
<i>Echinocereus</i> sp.	Hedgehog, Tule cactus	tule ^e chuamanav i'mamanavi ^b usivwuits ^f	ova'xobi ^f cacuosov'xobi ^f usirwuits (lv)(p) ^f NF ^d		
<i>Echinochloa</i> sp.	Cockspur	NF ^f			
<i>Eleocharis palustris</i>	Spikerush	NF ^{c, f}			
<i>Eleocharis</i> sp.	Spike rush	pahrasiev ^c		bumohap ^c	NF ⁹
<i>Elymus cinereus</i>	Wild rye				NF ⁹

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<i>Elymus elymoides</i>	Squirrel tail	saxwanartotsivuaium ^c			
<i>Elymus triticoides</i>	Beardless wildrye, Creeping wildrye	NF ^f			
<i>Elymus</i> sp.	Wildrye, Wheatgrass	ph-hoe-buh wah- hava ⁸ sah-wah-hayva ⁸ wah-hayva ⁸	saxwanartotsivuaium ^c NF ^f	pay-wah-guave ⁸ wy-ron-zip ⁸	
<i>Encelia farinosa</i>	White brittlebrush	NF ^b			
<i>Encelia frutescens</i> var. <i>resinosa</i>	Brittlebush	sana ich ^b tuwich ^b			
<i>Encelia virginensis</i> (all varieties)	Virgin encelia, Brittlebush	sana ich ^b suopiv ^c	tuwich ^b		
<i>Enceliopsis nudicaulis</i>	Nakedstem			anga-go-ahp ⁸ coo-see ah-kuk ⁸	
<i>Ephedra nevadensis</i>	Nevada Indian tea	tup, tup ^b hutuup ^c tu'up ^c tutuupif ^f tutupi ^{f,e} tu-tupe (mp) ⁸	tutupe ^f utuupif ^f u'tuup ^e yatup ^e NF ^d	coo-see too-roombe ⁸ tutumbi ^c turundi ^c	turup ^c tutuup ^c
<i>Ephedra torreyana</i>	Torrey Indian tea	tutuupif ^f tutu'pi ^f	tu-tupe ^f u'tup ^b tupi ^b		
<i>Ephedra viridis</i>	Indian tea	tup ^b tup ^b tutuupif ^f soo-roop-ee ⁸ too-roop-ee ⁸	tutu'pi ^f utuupif ^f u'tuup ^e too-toop-ee ⁸	too-roombe ⁸ too-toom-be ⁸ tutumbi ^c NF ^c	turup ^c NF ^c

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		NF ^c			
<i>Ephedra</i> sp.	Mormon tea, Jointfir, Indian tea	too-troop' (c) ⁴ hoo-toop' (k) ⁴ tup, tup ^b u'tuup ^c yatup ^e hutuup ^c tu'up ^c	tutuupi ^f utuupi ^f tutu'pi ^f tutupi ^{c,f} tutupe ⁱ tu-tupe ^f	too-toom'-bip (ps) ⁴	
<i>Equisetum laevigatum</i>	Smooth scouring rush	sakwa-'ivi-p ^b	paxwav ^f		
<i>Equisetum</i> sp.	Scouringrush			bah-see-noo ⁸ kah-wah-quah-see ⁸	
<i>Eragrostis</i> sp.	Love grass	NF ^f			NF ⁹
<i>Eriastrum eremicum</i>	Mohave eriastrum	NF ^c			NF ^c
<i>Erigeron</i> sp.	Daisy	booi na-tizuah ⁸ dootsie tah-bah-she-up ⁸	kah-noop-ah ⁸ too-bee-man-ob ⁸	boo-ee nut-zoo ⁸	
<i>Eriodictyon angustifolium</i>	Narrow-leaf yerba santa	wee-poo-en-ub (mp) ^{8,f} weepoo-enub ^f	kutsa'rimpi ^f pa'sinipi ^f	wee-pah-got-um ⁸	
<i>Eriogonum inflatum</i>	Desert trumpet, Bladderstem, Indian pipeweed	papakurum ^f papakurum ^{f,e}	papakurum(p) ^e	tusarambokup ^e	
<i>Eriogonum microthecum</i>	Wild buckwheat	pee-wee-guy-womb-mutz-zee ⁸		ahn-ga-see-ga wee-ub ⁸ anga-kah-sah-rumba ⁸	
<i>Eriogonum ovalifolium</i>	Butterballs	ya-paw-taw-the ⁸		naka-donup ⁸	

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<i>Eriogonum caespitosum</i>	Buckwheat brush	NF ^f			
<i>Eriogonum umbellatum</i>	Sulphur flower	na-ka-donip ⁸	wadda-e-goh ⁸	bah-hoe-zee ⁸ naka-donup ⁸	
<i>Eriogonum</i> sp.	Buckwheat	ya-paw-taw-the ⁸			
<i>Erodium cicutarium</i>	Storksbill, Heronbill	wyuvimp ^e			
<i>Euphorbia albomarginata</i>	Rattlesnake weed	tuvika'xai ^v tuvipukaxi ^f trvirkaxi ^f	tava'namu'obi ^f tuvipaxghai ^v	nah-com-boot-zip ⁸	
<i>Euphorbia</i> sp.	Spurge	tuvipaxghai ^v tuvika'xai ^v tuvipukaxi ^f tah-wee-carib (mp) ⁸	tava'namu'obi ^f trvirkaxi ^f tah-wee-carib ^f	nah-comb-boh-zip ⁸ nah-wah-go bud-zip ⁸	
<i>Eurotia lanata</i>	White sage, Winter fat	boo-see-ah-wah-be ⁸	she-shu-bah ⁸	shee-shub ⁸ tuh-veep ⁸	
<i>Fallugia paradoxa</i>	Apache plume	muup ^b			
<i>Forsellesia nevadensis</i>	Nevada greaseweed	bas-un-dook nut-zoo ⁸			
<i>Frasera albomarginata</i> (see <i>Swertia albomarginata</i>)	White-margined swertia				
<i>Fraxinus anomala</i>	Singleleaf ash	trav ^f	tuav ^f		
<i>Fraxinus</i> sp.	Ash	wam-pip (k) ⁶ wan-pimp (lv) ⁶	trav ^f NF ^b		

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<i>Fritillaria atropurpurea</i>	Spotted missionbells, Leopard-lily	NF ^f		
<i>Garrya flavescens</i>	Ashy silktassel	ka'ninkwap ^f		
<i>Gaura coccinea</i>	Scarlet beeblossom	NF ^f		
<i>Gilia aggregata</i> (see <i>Ipomopsis aggregata</i>)	Scarlet gilia, Skyrocket			
<i>Gilia congesta</i> (see <i>Ipomopsis congesta</i>)	Ballhead gilia			
<i>Gilia inconspicua</i> (see <i>Ipomopsis inconspicua</i>)	Floccose gilia			
<i>Glycyrrhiza lepidota</i>	Desert root, American licorice	NF ^f		
<i>Grayia spinosa</i>	Spiny hop sage			NF ^c
<i>Grindelia squarrosa</i>	Gum plant	oha tonega ⁸	sah-nah tonegan ⁸	sah-nah cav-oh-no-ah ⁸ sah-nah-goop-ah-rah ⁸ woh-ah-gum ⁸
<i>Gutierrezia microcephala</i>	Matchweed, Small-head snakeweed	NF ^c	yainup ^b waarump ^b	tavishepi ^c
<i>Gutierrezia sarothrae</i>	Snakeweed, Matchweed	s'kump ^d		see-gupe ⁸ too-goot-se-oooh-goope ⁸ toom-bee-see-bupe ⁸
<i>Haplopappus acaulis</i>	Stemless Goldenweed	pau'p ^f	apu'p ^f	

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<i>Haplopappus</i> sp.	Goldenweed	pau'p ^f	apu'p ^f		
<i>Helianthus annuus</i>	Common sunflower	ah-kump' (k) ⁴	bah-kuk ⁸		
<i>Helianthus</i> sp.	Sunflower	ah-kump' (k) ⁴	akamp ^f		
<i>Heliotropium curassavicum</i>	Heliotrope	tu ^u be-manabe ⁸ wa'ateyowimpi ^f	tu ^u -ma-nabe ⁸	i-yah-oh-ho ⁸ i-yah-oh-ho ⁸ tu-man-ah-be ⁸	
<i>Hemidium alipes</i>	Four-o'clock	he-wov-bee ⁸	hewovey ⁸		
<i>Heuchera rubescens</i>	Alum root			toya-dimba-wah-rumb ⁸ zee-guoy ⁸	
<i>Hilaria rigida</i>	Big galleta	NF ^f			
<i>Holodiscus dumomus</i>	Mountain spray	oh-na-nut-tiz-u-wabbe ⁸	tah-see-vuh ⁸ wah-poose-oh-guay ⁸	tot-zip ⁸ toya-huhnabbe ⁸	
<i>Hymenoclea salsola</i>	White cheesebush, Burrobush	paiab ^f			
<i>Ipomoea</i> sp.	Morning glory	NF ^f			
<i>Ipomopsis aggregata</i>	Scarlet gilia, Skyrocket	anka'siti ^f soh-noy tah-cun-oh- quah ⁸	pah-wah-gopish ⁸ para-give ⁸	enga-mo-wanya ⁸ enga-mutz-oh-y-newie ⁸ tem-piute ⁸ tin-ah-piute ⁸	

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<i>Ipomopsis congesta</i>	Ballhead gilia	<u>quoy-<u>hee</u> nooma natiz-u-ah⁸</u>		<u>bas-oh-nup⁸</u> <u>be-he-vah⁸</u> <u>bee-ah-du-hu⁸</u> <u>bee-<u>hee</u>-vah⁸</u> <u>hoe-ni⁸</u> <u>hoo-na⁸</u> <u>hoo-ni⁸</u> <u>sah-tone-zee⁸</u> <u>sah-tone-zee-yung⁸</u>	
<i>Ipomopsis inconspicua</i>	Floccose gilia				NF ^c
<i>Ipomopsis</i> sp.	Gilia	<u>eck-<u>quee</u>-hu-binga⁸</u> <u>sigh-<u>yah</u>-gava⁸</u> <u>si-<u>yah</u>-gum⁸</u>	<u>too-<u>bee</u> man-a-ba⁸</u> <u>too-<u>bee</u> too-ben-aba⁸</u> <u>too-man-aba⁸</u>	<u>din-ah-<u>ee</u>-goom⁸</u> <u>duh-na-<u>ee</u>-go⁸</u> <u>duh-nah-<u>eye</u>-go⁸</u> <u>duh-nah-<u>eye</u>-gum⁸</u> <u>tin-ah-<u>ee</u>-go⁸</u> NF ^c	
<i>Iris missouriensis</i>	Wild iris	<u>pah-<u>see</u>-toob-ah⁸</u> <u>poo-<u>gooey</u>-roop⁸</u>	<u>poo-<u>gooey</u>-rub⁸</u>	<u>pah-sag-<u>ee</u>-dah⁸</u> <u>pah-sag-<u>ee</u>-duh⁸</u> <u>pah-sag-<u>e</u>-dump⁸</u> <u>pah-sag-<u>gee</u>-gee⁸</u> <u>sag-<u>e</u>-dump⁸</u>	
<i>Iris</i> sp.	Iris	NF ^f			
<i>Iva axillaris</i>	Poverty weed	<u>quee-<u>duh</u>-tec-nava⁸</u>	<u>too-<u>ha</u>-babba⁸</u>	<u>du-du-<u>zip</u>⁸</u> <u>too-du-<u>zip</u>⁸</u>	
<i>Juncus mexicanus</i>	Wire grass	NF ^d	pa'sip ^e	sonophi ^c	NF ^c
<i>Juncus</i> sp.	Rush	paxwav ^f	pauv ^b		

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<i>Juniperus communis</i>	Common juniper	pawa'apɹ ^f pah-wap-o-ruit ^f dootsie pah-wap-pee ⁸	pahwaporuit ^f pah-wap-o-ruitz (mp) ⁸ wap-pee ⁸	mah-hay-wa ⁸	
<i>Juniperus osteosperma</i>	Utah juniper, Cedar	wa'ap ^{c,d,e} wa'apu ^f wa'apɹ ^f wa'apumpi ^f	wa'apumpi ^f noo-ahntup ^f noo-ahn-tup ^f NF ^d	sahwavi ^c suwavi ^c sawabi ^c	hunuvu ^c hunuvu ^c
<i>Juniperus scopulorum</i>	Rocky mountain red cedar	bah-sah-mabe ⁸	bas-um-ah-be ⁸		
<i>Juniperus</i> sp.	Juniper, Cedar	wah-ahp' (lv) ⁴ che-emp' (c) ⁴ pah-wahp' (k) ⁴ wahp' ⁴ wap (k) ⁶ wa-op (lv) ⁶ wa'ap ^{c,e} pahwaporuit ^f noo-ahntup ^f wah-pee ⁸	noo-ahn-tup ^f wa'apɹ ^f wa'apumpi ^f pawa'apɹ ^f wa'-pi ^f wap ^f wa'apu ^f wa'apumpi ^f pah-wap-o-ruit ^f wah-puee ⁸	sah-mah-be ⁸ sam-ah-bee ⁸ sahn-ah-poh ⁸ sam-ah-bee ⁸ sahm-wah'-be ⁴ tsé-kev-ve ⁴ sah'-nah-be ⁴	NF ⁹
<i>Krameria parvifolia</i>	Range ratany	nagavaronump ^c	NF ^f		
<i>Krameria</i> sp.	Ratany	nah-kah-vah dah-tohnu ^b (mp) ^{8,f}		nah-gee too-nah-nib ⁸	
<i>Lappula occidentalis</i>	Stickseed	NF ^f			
<i>Larrea divaricata</i>	Creosote bush	yah-temp (mp) ⁸		ya-temp ⁸	
<i>Larrea tridentata</i>	Creosote bush	yatumpi ^f yatump ^f yatump ^{f,c}	yah-temp ^f yah-temp ^f ys'ya'mip ^f	yatumbi ^c	NF ^c

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<i>Larrea tridentata</i>	Creosote bush	yatamp ^{f,c} ya'tampi ^f yatumb ^b	ya'ta'mpi ^f yatampi ^f		
<i>Lepidium fremontii</i>	Fremont's peppergrass	NF ^f			
<i>Lepidium lasiocarpum</i>	Desert pepperweed	NF ^f			
<i>Lepidium Montanum</i>	Mountain Pepperplant	NF ^a			
<i>Lewisia rediviva</i>	Bitter root	NF ^f		gungah ^c	
<i>Lichen</i>	Lichen	NF ^f	timpapsuchicu ^c		
<i>Linum lewisii</i>	Blue flax, Wild flax	booie-ah-nooma ⁸ booie na-tizuah ⁸	po-ena-tiz-uah ⁸ NF ^f	boo-ee nut-tah-zoom ⁸ boo-ee nut-zoo ⁸ boo-eeep nut-zoo ⁸ poo-ena nut-tiz-zooh ⁸	
<i>Lithospermum ruderale</i>	Gromwell, Stoneseed			nem-ish-aw ⁸ nom-ish-aw ⁸	
<i>Lomatium sp.</i>	Biscuitroot, Indianroot	NF ^f			
<i>Lupinus spp.</i>	Lupine	quee-duh-kwana ⁸		quee-duh-quen-ah ⁸	
<i>Lycium andersonii</i>	Anderson wolfberry	u'upwivi ^b u'up ^{d,f} pa'up ^d	u'upi ^f hu'up ^e u'up ^e	huupi ^e	huupia ^e
<i>Lycium pallidum</i>	Pale wolfberry	u'upi ^f	pa'up ^e	huupi ^e	huupia ^e

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<i>Lycium sp.</i>	Squawberry, Wolfberry	u'up ^f pa'up ^{d,f} hu'up ^e u'upwivi ^b u'up ^b	u'up ^f u'upi ^f pa'up ^{e,f} u?upi ²		
<i>Lygodesmia spinosa</i>	Indian gum plant, Skeleton weed	i-goon-zon-um ⁸ pee-ee-ah-gub ⁸ see-ko-pe ⁸	too-man-abbe ⁸ too-wan-oo-pah ⁸		
<i>Mahonia repens</i> (see <i>Berberis repens</i>)	Creeping barberry				
<i>Marrubium vulgare</i>	Common horehound	quee-han-oob ⁸	NF ^a		
<i>Melilotus alba</i>	White sweet-clover	NF ²			
<i>Melilotus indicus</i>	Yellow sweet-clover	NF ²			
<i>Menodora spinescens</i>	Spiny Menodora	NF ^{e,f}		huupi ^o	
<i>Menodora sp.</i>	Menodora	NF ^f			
<i>Mentha arvensis</i>	Field mint, American wild mint	NF ^b			
<i>Mentha sp.</i>	Mint	paxwa'nanimpi ^f pah-quanna ⁸ pah-quanna-ah ⁸ pah-quanna-ah ⁸	paxananampif pah-quanna-av ⁸ quee-boh-nay ⁸ toh-see-ten-ava ⁸	pah-quanna ⁸	
<i>Mentzelia albicaulis</i>	Desert corsage, White-stem blazingstar	ku'u ^f ku'u ^c	NF ^e	pacita ^c kua ^{c,e}	kua ^c ma'kua ^c

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<i>Mentzelia laevicaulis</i>	Blazing star				NF ⁹
<i>Mentzelia oreophila</i>	Blazing star, Stickleaf	ku'u ^f			
<i>Mentzelia</i> sp.	Stickleaf, Desert corsage	ku'u ^{c,f}			
<i>Mimulus guttatus</i>	Monkey flower			unda-vitch-quanna ⁸ pahn-zah-quatum ⁸	
<i>Mirabilis multiflora</i>	Colorado four-o'clock	tox'oowatsiv ^c	tukwivi ^b		
<i>Monardella odoratissima</i>	Western bee balm	see-boo moh-goon-up ⁸	too-buzz-see-be ⁸	guy-moh ⁸ toya-abba-hobe ⁸	
<i>Muhlenbergia asperfolia</i>	Scratchgrass	wichavi ma'ap ^b			
<i>Muhlenbergia</i> sp.	Muhly	nɪtavi ^f			
<i>Nasturtium officinale</i>	Watercress	pamava ^b pammaxanar ^b			
<i>Nicotiana attenuata</i>	Coyote tobacco	koapi ^f koap ^f koaop ^f tsaw-wap ^f koap ^c	bah-moh ⁸ poo-ee-bah-hoon ⁸ poo-ee-bah-moh ⁸ poo-wee-buh-hoon ⁸ toh-quoh-quah ⁸	new-wha bah-hoon ⁸ poo-ee-pah ⁸ pue-bax ⁸ NF ^c	NF ^c
<i>Nicotiana trigonophylla</i>	Indian tobacco, Desert tobacco	koapi ^f nungwukoap ^f nungwukoap ^f	saxwaxwapi ^c koap ^b nungwukoap ^b	pombi ^e	

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<i>Nicotiana</i> sp.	Tobacco, Wild tobacco	ko-op ⁶ sě-wah'-wahp (lv) ⁴ ko-ahp' (c) ⁴ sow-wow'-wahp (k) ⁴ sě-wah'-gwah'b ⁴ koapi ^f	koap ^f koaop ^f saxwaxwapi ^c nungwukoap ^f nngwukoap ^f tsaw-wap ^f	pah-hum'-be (ps) ⁴	
<i>Oenothera pallida</i>	Pale evening-primrose	sixo ^b			
<i>Opuntia basilaris</i>	Beavertail cactus	manav ^b yuavi ^f yuavimp ^f NF ^c	yuavimp ^f yuavimp ^f navamp ^f	nugwia ^c nah-vomb ⁸ wo-gay-be ⁸	
<i>Opuntia echinocarpa</i>	Golden cholla, Silver cholla	NF ^c		wiatimbu ^c	
<i>Opuntia erinacea</i>	Mohave prickly pear, Grizzly bear cactus	yuavip ^b manavi ^c	manav ^d		
<i>Opuntia phaeacantha</i>	Engelmann prickly pear	manav ^b			
<i>Opuntia polyacantha</i>	Central prickly pear	usivuwits ^c		NF ^c	
<i>Opuntia</i> spp.	Tuna, "Tule" cactus	manav ^b yuavimp ^f yuavip ^b usivuwits ^f navamp ^f manavimp ^f	manavi ^f yuavimp ^f yuavimp ^f yuavimp ^f yuavi ^f manavimp ^f		
<i>Orobanche cooperi</i>	Broomrape	tu'u ^f			

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<i>Orobanchhe corymbosa</i>	Broomrape, Wild asparagus	tu'u ^c		tu'tum ^c tu'du ^c	
<i>Orobanchhe fasciculata</i>	Broomrape	tu'u ^f			
<i>Orobanchhe</i> sp.	Broomrape, Indian asparagus	tu'u ^f tue-hoo ⁸	too-hoo ⁸ NF ^a	doo ⁸ too-ee ⁸	
<i>Oryzopsis hymenoides</i>	Indian ricegrass	wa-i ⁷ wa'iv ^b	wa'ir ^e wa'ai ^{d,e,f}	wai ^c	wai ^c NF ⁹
<i>Osmorhiza occidentalis</i>	Sweetroot	pah-wah-cape ⁸ pah-wah-capish ⁸ pah-wah-gah-bish ⁸	wadda-eye-gop ⁸ worra-eye-gob ⁸	bah-soh-wip ⁸ bas-oh-gway ⁸ bas-oh-wip ⁸	
<i>Panicum</i> sp.	Panic grass	NF ^f			
<i>Parthenocissus</i> sp.	Virginia creeper	patowanamauy ^b			
<i>Pedicularis</i> sp.	Lousewort, Elephant head			gooie-took-ie ⁸	
<i>Penstemon eatonii</i>	Red penstemon			toh-quoh-bag-um ⁸	
<i>Penstemon floridus</i>	Panamint beard tongue				NF ^c
<i>Penstemon pahutensis</i>	Pahute beard tongue	NF ^c			NF ^c
<i>Penstemon palmeri</i>	Palmer beardtongue	tox'o'awatsip ^f			
<i>Penstemon</i> sp.	Beardtongue	tox'oawatsip ^f too-buzz-sah-wop ⁸ toh-quoh-wat-ziv ⁸	tox'o'awatsip ^f toe-buzz-see-bee ⁸	dim-bah-sego ⁸ dim-bah-shego ⁸ too-buzz-see-bee ⁸	

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<i>Peraphyllum ramosissimum</i>	Squawapple	suovi ^c			
<i>Phacelia</i> sp.	Phacelia	NF ^f			
<i>Phlox</i> sp.	Phlox	moh-goon-zee-eye-ah ⁸ quee-duh-too-nabba ⁸ NF ^f	toh-hah-tonegan ⁸ tu-be-man-up ⁸	din-ah-ee-go ⁸ eye-go-dun-um ⁸ so-go-div-oh-sah ⁸ so-go-ron-zee-ah ⁸	
<i>Phragmites australis</i>	Common reed, Giant common reed, Cane, Honey dew	po'-ru (k) ⁶ pa-gump (lv) ⁶	paxamp ^{b, f} pa'xamp ^c pah-gump ^f	NF ^c	pihavi ^c
<i>Phragmites communis</i>	Common reed, Honey dew	moh-goh-koh (mp) ⁸ pahgump ^f pa-hump ^f	wo-cau-cau-pu ⁸ hohgohkoh ^f		
<i>Phragmites</i> sp.	Reed	po'-ru (k) ⁶ pa-gump (lv) ⁶ pahgump ^f	hoh-goh-koh ^f paxamp ^{b, f} hohgohkoh ^f		
<i>Physalis crassifolia</i>	Groundcherry	NF ^f			
<i>Physalis</i> sp.	Groundcherry	NF ^f			
<i>Physaria chambersii</i>	Chambers' twinpod	tah-rah-gee-noob ⁸	NF ^f	tah-pah-day ⁸	
<i>Pinus monophylla</i>	Singleleaf pinyon,	tu-vap' (lv) ⁴ toov' (c) ⁴ tū-bah'-kah-bub (k) ⁴ tuvap ^{c, e} sahn-a-pah wah-pee ⁸ too-bee ⁸ tu-ba ⁸	tu'uv ^c tūva ^f tuva ^f tuvwap ^e tu-bap-ee ⁸ wah-pee ⁸	wahpi ^{c, c} tuvah ^c wah-pee ⁸ wahp' (ps) ⁴ wah'-pe ⁴ sah'-nah-wah'-pe ⁴ tipa ⁹	tuvap ^c tuva ^c tiba ⁹

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<i>Pinus ponderosa</i>	Ponderosa pine	yu-vim' (lv) ⁴ ō-gump' (k) ⁴ yu-wim' p ⁴	wung-gah-be ⁴ wun-kó-be (ps) ⁴	
<i>Pinus</i> sp.	Pinyon	tu-wop' (k), (lv) ⁶ tu-vap' (lv) ⁴ toov' (c) ⁴ tū-bah'-kah-bub (k) ⁴ yu-vim' (lv) ⁴ ō-gump' (k) ⁴ yu-wim' p ⁴	táva ^f tivah ^f tuva ^f tuvap ^{c,e} tu'uv ^c tuvwap ^e	<u>wong-govie</u> ⁸
<i>Pinus</i> sp.	Sugar pine		wi-ah'-kah-tum (ps) ⁴	
<i>Plantago major</i>	Common plantain		<u>wee-dee</u> ⁸ <u>woo-dee</u> ⁸	
<i>Pluchea sericea</i> (see <i>Tessaria sericea</i>)	Arrow weed			
<i>Poa bigelovii</i>	Bluegrass	NF ^f		
<i>Poa fendleriana</i>	Muttongrass, Bluegrass	uxwishuv ^f		
<i>Populus fremontii</i>	Fremont cottonwood	sovip ^b		
<i>Populus tremuloides</i>	Quaking aspen		<u>sing-gah-ve</u> ⁸ <u>sung-up</u> ⁸	
<i>Populus trichocarpa</i>	Black cottonwood		<u>sing-gah-ve</u> ⁸ <u>sing-gop</u> ⁸ <u>so-ho-be</u> ⁸ <u>su-nabbe</u> ⁸ <u>toya-soo-nap</u> ⁸	

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<i>Populus</i> sp.	Cottonwood	sho-wīp' (k) ⁶ so-vwīp (lv) ⁶	sovip ^b só-vip (k) ⁴ sah'-vip (lv) ⁴ sah'-vip' (c) ⁴	só-o-vimp' (ps) ⁴ sah'-hah-be ⁴ sig'-ge ⁴	
<i>Porophyllum gracile</i>	Odora	pa'kwitupip ^f			
<i>Porophyllum</i> sp.	Odora	pa-guidobe (mp) ⁸			
<i>Portulaca</i> sp.	Purslane	topuene ^f	to-puene ^f		
<i>Prosopis glandulosa</i> var. <i>torreyana</i>	Torrey mesquite	opimp ^b 'op ^f	'opimp ^f o'pimb ^e	o'phi ^e	
<i>Prosopis pubescens</i>	Screwbean	kwiyaṛ ^f wi'ump ^e kwierum ^e	'opimp ^{tr} (mp) ^f quee-et-umb ⁸		
<i>Prosopis</i> spp.	Mesquite	'Op ^f opimp ^b 'opimp ^f	kwiyaṛ ^f quee-et-umb ^f quee-etumb ^f		
<i>Prunus andersonii</i>	Desert peach	sahn-avvie ⁸ sahn-nab-bee ⁸	NF ^f	bahn-zon-ip ⁸	
<i>Prunus fasciculata</i>	Desert almond	tonopi ^f	tonapi ^f		
<i>Prunus virginiana</i>	Chokecherry	tonap ^f doh-ish-ah-boo-e ⁸	tonapi ^f toh-ish-a-booe ⁸		
<i>Prunus</i> sp.	Chokecherry	tonap ^f tonopi ^f	tonapi ^f		
<i>Psathyrotes annua</i>	Turtle back	sebu-moh-goon-a-bu ⁸		yoh-nip ⁸	
<i>Psathyrotes ramosissima</i>	Turtle back	ka-sigh-yah-gave ⁸ sebu-moh-goon-a-bu ⁸	see-boh mo-goon-ub ⁸ sigh-yah-gava ⁸	quoy-hee nut-zoo ⁸	

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<i>Psoralea</i> sp.	Scruf-pea	kwaovi ^f			
<i>Psorothamnus fremontii</i>	Fremont indigo-bush	kaatamon ^{mp} ^f	i- <u>era</u> -midja (mp) ⁸ i- <u>eramidja</u> r	<u>quee</u> -um-be ⁸ tuh- <u>goo</u> -buss-e-emp ⁸	
<i>Psorothamnus polydenius</i>	Dotted dalea			muipuh ^c	NF ^c
<i>Purshia glandulosa</i>	Buckbrush	u'nup ^c		hunavi ^c	
<i>Purshia stansburiana</i> (=Purshia mexicana and Cowania mexicana)	Cliffrose	ɬnap ^f uh- <u>nop</u> (mp) ⁸ hunap ^c	uhnop ^f NF ^d	hunavi ^c <u>be-ah-huh</u> -nabbe ⁸ <u>huh</u> -nabbe ⁸	
<i>Purshia tridentata</i>	Bitterbrush,	unap ^c NF ^f	<u>huh</u> -na-bee ⁸	<u>huh</u> -nabbe ⁸ <u>linna</u> -huh-nabbe ⁸	
<i>Purshia</i> sp.	Cliffrose	hunap ^c		hunavi ^c	
<i>Quercus gambelii</i>	Gambel oak, Scrub oak	tuav ^c	kwiav ^c		tsiginoh ^c tsigino ^c we'a ^c
<i>Quercus</i> sp.	Oak	kwi'-uv (k) ⁶ to-mum-piv (lv) ⁶ hēm'-pah (c) ⁴ kwe'-av ⁴ we-am'-pe (c) ⁴ hēm'-pah (c) ⁴	tom ^{mp} pi ^f tuav ^c kwiav ^c tomump ^f tomumpi ^f	wé-ah (ps) ⁴	wiya ⁹
<i>Rhus aromatica</i>	Skunkbush, Sumac	i'is ^c	su'uv ^c u'up ^c		

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<i>Rhus trilobata</i> (all varieties)	Squawbush	e-is ⁴ i'isi ^f i-siv ⁶ (lv) ⁶ shen-pimp ⁶ (lv) ⁶ suuv ^b shuuv ^b siuvimp ^f huupi ^f see-a-wimp (mp) ⁸	huiupi ^f su'uvimp ^f i'isi ^f suuvimp ^f i'is ^f see-a-wimp ^f see-awimp ^f su'uv ^{d,f} su'uv ^e		
<i>Rhus sp.</i>	Skunkbush, Lemonade- berry, Sumac, Poison oak	i'is ^c	su'uv ^c	nat'-soo o'k ⁴	
<i>Ribes aureum</i>	Golden currant	bo-gumbe ⁸ poh-oh-bis ⁸	NF ^f	bo-gumbe ⁸	
<i>Ribes cereum</i>	White squaw currant	NF ¹	NF ^c	bogombi ^c	
<i>Ribes velutinum</i>	Desert gooseberry	NF ^c		NF ^c	NF ^c
<i>Rorippa sp.</i>	Watercress	NF ^d			
<i>Rosa woodsii</i>	Woods wild rose	pikikurump ^c	see-avvie ⁸	siwa'vit ^c cimbi ^c see-avvie ⁸ see-am-bip ⁸	NF ^c
<i>Rosa sp.</i>	Wild rose	tsi-am-piv (lv) ⁶ pikikurump ^c	su'impipi ^f	tsé-ab ^{1b4}	
<i>Rubus sp.</i>	Raspberry	nagauvwanatumpipi ^f		see-am-bip ⁸	
<i>Rumex crispus</i>	Curly dock, Wild rhubarb	nambitu ^c enga-pah-wee-ub ⁸	pah-wee-ah ⁸ pah-wee-ub ⁸	be-ja-no-ko ⁸ dim-woo-ee ⁸ enga-pa-wee-ah ⁸ new-wha no-ko ⁸	

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<i>Rumex sp.</i>	Rhubarb	nambitu ^c <u>tuha-kono-be</u> ⁸	ku'u ^b <u>tuha-kono-gip</u> ⁸	<u>bah-rah-zip</u> ⁸ <u>tuha-konobe</u> ⁸ <u>wya nut-zoo</u> ⁸	
<i>Salazaria mexicana</i>	Bladder sage	NF ^f			
<i>Salix exigua</i>	Coyote willow	kanav ^{b,c} <u>kah-nav</u> (mp) ⁸ <u>coo-see</u> suh- <u>ee-be</u> ⁸	<u>soo-vee</u> ⁸ suh- <u>ee-be</u> ⁸ suh- <u>ee-wee</u> ⁸	kwishisuuvi ^o coo- <u>see see-bupe</u> ⁸ <u>soo-vee</u> ⁸ suh- <u>ee-be</u> ⁸	su'huva ^c
<i>Salix gooddingii</i>	Goodding willow	pakanav ^b	pawaxanav ^c	suuvi ^e	
<i>Salix sp.</i>	Willow	kahn-nahv (lv) ⁴ sah'b (c) ⁴ kah-nahv ⁴ sah-kahv ⁴ kan-av ⁴ (k) ⁴ ka-nav (lv) ⁶	kanavi ^f kah-nav ^f kahnnav ^f pakanav ^b pawaxanav ^e	se-o6-be (ps) ⁴ sē-yu'b ⁴ sē-yu-be ⁴ so6-be ⁴	su-hu-vee ^e
<i>Salsola iberica</i>	Russian thistle, Tumbleweed	manavip ^b	manav ^c		
<i>Salvia columbariae</i>	Chia sage, California sage	sangwav ^f saywav ^f	pasiits ^o patsits ^f	pacita ^e	pacita ^e
<i>Salvia dorrii</i>	Purple sage, Indian tobacco	nungwukoap ^c kwatamanum ^e	NF ^e kanarukoap ^b		
<i>Salvia sp.</i>	Sage	siguwii ^f pasiits ^c sangwav ^f see- <u>goo-we-up</u> ^f see ^o goowe-up ^f see- <u>goo-we-up</u> (mp) ⁸ nungwukoap ^b	nungwukoap ^c kwatamanum ^e saywav ^f sigimwiap ^f <u>kung-nuh sah-wabbe</u> ⁸ too- <u>bee</u> she-gin-oop ⁸	<u>kahn-gwanna</u> ⁸ suh- <u>goo-wee-up</u> ⁸ <u>toya-abba-hobe</u> ⁸ <u>toya-tim-ba-zip</u> ⁸	

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<i>Sambucus</i> sp.	Elderberry	koo-booie-du-ney ⁸ koon-oo-gip ⁸ ko-nó-wip' (c) ⁴	who-booie ⁸ hoo-boo ⁸ koo-noo ^{ch4} kunukwi ^f kunuxwi ^f	duh-he-yemba ⁸ du-yembe ⁸ hoh-tiem ⁸	
<i>Sarcobatus vermiculatus</i>	Greasewood	yah-tahmp' (lv) ⁴ tah-uh-be ⁸ toh-no-be ⁸	yah-tamp' ⁴ tone-oh-bee ⁸ NF ^f	to-nó-be (ps) ⁴	
<i>Scirpus acutus</i>	Hard-stem bulrush	to'oivi ^f			
<i>Scirpus validus</i>	Soft stem bulrush, Tule	to'oivi ^f			
<i>Scirpus</i> sp.	Bullrush, Big round tule	he' - taw (lv) ⁴ pow-ahv' (k) ⁴	to'oivi ^f manav ^d	sīn-vib ⁴ pah sīp ⁴ bah-sī'p ⁴	
<i>Sclerocactus</i> sp.	Fishhook cactus, Pineapple cactus	manav ^d	NF ^b		
<i>Selinocarpus diffusus</i>	Moonpod	NF ^f			
<i>Senecio</i> sp.	Groundsel	NF ^f			
<i>Sisymbrium altissimum</i>	Tumble mustard	wa'ai ^c			
<i>Smilacina stellata</i>	Solomon-seal	esha-tone-ub ⁸ pee-havvie ⁸	quoh-quavvie ⁸ quoy-quavvie ⁸	wah-toh-voh ⁸ wom-boh-nomb ⁸	
<i>Smilacina</i> sp.	False solomon-seal, Coyote berry	NF ^f			
<i>Solanum</i> sp.	Nightshade	ah-dye-ee na-tizuah ⁸			

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<i>Solidago</i> sp.	Goldenrod	NF ²			
<i>Sonchus oleraceus</i>	Common sow-thistle	mamoiv ^b	mamui ^v ^b		
<i>Sphaeralcea ambigua</i>	Apricot globemallow, Desert globemallow	tupwiv ^{b,c}	NF ^c		
<i>Sphaeralcea</i> sp.	Globemallow	tupwiv ^c kupinav ^f	ku'pinav (mp) ^f NF ^b	quoin-oh-combee ⁸ quoya-no-comb ⁸ see-quoy no-ko ⁸ wee-dah-gom ⁸ wee-doh-comb ⁸	
<i>Sporobolus airoides</i>	Bunchgrass, Alkali sacton	NF ^f			
<i>Sporobolus</i> sp.	Dropseed	postushukunt ^f pas-tu-shu-kunt ^f	kwakwai ^f		
<i>Stanleya pinnata</i>	Prince's-plume, Indian spinach	tumar ^{b,f} namvit ^f tumar ^{c,c} tumar ^f who-goo-buh ⁸	nambitu ^f tumar ^f nambitu ^f tumar ^f whoo-goop ⁸	tuhuara ^c tu'mara ^c woy-boh-numb ⁸	yuhuara ^c NF ^c
<i>Stephanomeria exigua</i>	Wire lettuce	NF ^b			
<i>Stephanomeria</i> sp. <i>spinosa</i>	Spiny wire lettuce, Gum bush	NF ^c		NF ^c	
<i>Stephanomeria tenuifolia</i>	Slender wirelettuce	tuwishanakup ^b	NF ⁸	NF ⁸	

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<i>Stipa comata</i>	Needle-and-thread grass	NF ^a		
<i>Stipa hymenoides</i> (see <i>Oryzopsis hymenoides</i>)	Indian ricegrass	wa'ai ^c	wai ^c	pacita ^c
<i>Stipa speciosa</i>	Desert needlegrass	NF ^c		NF ^o
<i>Stipa</i> sp.	Indian ricegrass	wa'aiv ^c		
<i>Streptanthella longirostris</i>	Wild mustard, Long-beak fiddle-mustard	NF ^{e, f}		
<i>Streptanthus cordatus</i>	Heartleaf twistflower, Wild mustard	NF ^{e, f}		
<i>Suaeda torreyana</i>	Seepweed	NF ^e	ah-rumb (mp) ⁸	attem ⁸
<i>Suaeda</i> sp.	Seepweed	ahrr ^f aah-ap-weep ^f	sah-ap-weep ^f NF (lv)(p) ^f	
<i>Swertia albomarginata</i>	White-margined swertia	NF ⁸		
<i>Swertia</i> sp.	Swertia	kwiu ^f		coo-see diy-oh-savva ⁸
<i>Symphoricarpos longiflorus</i>	Long-flower snowberry	NF ^{e, f}	sahn-ah-vee ⁸	
<i>Tamarix</i> sp.	Tamarisk	pantumaav ^b		
<i>Tessaria sericea</i>	Arrow weed	sah-wape (mp) ⁸	NF ^{b, e, f}	

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<i>Tetradymia canescens</i>	Gray horsebrush			nah-ga-ha-boh-be ⁸ pah-vah-bah-hoe-be ⁸ tah-beese-ee-goop ⁸	
<i>Tetradymia</i> sp.	Horsebrush	coo-see see-bupe ⁸ see-goop-e ⁸	too-hah-see-goop-ee ⁸	coo-see see-bup ⁸ coo-see see-bup-e ⁸	
<i>Thalictrum fendleri</i>	Meadow rue			boss-oo-guay ⁸	
<i>Thamnosma montana</i>	Turpentine bush	NF ^{e,c}	kaiva sixwana ^b	mo-gun-du ⁸ moh-goon-du-oop ⁸	
<i>Thelypodium integrifolium</i>	Wild cabbage	nambitu ^c	NF ^f		
<i>Townsendia scapigera</i>	Eaton's townsendia	NF ^f			
<i>Townsendia</i> sp.	Townsendia	NF ^f			
<i>Typha domingensis</i>	Cattail, Southern cattail	NF ^{e,f}		toyh ^e	NF ^c
<i>Typha latifolia</i>	Cattail, Broad-leaf cattail	taw-e'-vah (lv) ⁴ to-oiv (k) ⁴ tø'iv ^b	pant-sahwav ^b NF ^c	toyh ^e taw'-e ⁴ toi ⁴	NF ^c
<i>Typha</i> sp.	Cattail	taw-e'-vah (lv) ⁴ to-oiv (k) ⁴ ta-oiv ⁷	tonovi ^f tonoz ^f		
<i>Urtica</i> sp.	Nettle	quee-bah-noop ⁸	quee-quawn-oop ⁸	by-wee-ah ⁸	
<i>Valeriana</i> sp.	Valerian, Tobacco root	NF ^f			

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Veronica anagallis-aquatica</i>	Speedwell	NF ^e			NF ^e
<i>Viguiera multiflora</i>	Showy goldeneye	NF ^f			
<i>Vitis arizonica</i>	Canyon grape, Wild grape	i'av ^e kuripsup ^e	NF ^b	muvasi ^e	
<i>Vitis</i> spp.	Grape	we'ump ^f			
<i>Wyethia</i> sp.	Mules' ear	taxuichaxantiip ^f tixu'si taxanti ^f taxu'itcaxantiip ^f	tikoitcixantiip ^f tixu'si taxantiip ^f		
<i>Yucca baccata</i>	Banana yucca, Blue yucca	uusiv ^{b,c} wiisiv ^b tachumpi ^f tachumpi ^f	uusif ^f tcimpi ^f o-u-se ^f u'wivi ^e	NF ^e	
<i>Yucca brevifolia</i>	Joshua tree	tachumpi ^f NF ^e		umpu ^e	
<i>Yucca kanabensis</i>	Kanab yucca	NF ^a			
<i>Yucca schidigera</i>	Mojave yucca, Spanish bayonet	tachump ^e u'vimp ^e tachumpi ^f	uusivif ^f uusiv ^f	NF ^e	
<i>Yucca</i> sp.	Yucca	cho-ram'-pik (k) ⁶ sam-ah'-vip (k) ⁴ tsam-a-vip ⁷ tcimpi ^f u'wivi ^e wiisiv ^b tachumpi ^f	uusif ^f o-u-se ^f uusivif ^f tachumpi ^f uusiv ^f uus ^f		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Tetradymia canescens</i>	Gray horsebrush			nah-ga-ha-boh-be ⁸ pah-vah-bah-hoe-be ⁸ tah-beese-ee-goop ⁸	
<i>Tetradymia</i> sp.	Horsebrush	coo-see see-bupe ⁸ see-goop-e ⁸	too-hah-see-goop-ee ⁸	coo-see see-bup ⁸ coo-see see-bup-e ⁸	
<i>Thalictrum fendleri</i>	Meadow rue			boss-oo-guay ⁸	
<i>Thamnosma montana</i>	Turpentine bush	NF ^{e,c}	kaiva sixwana ^b	mo-gun-du ⁸ moh-goon-du-oop ⁸	
<i>Thelypodium integrifolium</i>	Wild cabbage	nambitu ^c	NF ^f		
<i>Townsendia scapigera</i>	Eaton's townsendia	NF ^f			
<i>Townsendia</i> sp.	Townsendia	NF ^f			
<i>Typha domingensis</i>	Cattail, Southern cattail	NF ^{e,f}		toyh ^e	NF ^c
<i>Typha latifolia</i>	Cattail, Broad-leaf cattail	taw-e'-vah (lv) ⁴ to-oiv (k) ⁴ tø'iv ^b	pant-sahwav ^b NF ^c	toyh ^e taw'-e ⁴ toi ⁴	NF ^c
<i>Typha</i> sp.	Cattail	taw-e'-vah (lv) ⁴ to-oiv (k) ⁴ ta-oiv ⁷	tonovi ^f tonoz ^f		
<i>Urtica</i> sp.	Nettle	quee-bah-noop ⁸	quee-quawn-oop ⁸	by-wee-ah ⁸	
<i>Valeriana</i> sp.	Valerian, Tobacco root	NF ^f			

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Veronica anagallis-aquatica</i>	Speedwell	NF ^e			NF ^e
<i>Viguiera multiflora</i>	Showy goldeneye	NF ^f			
<i>Vitis arizonica</i>	Canyon grape, Wild grape	i'av ^e kuripsup ^e	NF ^b	muvasi ^e	
<i>Vitis</i> spp.	Grape	we'ump ^f			
<i>Wyethia</i> sp.	Mules' ear	taxuichaxantiip ^f tixu'si taxanti ^f taxu'itcaxantiip ^f	tikoitcixantiip ^f tixu'si taxantiip ^f		
<i>Yucca baccata</i>	Banana yucca, Blue yucca	uusiv ^{b,c} wiisiv ^b tachumpi ^f tachumpi ^f	uusiv ^f tcimpi ^f o-u-se ^f u'wivi ^e	NF ^e	
<i>Yucca brevifolia</i>	Joshua tree	tachumpi ^f NF ^e		umpu ^e	
<i>Yucca kanabensis</i>	Kanab yucca	NF ^a			
<i>Yucca schidigera</i>	Mojave yucca, Spanish bayonet	tachump ^e u'vimp ^e tachumpi ^f	uusiv ^f uusiv ^f	NF ^e	
<i>Yucca</i> sp.	Yucca	cho-ram'-pik (k) ⁶ sam-ah'-vip (k) ⁴ tsam-a-vip ⁷ tcimpi ^f u'wivi ^e wiisiv ^b tachumpi ^f	uusiv ^f o-u-se ^f uusiv ^f tachumpi ^f uusiv ^f uus ^f		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Zigadenus paniculatus</i>	Foothill death camas	<u>koggie-a-den-up</u> ⁸ <u>see-goh-oh</u> ⁸	<u>tah-beese-e-goh</u> ⁸	<u>tah-bah-she-go</u> ⁸ <u>tah-vah-see-go</u> ⁸	
<i>Zigadenus</i> sp.	Meadow death camas	<u>koggie-a-den-up</u> ⁸	<u>see-go oh-buh</u> ⁸		
Gramineae (grass family)	Grass	<u>pa-wah'</u> (lv) ⁴ <u>hoo-wēv'</u> (c) ⁴ <u>u-gwiv'</u> (k) (lv) ⁶	<u>o-gweeb'</u> (k) ⁴ <u>u-gu'-siv</u> (k) ⁶ <u>oo-kwiv'</u> ⁴	<u>Sah'-nip'</u> <u>Só-nip'</u> <u>Só-nip'</u> <u>Pah'-mah-hap'</u>	

¹ Work done by Powell between 1867-1880: (Fowler and Matley, 1979)
² Work done by Euler between 1956-1966: (Euler, 1966)
³ Work done by Palmer before 1946: (Palmer, 1978)
⁴ Work done by Merriam between 1902- 1935: (Merriam, 1979)
⁵ Work done by Sapir in 1910: (Sapir, 1910)
⁶ Work done by Powell in 1873: (Fowler and Fowler, 1971)
⁷ Work done by Presnall in 1936: (Presnall, 1936)
⁸ Work done by Train between 1935-1941: (Train, 1957)
⁹ Handbook of North American Indians-Great Basin (Vol. 11, "Owens Valley Paiute") D'Azevedo, 1986

^a Stoffle et al., 1996
^b Stoffle et al., 1994
^c Stoffle et al., 1994b
^d Stoffle et al., 1989b
^e Stoffle et al., 1990
^f Stoffle and Dobyns, 1982
 Stoffle and Dobyns, 1983
 Stoffle et al., 1983
⁸ Names by CGTO members; April 1996 NTS EIS meeting.

NF = Not found; mentioned in text but no Indian name given.
 (c) = Chemehuevi
 (k) = Kaibab
 (lv) = Las Vegas
 (mp) = Moapa Paiute
 (p) = Pahrump Paiute
 (ps) = Panamint Shoshone

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**Table 2 One Hundred and Seventy Native American Traditional Use Animals
on NNSS and NTTR**

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Table 2 One Hundred and Seventy Native American Traditional Use Animals on NNSS and NTTR

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
Mammals					
Family Antilocapridae					
<i>Antilocapra americana</i>	Pronghorn Antelope	Won'-sits (k) ⁶ Wants ⁵ (lv) ⁶ Wahn-ze ⁴ Wongs ⁴	Wahntz (k) ⁴ Waknch ⁴ Waantsi ^f	Wan-zee ⁸	
Family Bovidae					
<i>Ovis canadensis</i>	Desert Bighorn Sheep	Na'-guts (k) ⁶ Na'-k ^w (lv) ⁶ Naaxa ⁵ Nahk (k) ⁴	Nah ^{ch4} Nahk ⁴ Nah-gah ⁴ Naax ^b		
<i>Ovis sp.</i>	Bighorn Sheep	Nah'-gah (lv) ⁴	Nah ^{cht} (c) ⁴ Nahk' (k) ⁴	Wah'-soo-be (ps) ⁴ Wah'-süp ¹⁴ Wah'-soo-pe ⁴ Wahs-pe ⁴	
Family Canidae					
<i>Canis latrans</i>	Coyote	Yo-go-wo'-tsi (k) ⁶ Yoxovwits ⁵ Yoxovutsi ⁵ Senangwavi ⁵ Turasonav ⁵ Turasinav ⁵ Tā'-rā-shin'-nav (lv) ⁴	Sin-nav ⁴ Shin-nah-ab ⁴ Turasona'av ^b Turahsunav ^c Sin-nav' (c) ⁴ Yo-go'-bits (k) ⁴	E-shah-wi'-pah (ps) ⁴ Ē-jap'-pah ⁴ E'-jah ⁴ E'-chah ⁴ It'-za ⁶	
<i>Canis sp.</i>	Coyote	tu-er-shin-avi ⁷		Duhvoo-ee-jah ⁸	Ee-sha ⁸
<i>Vulpes maerotis</i>	Kit fox			Kuida moss-suguee ⁸	

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Vulpes</i> sp.	Fox	Yú-íp (lv) ⁴	Yó-putch (lv) ⁴ Yu-pats (c) ⁴	Ye-putch-ah (ps) ⁴ Yu-pitch'-e ⁴ Wah'-ne ⁴	
--	Fox	Sah-vi'-puts (k) ⁴ Hú-pats (k) ⁶ Un-sí'-ats (k) ⁶ Hunt-sí' (lv) ⁶ Tawangwaimpitsi ⁵ Hon-zá' (lv) ⁴	Sin-nants ⁴ Tah-vahn-set ⁴ Hon-za ⁴ Onsi'its ^b Onsi'ikarum ^b Hon-ze (c) ⁴	Wo'-tse-ah (ps) ⁴ Wah'-ne ⁴ Wah-je'-ah ⁴ Wo'-tse-ah ⁴ Wa-ni ⁶ Wo-tsi-a ⁶ (small)	
Family Cervidae					
<i>Odocoileus hemionus</i>	Mule Deer	Tu-we-ah ⁴ Yu-oo-e ⁴ Too-hoo'-e (lv) ⁴	Too-hoo-e ⁴ Tuxia ^b Tū-hē ⁴ Tū-ě' (k) ⁴	Dū-yah (ps) ⁴ Dū'-he ⁴ Tū-hē'-yah ⁴ Toó-ho'-yah ⁴	
<i>Odocoileus</i> sp.	Deer	Ti'-ats (k) ⁶ Tu-i (lv) ⁶ Tuxia ⁵ Tuuyi ^f	Tuhi ^c Tuhuya ^c Tē-he' (lv) ⁴ NF ^b	Duhayet ^c Ti-hi ⁶	Tahenah ^c Tuh'ena ^c Tu-he-nah ⁸
Family Cricetidae					
<i>Neotoma</i> sp.	Wood Rat	Kats (k) ^{6,4} Kaatsi ⁵ Kaht' (k) ⁴	Kahts ⁴ Kaats ^b Kahts' (lv), (c) ⁴	Kow'-wah (ps) ⁴ Kah ⁴	
--	Wood Rat			Gah" ⁴	
--	Rat	Kāts (lv) ⁶			
<i>Peromyscus</i> sp.	Mouse	Poo-e'-chet (k) ⁴ Poo-e-tsets ⁴ Poo-in'-chets (lv) ⁴	Poo-e-chet ⁴ Poo-in-chets ⁴ Poo-in'-jets (c) ⁴	Poo'-ī (ps) ⁴ Bo'-ni ⁴ Po'-ni ⁴ Poo-nah ⁴	

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
--	Mouse	Pu'ichats ^{5, b} Pöm poo'-e-chet (k) ⁴	Moi (s) ⁴	Po-an'-chah (ps) ⁴	Poong-way-szhee ⁸
Family Equidae					
<i>Equus</i> sp.	Horse	Kah-wi'-yu (ps) ⁴ Wah-ar'-ar (c) ⁴	Kah-vah ⁴	Poo'nk ⁴ Bun'-go ⁴	
Family Erethizontidae					
<i>Erethizon dorsatum</i>	Porcupine	Yungumputsi ⁵ Ye-num-puts (k) ⁴ Ye-hum-puts ⁴	Ye-num-puts ⁴ Yu ^{ch} ⁴ NF ^b		
<i>Erethizon</i> sp.	Porcupine	Yu ^{ch} (lv) ⁴	Yüng (c) ⁴ Ye-num'-puts (k) ⁴	Yü'-hü (ps) ⁴ Yen" ⁴ Yü'-hü ⁴ Yo'-hah ⁴ Tsa'-gwit ⁶	
Family Felidae					
<i>Felis concolor</i>	Mountain Lion	Tu-ma'-mu-ints (lv) ⁶ Tukumumutsi ⁵ Piaruku ⁵ 'Kummo-muts (k) ⁴ Too-koó-mo-munch (lv) ⁴	Too-koo-puts ⁴ To-ko-mo-muts ⁴ Too-koo-mo-munch ⁴ Piaruk ^b Tö-koo'-muts (c) ⁴	Too-koo'-muts (ps) ⁴ Toi-yä-too'-koo ⁴ To-ko-bitch ⁴ Mi'-yum-be ⁴ Kong'-gwi-tu-nu ⁶	Too-ku-vitchs ⁸
<i>Lynx rufus</i>	Bobcat, Wildcat	Tukuputs ^b	Tukuvits ^c	NF ^c	
<i>Lynx</i> sp.	Bobcat, Wildcat	To-ko'-puts (k) ⁶ Tök (lv) ⁶ Tukutsi ⁵ Tukuputs ⁵ NF ^b	Took ⁴ Took ⁴ Mo-sahts ⁴ Tukuvits ^c Too-koo'-puts (k) ⁴	Too'-koo'-vitch (ps) ⁴ Doo'-ko-vitch ⁴ Too'-ko-vitch ⁴ Too'-ko-bitch ⁴ To'-ko-pik ⁶	Too-ku-vitchs ⁸

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Lynx</i> sp.	Bobcat, Wildcat			NF ^c	
Family Geomyidae					
<i>Thomomys</i> sp.	Pocket Gopher	Muyumpitsi ⁵ Mü'-e (c) ⁴	Mwe-em-puts ⁴ Mü-e (lv) ⁴ Me-im'-put (k) ⁴	Yu-ab'-bitch (ps) ⁴ Yë'-hah'-vitch ⁴ Yë'-hah'-vitch ⁴ Ye-hah'-vitch-e ⁴	
--	Gopher	NF ^f			
Family Heteromyidae					
<i>Dipodomys</i> sp.	Kangaroo Rat	Pi-yu-ah ⁴ Pi'-ah (c) ⁴ Tä-wä'-tet (k) ⁴ Pi' (lv) ⁴	Tah-we-tat ⁴ Pi-im'-buts ⁴ tom-we-a-tats ⁷	Pi'-yu (ps) ⁴ Bi'-e ⁴ Pi'-yu ⁴	
<i>Perognathus</i> sp.	Pocket Mouse	Pi-im-buts (k) ⁴			
Family Leporidae					
<i>Lepus californicus</i>	Black-tailed Jackrabbit	Ka-mu (k) ⁶ Kam (k), (lv) ⁶ Kaam ⁵	Kahm (k) ⁴ Kaam ^b Kamuntsi ^f		
<i>Lepus</i> sp.	Rabbit	Tä-voots' (lv) ⁴ Tah-voots' (c) ⁴ Tah-wuts' (k) ⁴	Kahm' (lv), (c), (k) ⁴	Kah'-moo (ps) ⁴ Tä'-boo'-tse (ps) ⁴ Tah'-bo ⁴ Tah'-bot-se ⁴ Gah'-mo ⁴ Kah'-mo ⁴ Kah'-mah ⁴ Be'-ah gah'-mo ⁴ Be'-ah qah'-mo ⁴ Ta-vut'-si ⁶ Tsi-gut'-si ⁶	

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Lepus sp.</i>	Rabbit			Ka-mut'-si ⁶ To-ha'-kum ⁶	
--	Jackrabbit	Kamb ^c		Kamusi ^c Tavusi ^c	Kuma ^c Ka-mua ^g
--	Rabbit	Tsok-um (k) ⁶ Kamb ^c	NF ^b		
<i>Sylvilagus audubonii</i>	Desert Cottontail	Ta-vwōts' (k) ⁶ Ta-vōts (lv) ⁶ Tavutsi ⁵ Tah-wuts (k) ⁴ Tah-boots ⁴	Tah-vuts ⁴ Ta-voots ⁴ Tavuts ^b Tavuuts ^f		
<i>Sylvilagus sp.</i>	Cottontail	Taviti ^c	Tavuuts ^c	Dah-voo ^g	Taputsi ^c Ta-votsi ^g
Family Mustelidae					
<i>Spilogale putorius</i>	Western Spotted Skunk	Kah'bo-ne (k) ⁴ Kah Bo-na ⁴	Kah-bo-na ⁴		
<i>Spilogale sp.</i>	Skunk	Kah'-bo-nā (lv) ⁴ Kah'bo-nē (k) ⁴	Kah'-bo-ne (c) ⁴	Yu-hah ⁴	
--	Skunk	Pu'-ni (k) ⁶ Poni'a ⁵ Po-nē' (k) ⁴ Po-ne-ets (lv) ⁴	Po-na ⁴ Po-ne-ets ⁴ Poni ^b Pō-ne' (c) ⁴	Po-nē'-ētš (ps) ⁴ Bō'n-he-atz ⁴ Baw'-ne-yāts ⁴ Po-hoi'-ats ⁴ Po'-nint ⁶ bo-ho-yetz ^g	
<i>Taxidea taxus</i>	Badger	Hūn (lv) ⁶ ʕnampṭsi ⁵ Un-nam-but (k) ⁴	Hoon ⁴ To-chi-e ⁴ ʕnampṭs ^b		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Taxidea</i> sp.	Badger	Hoon' (lv), (c) ⁴	Un-nam'-but (k) ⁴	Ho'-nah ⁴ Hoo'-nah ⁴ Hoo-nah ⁴ Ho'-nan ⁶ Hoo'-nah (ps) ⁴	
--	Weasel	Sü-süg (lv) ⁴	Pah-rook' (c) ⁴ Pah-ve'-chit (k) ⁴	Bah'-bitch-ē't ⁴ Bah'-tsoo-goo ⁴ Pah'-moo-kah ⁴ Soo'-soo-gah (ps) ⁴	
Family Procyonidae					
<i>Bassariscus astutus</i>	Ringtail	Kah-goots ⁴ te-av-ats ⁷			
<i>Bassariscus</i> sp.	Ringtail	Hö-run'-tah-vahts (c) ⁴		Kah'-wo-dze'-ah (ps) ⁴	
Family Sciuridae					
<i>Ammospermophilus leucurus</i>	White-tailed Antelope Squirrel	Tava'atsi ⁵ Tav-vat (k) ⁴	Ta-bats ⁴ Ta-vats ⁴		
<i>Eutamias</i> sp.	Chipmunk	Ta-vwöts (k) ⁶ O'gun'-to-ats (k) ⁶ O'-i-chots (lv) ⁶ Oxontava'atsi ⁵ Tava'atsi ⁵ Ho-ä'-tsits (lv) ⁴	Tavarungkwits ⁵ Oi-chits (k) ⁴ O-gon tav-vah-ats ⁴ Ho-a-tsits ⁴ Tavarungkwits ^b Ko-e'-tsets (c) ⁴ a-oits-its ⁷	Woi-che (ps) ⁴ Woi ⁴ Wah'-oi ⁴ Woh'-oi ⁴ Wo-i'-tsi ⁶	
<i>Citellus</i> sp.	Ground Squirrel	O'itsitsi ⁵ Aw-oi-chits (k) ⁴	Ki-vah skoots ⁴ Skwe-ets ⁴	Ing'wa ^c Zip-pe (field dwelling) ⁸ Guhm-be (white belly, lives in desert) ⁸	

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
--	Squirrel	Skāts (k) ⁶ O-'gun'-to-ats (k) ⁶ Si-kuts' (lv) ⁶ Sé-koots (lv) ⁴ Su-koots' (c) ⁴ Skoot' (k) ⁴ Skwe'-ěts (lv) ⁴ Sü-pe' (c) ⁴ Aw-oi'-chits (k) ⁴ Ye-we'-set (k) ⁴ u-wish-its ⁷	Skuts ^{5,b} Sikuts ^{5,b} Skuuts ^c Un-tsup' (k) ⁴ Tah-vats' (lv) ⁴ Tah-vahts (c) ⁴ Tav-vať (k) ⁴ Ho-ur-tā-vats (c) ⁴ Ah-wun' tah-vat (k) ⁴ NF ^f	Hoo'-kōn-tah-bi' (ps) ⁴ Tā-vah'-che (ps) ⁴ Kōng'-ah (ps) ⁴ O-wun'-dah-vi (ps) ⁴ Eng'-wah (ps) ⁴ Tseep' ⁴ Che'-gah ⁴ Kūmp ⁴ Wung-gwah'-rah-bi ⁴ Koom'-pi ⁴ Che'-gā ⁴ Woh'-i ⁴ Dah'-wah-ni ⁴ Tah'-bi-i ⁴ Tsi'-pish ⁶ Tav'-a ⁶ Ko'-gwi ⁶	
Family Vespertilionidae					
--	Bat	Pacha'ats ⁵ Pāt-sats ⁴ Paht-sats (c) ⁴ Pā'-tsats (k) ⁴	Pah-chats ⁴ Pats-ats (lv) ⁴ Pacha'ats ^b	Ho'-no-vitch ⁴ Ho-no-bitch (ps) ⁴ Ho'-e-nah vitch'-e ⁴	
Reptiles					
Family Iguanidae	Iguanids				
<i>Crotaphytus collaris</i>	Collared Lizard	Kan'-ne moi-kar-rat' (k) ⁴ pomp-ots-ats ⁷	Tom-po'-tsat' (lv) ⁴ Tum-bo-tats (ps) ⁴ Towm-po'-tsuts (c) ⁴	Tum'-bo-tats' (ps) ⁴ Po'-go-che ⁴ Tem'-im-boi ⁴	

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Crotaphytus collaris</i>	Collard Lizard			Doo-kor'-a-ke ⁴	
<i>Gambelia wislizenia</i>	Leopard Lizard	Chah-a-mi-ahv (k) ⁴ Too-ar-rah ⁴ Sah-we'-vah (c) ⁴	Neu-mah-zing-ahts ⁴ Si-vah (lv) ⁴	Sow'-we-vah ⁴ Sah'-we-vah ⁴	
<i>Sauromalus obesus</i>	Chuckwalla	Saxwar ⁵ Chah-kwar-rah (k) ⁴ Tsah-wahr' (lv) ⁴ Sow-wahr' (c) ⁴	Sahk-war-rah ⁴ Tsah wahr ⁴ sa-wha-rha ⁷ Chah-kwar'-rah (k) ⁴	Sow-war'-rah (ps) ⁴ Sah-gwar'-rah ⁴	
<i>Sceloporus magister</i>	Desert Spiny Lizard	Tsahng-ahv (k) ⁴ Chahng-ahnts ⁴ tsang-a ⁷	Ching-ki-ahng-ah ⁴ Tsang-ants ⁴		
<i>Sceloporus</i> sp.	Lizard	Changa ⁵ Tsahng-ahv (k) ⁴ Chahng-ahnts ⁴	Ching-ki-ahng-ah ⁴ Tsang-ants ⁴ Changa' changats ^f		
--	Lizard	Su-gu'-pits (k) ⁶ Mu-gwi' (lv) ⁶ Pompotsatsi ⁵ Tsang-ants (lv) ⁴ Tsang-ah' (c) ⁴	Moxwia ⁵ Suxuputsi ⁵ Mow'-wav'-ve (c) ⁴ Tsahng-ahv ⁴	Tim'-puts ⁶ Pa'-vo-go-nai ⁶ Poh-gwua-gee ⁸ Po-goi'-che (ps) ⁴ Ah-wah'-poi (ps) ⁴ Ki'-e-too-ar (ps) ⁴ Tü'-moi ⁴ Dě'-hoi ⁴ Dem'-mon-zah ⁴	
Family Colubridae	Colubrids				
<i>Lampropeltus</i>	Common Kingsnake	Sing-ump (k) ⁴ Sung ⁴	Shing-aht ⁴ Nun-too-nav ⁴		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Pituophis melanoleucus</i>	Gopher Snake, Pine	Oxomp̄tsi ⁵ Ko-hum-but̄s (k) ⁴ Kaw' (c) ⁴	Kaw-kum-puts ⁴ Oxop̄ts ^b Ko-hum'-but̄s ⁴	Ko'-go (ps) ⁴ Pas'-sā-wah'-kah ⁴	
--	Snake	Ta-na'-kuts (lv) ⁶ Pah'-we-ēts (lv) ⁴ Nun'-too-nav' (lv) ⁴ Nin-din'-av (lv) ⁴ Pah-we'-ets (c) ⁴ Sing'-ump (k) ⁴	Kwi'-uts (lv) ⁶ Sēu-ung'-ah (c) ⁴ Ah-wah-rum pā-at (c) ⁴ Pah'-ro ahv' (k) ⁴	Pah-soo'-go (ps) ⁴ Ki'-ar-rār'-rah (ps) ⁴ Nā-boo'-ah-gwah-tsoo' (ps) ⁴ Paś-se-neu ⁴ Gawk' ⁴ Pah'-rah go-ah ⁴ Ki'-yā gar'-rah ⁴ Wun'-gah-rah ⁴	Tah-go-ah ⁸
Family Viperidae	Pit Vipers				
<i>Crotalus</i> sp.	Rattlesnake	To-go'-avw (k) ⁶ O-lo'-ga (lv) ⁶ Toxoavi ⁵ Tanakitsi ⁵ To'-go-av'-ve (lv) ⁴	To-go-ahb (k) ⁴ To-ko-ahv ⁴ To-go-av-ve ⁴ Kwe-ets (c) ⁴ To-go-ahb' (k) ⁴	To-to'-a ⁶ Do-gowah ⁸ To-go'-ah (ps) ⁴ To'-gwah ⁴ To-qo'-ah ⁴ To'-go-ah ⁴	
Birds					
--	Bird	Wi'-chits (k), (lv) ⁶ Witsi'tsi ⁵	Witsi'tsi ^b	Ko'-cho ⁶ who-choo ⁸	Chee-pah ⁸
Family Accipitridae	Hawks, Kites, Eagles				
<i>Accipiter cooperii</i>	Cooper's Hawk	Wit se-mor-rat (k) ⁴ Kwe-sahp ⁴	Pah-rahm-puts ⁴ Kwe-sahp ⁴		

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Accipiter</i> sp.	Hawk, goshawk	Kwen-noonts-a-mord (k) ⁴	Ku-shav-i ⁷		
<i>Aquila chrysaetos</i>	Golden Eagle	Kwahn-ants (k) ⁴ Mung ⁴	Kwanants ^b		
<i>Buteo jamaicensis</i>	Red-tailed Hawk	Kwī-nat'-sits (k) ⁶ Kwanantsits ^{5,c} Kwah-nah-tsits (k) ⁴ Se-kan-na kwahn-ant ⁴ Qua-nats-its ⁷	Ta-ah kwah-nahts ⁴ Kwen-nan-zits ⁴ Kwsav ^b Quinnah ^c	NF ^c	
<i>Circus</i> sp.	Hawk, Harrier	Oong-aur-ats ⁷			
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Si-kwah (k) ⁴ Piakwanants ^b	Piasakwanants ^b		
--	Eagle	Kwi'-nants (k) ⁶ Mung-i'-puts (lv) ⁶	Kwanants ⁵ Kwanantsi ^f	Kwi'-na ⁶ Kivi-na ⁶ Bia' quinah ⁸	Quing-ah ⁸
--	Hawk			G'in-nee ⁸ Ing'-a-kwi-na ⁶ Sah-na qui-na ⁸ Ki'-ni ⁶	
Family Alaudidae	Larks				
<i>Eremophila alpestris</i>	Horned Lark	Turanwintsi' tsi ⁵ Nuva witsi' ts ⁵ Ter-rah-we-che (k) ⁴	Te-we-wit-se ⁴ Te-rah we-cha-its ⁴ Ne-vow-we-tsits ⁴		
Family Alcedinidae	Kingfishers				
<i>Ceryle</i> sp.	Kingfisher	Wun-na-tus (k) ⁴	Wun-nah-taht ⁴		

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Family Anatidae	Swans, Geese, Ducks				
<i>Anas clypeata</i>	Shoveler	Pa choog (k) ⁴			
<i>Anas platyrhynchos</i>	Mallard Duck	Oo-chuxa ⁵ Pe-at choog (k) ⁴ Choo ^{ch4}	Choog ⁴ Parrv ^b Uuchuxa ^b		
<i>Anas sp.</i>	Duck	Chuxa ⁵	Chux ^b	Pu'-yan ⁶ Buhn'yeeh ⁸	NF ^c Puh-yuh-ah ⁸
<i>Branta canadensis</i>	Canada Goose	Chakoarw ⁶ Ah-vin-kay-raht (k) ⁴	To-o-pah ⁴ Koo-res-sen ⁴		
--	Goose			Nu'-gud ⁶	
<i>Oxyura jamaicensis</i>	Ruddy Duck	Pi-ah-kwits (k) ⁴			
Family Ardeidae	Hérons, Egrets, Bitterns				
<i>Ardea herodias</i>	Great Blue Heron	Pah-too-koo ko-vah kahnt ⁴	Pah-koor-kuv ⁴ Nah-kwah ⁴	Wus'-sa ⁶	
--	Bittern	Tah-wah woo-ne-ker- rit (k) ⁴	Choo-goob (n) ⁴		
Family Caprimulgidae	Nightjars				
<i>Chordeiles acutipennis</i>	Lesser Nighthawk	Tuwawitsi'ts ^b			
<i>Chordeiles sp.</i>	Nighthawk	Mono'opangwits ⁵ Pe-utch (k) ⁴ Too-gow-wit-se ⁴	Mo-mo-pits ⁴ Mum-mo-paht ⁴	Du-va-go ⁸	
<i>Phalaenoptilus sp.</i>	Poorwill	Pan-no-witch (k) ⁴ Pah-nah-kwits ⁴	Pi-na-wits ⁴		

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Family Cathartidae	American vultures				
<i>Cathartes aura</i>	Turkey Vulture	Whu-gump'-uts (k) ⁶ Whi-ku'-puts (lv) ⁶ Wikumpatsi ⁵ We-kum-butts (k) ⁴	We-koo-puts ⁴ Week ⁴ NF ^b		
--	Vulture			Wi'-ho ⁶ Wee-whom-binch ⁸	Wee-hoo ⁸
Family Charadriidae	Plovers				
<i>Charadrius vociferus</i>	Killdeer	Pantuxuits ⁵ Pan-te-geetch (k) ⁴ Pahn-tig-wits ⁴	Pah-re koo-its ⁴ Pa-roo-goo-e'ts ⁴	Bah-zah-wee ⁸	
Family Columbidae	Pigeons and Doves				
<i>Zenaida macroura</i>	Mourning Dove	Iyov ^b	Ayov ^b		
--	Dove	Ai'-yuv (k) ⁶ Iyovi ⁵ Oi-uv (k) ⁴ Ha-o'v ⁴	Che-yu ^{ch4} He-ov ⁴ Hiav ^c Hiuv ^c	High-wee ⁸	Hay-wee ⁸
--	Pigeon	I-yov ⁴			
Family Corvidae	Jay, Magpies, Crows				
<i>Aphelocoma coerulescens</i>	Scrub Jay	NF ^b			
<i>Corvus brachyrhynchos</i>	American Crow	Paht-kot ⁴	Ah-tah-bits ⁴		
--	Crow			A'-ta ⁶ Hi ⁸	Cuta-puzee ⁸

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
<i>Corvus corax</i>	Common Raven	A-ta'-puts (k) ⁶ A-ta'-puts (lv) ⁶ Ataputs ⁵ Atakots ⁵ Tah-kwots (k) ⁴ Ha-ta-puits ⁷	Ah-tah-pah-ki'p ⁴ Tah-kwahts ⁴ Ah-tah-pwits ⁴ Ataputs ^b Atakots ^b		
<i>Cyanocitta sp.</i>	Jay	O-go'-chi-ok (k) ⁶ Oxo-chayaku ⁵ Ah-run Chi-ahk (k) ⁴	Sik-koo-ra-gwuts ⁴ Ho-gon Tsi-ahk ⁴		
<i>Gymnorhinus cyanocephala</i>	Pinyon Jay	Aanga ⁵ Ahng Uv-ve (k) ⁴ Ki-vah witch et ⁴ Ahng-av ⁴ Ahng ⁴	Tuvawitsi'ts ^b Tuvavwitsiits ^c Tuuv watsits ^c Yamp ^c	Guy-nutz ⁸	
--	Jay	Ong'-a (k) ⁶		Wi-at'-si ⁶	
<i>Pica sp.</i>	Magpie	Mama'kwa'yavi ⁵ Mah-kwi-ahv (k) ⁴ Mah-mah-kwe-as ⁴	Mah-mahk kwi-ahv ⁴ Mah-mah-kew-ahs ⁴	Kwi'-da-wo-i ⁶ Qwithe-woy-yoh ⁸	Cui-ta' go'ya ⁸
Family Cuculidae	Cuckoos, Roadrunners, Anis				
<i>Geococcyx sp.</i>	Roadrunner	Nants (k) ⁵ Wuts (k) ⁴	Ko cha bo'ki ⁴ Oo'ts ⁴		Unnup-pi ⁸
Family Emberizidae	Emberizid Finches and Allies				
Subfamily Cardinalinae	Cardinal-Grosbeaks				
<i>Passerina cyanea</i>	Indigo Bunting	NF ^b			

Scientific Name	Common Name	Southern Paiute Ethnic Group Names		Western Shoshone Ethnic Group Names	Owens Valley Ethnic Group Names
Subfamily Emberizinae	American Sparrows and Towhees				
<i>Amphispiza bilineata</i>	Black-throated Sparrow	NF ^b			
<i>Junco</i> sp.	Junco	Ne-war-rum po-kuts (k) ⁴ Nu-wer-rowk ⁴	Noo-war-rum po-koots ⁴		
<i>Pipilo chlorurus</i>	Green-tailed Towhee	Tam pe-ats (k) ⁴			
<i>Pipilo</i> sp.	Towhee	E-se-voo-it (k) ⁴ Ke-we-rit-se ⁴	Tim-mah-tin ⁴		
<i>Spizella passerina</i>	Chipping Sparrow	Kam pe-ats (k) ⁴	Yu-oo-ro-whats ⁴		
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	Yu-rah-vaht (k) ⁴ Se-we-cha-et ⁴	We-tsids ⁴		
--	Sparrow	Wt'iatsi ⁵ Kam pe-ats (k) ⁴	Yu-oo-ro-whats ⁴		
Subfamily Icterinae	American Blackbirds and Orioles				
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	Paxachakapi ⁵ Pah rahts-kahp ⁴	Pah-ran-to-twit ⁴		
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird	Pah-ranch Che-kahp (k) ⁴ Too we-tse ⁴	Cha-kahp ⁴ Pah-ran-zu-wit ⁴		
--	Blackbird			Bah-gan-zuk-qwue ⁸	

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<i>Icterus</i> sp.	Oriole	Oangwintsi' ts (yellow bird) ⁵ Kah-ni-amp (k) ⁴	O-ow-wit-se ⁴ Wahts-ke-it ⁴ O-ah-we-tsits ⁴		
<i>Sturnella</i> sp.	Meadowlark	Iitotsi ⁵ A-tawt (k) ⁴ Tu-we-uk ⁴	Kah-nah-we tse-its ⁴ Te-ve-uk ⁴	Pa'-tsi-ton ⁶	
Subfamily Parulinae	Wood-Warblers				
<i>Dendroica petechia</i>	Yellow Warbler	Ka-na-wits-its ⁷			
Subfamily Thraupinae	Tanagers				
<i>Piranga ludoviciana</i>	Western Tanager, Mountain Tanager	Oo-win-nt (k) ⁴			
Family Falconidae	Falcons and Carcaras				
<i>Falco sparverius</i>	Sparrow Hawk, American Kestrel	Kærin'ang kats ⁵ Ku-we-nah-kut (k) ⁴	Te-ze-nah-kahts ⁴ Kwan-an-tsits ⁴	Ku-ti'-ta ⁶	
Family Fringillidae	Old World Finches and Allies				
<i>Carpodacus purpureus</i>	Purple Finch	We-etch (k) ⁴ Waw ⁴	We-ets ⁴ We-we-ets ⁴		
<i>Carpodacus</i> sp.	Finch	We-etch (k) ⁴ Waw ⁴	We-ets ⁴ We-we-ets ⁴		
--	Grosbeak	Wah-pum-wer-rah-ka (k) ⁴ Gus-se-nav (k) ⁴	Ker-re-tsawt ⁴ Kan-now we-tse-its ⁴		
Family Hirundinidae	Swallows				

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<i>Hirundo pyrrhonota</i>	Cliff Swallow	Pah-sah-rok-pets ⁴	Wah-pas-so-pe ⁴		
<i>Hirundo rustica</i>	Barn Swallow	Tim-pow-we-ger-rit (k) ⁴ Tim-pah-ro-we-it ⁴	Pas-ser-ro-pe'ts ⁴		
<i>Tachycineta thalassina</i>	Violet-green Swallow	Pas-ser-ro-it (k) ⁴	Pan-no-av ⁴		
Family Laniidae	Shrikes				
<i>Lanius ludovicianus</i>	Loggerhead Shrike	Tah-tso-noint (k) ⁴ Tah-cho-noint ⁴	Tun-dun-nois ⁴		
<i>Lanius</i> sp.	Shrike	Tah-tso-noint (k) ⁴ Tah-cho-noint ⁴	Tun-dun-nois ⁴ NF ¹		
Family Laridae	Gulls, Terns, Allies				
<i>Larus</i> sp.	Gull	Tosa payamp'utsi (white gull) ⁵ Che-yu ^{ch 4}	Pi-yam'b ⁴ NF ^b		
Family Mimidae	Mockingbirds and Thrashers				
<i>Mimus polyglottos</i>	Northern Mockingbird	Yamp ^b			
<i>Mimus</i> sp.	Mockingbird	Yampa ⁵ Yamp (k) ⁴	Yahmp ⁴ Yam'p ⁴		
<i>Toxostoma</i> sp.	Thrasher	Sah-wah-goo-et (k) ⁴	Mo-e-pah-num-bits ⁴		
Family Muscicapidae	Old World Flycatchers and Allies				

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<i>Sialia</i> sp.	Bluebird	Shok'-wai'ants (k) ⁶ Nung-un'-chots (lv) ⁶ Saxwang wintsi'ts ⁵	San-nap-po-chet (k) ⁴ Sa-kwahn at-so-its ⁴ Sah-wah-wits ⁴		
<i>Turdus migratorius</i>	American Robin	Angka-kwaa' nangwants ⁵ Se-kon kno-av (k) ⁴ Sin-kum ⁴	Sko-we-che-it ⁴ Se-kin-kon-av ⁴ Say-kung-quav ⁷		
<i>Turdus</i> sp.	Robin			Sue-gwee-cok-coo ⁸	
Family Paridae	Chickadees and Titmice				
<i>Parus gambeli</i>	Mountain Chickadee	Tse-gut (k) ⁴	Mo-che-et ⁴		
Family Pelecanidae	Pelicans				
<i>Pelecanus erythrorhynchos</i>	American White Pelican	Pa-go-moo-e-nav (k) ⁴			
Family Phalacrocoracidae	Cormorants				
<i>Phalacrocorax</i> sp.	Cormorant	Pa-at-kut (k) ⁴	Pah-wung zits ⁴		
Family Phasianidae	Pheasants, Grouse, Quail				
<i>Callipepla gambelii</i>	Gambel's Quail	Akar ^b			
--	Quail	Ka'-ka (k) ⁶	Ka-ka (lv) ⁶		Tounga-ah-hah ⁸
Family Picidae	Woodpeckers and Wrynecks				
<i>Colaptes auratus</i>	Northern Flicker	Un-ka-kwo-nau-ants (k) ⁶	Kah-kwah-nah-ahts ⁴		

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		Anyka-kwanangwav ⁵ Un-kah (k) ⁴	Kwah-nah-vant ⁴ Ungkakwa-nangwav ^b Kwar-nah-kits ⁴		
<i>Colaptes sp.</i>	Flicker	Angka-qua-no-wunco ⁷			
<i>Melanerpes lewis</i>	Lewis' Woodpecker	Po-wah-che-nint (k) ⁴ Ahn-kah-pi-ah we-tse ⁴	So-wan-nat ⁴		
<i>Picoides villosus</i>	Hairy Woodpecker	Peep-e-wor-et (k) ⁴	Pe-pe-po-wunts ⁴		
--	Woodpecker	Piipung' wantsi ⁵ Pe-po-wuntz (s) ⁴	Pe-po wantz (k) ⁴ Peep-wunts ⁷	Du-ga-hâi ⁶	
Family Podicipedidae	Grebes				
<i>Podilymbus sp.</i>	Grebe	Koo-hoot-kit (k) ⁴			
Family Rallidae	Rails, Gallinules, Coots				
<i>Fulica americana</i>	American Coot	Sah-sit (k) ⁴ Sahts ⁴	Ke-yu ^{ch 4} Sats ⁴		
Family Recurvirostridae	Avocets and Stilts				
<i>Himantopus mexicanus</i>	Black-necked Stilt	Too-we-e-yoot (k) ⁴			
<i>Recurvirostra americana</i>	American Avocet	Tuviyuyu' tsi ⁵ Koo-weet (k) ⁴	Mi-an Koo-wit ⁴		
Family Sittidae					
<i>Sitta sp.</i>	Nuthatch	Kan-ka-rik-ket (k) ⁴ To-pah-we-kent ⁴	Yu-ve-nants ⁴		
Family Strigidae	Typical Owls				

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<i>Athene cunicularia</i>	Burrowing Owl	Muku'uts ^f		Ku'-hu ⁶	
<i>Bubo virginianus</i>	Great Horned Owl	Mo'-puts (k) ⁶ Mo-o'-puts (lv) ⁶ Mooputs ⁵ Mo-puts (k) ⁴	Moo-oo-put ⁴ Mo-o-puts ⁴ Moo-e-pwits ⁴ Muuputs ^b		
--	Owl	Muuputsi ^f Muku'uts ^f Wah-now-kwits (k) ⁴ Wanakwitsi ⁵	Am-mo-puts ⁴ Mo-se-ah-kaw-bits ⁴ Ahn-kah-re Mo-put (k) ⁴	Mu-hu ⁶ Muum-bitch ⁸	Moohoo ⁸
Family Trochilidae	Hummingbirds				
--	Hummingbird	Mu'-tu-chats (k) ⁶ Mootuchats ⁵ Mo-te-tcheh (k) ⁴ Mo-too-tsahts ⁴	Ah-to-e-tsets ⁴ Moo-tin-zits ⁴ Mutuchats ^b	Bi'si'i ^c Pi-a-gun'to-wit-si ⁶ Sung'-o-wit-si ⁶	Pish-coot ⁸
Family Troglodytidae	Wrens				
<i>Catherpes mexicanus</i>	Canyon Wren	Tumpikia hoxotsi ⁵ Tim-pe-ah-soot (k) ⁴ Tim-pe-its ⁴	Timp-pe-ke yah-hots ⁴ Toom-pe-tah ah-bit ⁴ Tom-pike-aw-sauts ⁷		
<i>Salpinctes obsoletus</i>	Rock Wren	Too-ching-ing ⁴ Tumpikixots ^b	NF ^c		
<i>Troglodytes</i> sp.	House Wren	Wu-nat tim-be ro-put (k) ⁴	T'kes-se chim-mits ⁴		
Family Tyrannidae	Tyrant Flycatchers				

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<i>Tyrannus verticalis</i>	Western Kingbird	Chuxu'uvi ⁵ Che-goo-ritch (k) ⁴	Wahts-koo-its ⁴ Too-pe-wats ⁴		
<i>Sayornis saya</i>	Say's Phoebe	Chu-huv ⁷			
Amphibians					
--	Frog	Wah'-gah'-tsets (lv) ⁴ Wah-raht' (k) ⁴	Hah'-pah wah'-ah-tuts (c) ⁴	Pah-woo'-go' (ps) ⁴ Wah'-ko-ah ⁴ Bi'-yah-qwat-sah ⁴ Pi'-ah guz-zah ⁴	Yha-gua-zah ⁸
Arachnids					
--	Scorpion	Wah'-wah-tsets (lv) ⁴ Wahm'-bah-kwits (c) ⁴	Tah-wur'-rum-kwe-pitch (k) ⁴	Woo'-vah-tah (ps) ⁴ Gwe'-buntz ⁴ Kwe'-bentz ⁴	
--	Spider	Mo-kwam'-be (lv) ⁴ Hoo-kwahmp' (c) ⁴	Mo-kwahmp' (k) ⁴	Ku'-kwats ⁶ So-wats' (ps) ⁴ Ah'-mah-so'-ans ⁴ So'-wants ⁴ So-ar'-rah ⁴	NF ⁸
--	Tarantula	Nü'-e-saw'-bits (lv) ⁴ We-gaht'-sawt k) ⁴	Noo'-wě-saw'-pig (c) ⁴	Nah'-soo-waht' (ps) ⁴ Nah'-we-tsoi'm-bitch ⁴ Nä'-soo-ar'-rah ⁴	
Insects					
<i>Mutillidae</i> sp.	Velvet ant				Togo ⁸
--	Ant	T'siev (wood) ^c Tuhsiev (wood) ^c	Ahng-ahv' (black) (k) ⁴ Ahng-e-ve (black) (lv) ⁴	Hu-wit' (large red) ⁶ To'-ats (small black) ⁶	Ah-see-ah ⁸

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		Tu'siev ^c Tas'-se-av (lv) ⁴ Ang-av' (c) ⁴ Tas-se'-av (k) ⁴ Wahnts (red) (c) ⁴ Pas-se'-av (red) (k) ⁴	On'-tat (black) (c) ⁴ Tas'-se'-ev (red) (lv) ⁴	A'-ni (mound building) ⁶ Ani'e (wood) ^c On'nee (wood) ^c Ta'-siv-av ⁶ Un-kav'-tu-si (red) ⁶ Tas'-se-wuts-tse (ps) ⁴ Ah'-ne ⁴ Ho'-we-dah ⁴ Hó-e-dah ⁴ Tun-gah'-vitch (black) (ps) ⁴ Ho'-we-dah (black) ⁴ Too-kah-pe'-pah (red) ⁴	
--	Beetle	Kan-nav'-ve-tets (lv) ⁴ We-po'-set (c) ⁴	Wēv-haht (k) ⁴	Shun-goo'-ah (ps) ⁴ Pe'-bos'-se ⁴	Huga-pish-ah ⁸
--	Bumblebee	See-moo'-rahm (lv) ⁴ Se'-moo-rahmp (k) ⁴	Sho-em' mo-ro-ram (c) ⁴	O'-be-wo ⁴ Be'-hah-moo ⁴	
--	Butterfly	As'-se-wuts (lv) ⁴ , Ah'-se-ruts' (c) ⁴	Yas'-se-wut (k) ⁴	Ah'-se-wer-run' (ps) Ā-ā'-per-rum I'-yup-pur-ruq'-ā Ap'-per-roo'-ge Wi'-ah-bos'-se	
--	Centipede	Sing-ump (k) ⁴			
--	Cricket	Mā-kaht'-sah-roo'-bit (lv) ⁴ Chě-roots' (k) ⁴	Sow-wah'-ar-rum (c) ⁴	Thin'-ā-pitch (ps) ⁴	

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--	Dragonfly	We-wing'-ga-rits (lv) ⁴ We-win'-koo-rets (c) ⁴	Ah'-witch (k) ⁴	Pă-ran'-doo-no (ps) ⁴ He'-tso-saw ⁴ Bah'-qah-mo'-anz ⁴ Pah'-ran-do'-ro ⁴	
--	Flea	Po'-ahv (k) ⁴			
--	Fly	Mo'-pits (lv) ⁴ Mo'-bits (c) ⁴	Mo'-pitch-ă (k) ⁴	Mo-e'-ve-hah (ps) ⁴ Ah'-ne-moi ⁴ Ah'-nah-woi ⁴ Mo'-pits ⁶ Mu'-iv ⁶ A'-niv (sand) ⁶	Mu'e-vee-ha ⁸
--	Grasshopper	At'-tah-kah-peets (lv) ⁴ Ah'-tah-kah-bits (c) ⁴	Ar'-ron-kah'-pit (k) ⁴	Ah-tung'-ge (ps) ⁴ Ah'-ting ⁴ Ah'-tunq-que ⁴ At'-tan'-ge ⁴	
--	Lice	Se-ap'-pit (k) ⁴		Bo'-see-ěts (ps) ⁴	Pooh-ze-ah ⁸
--	Louse			Pu-si'-a ⁶	
--	Mosquito	Mo-oo'-av'-ve (lv) ⁴ Mo'-av (c) ⁴	Mo-ahv' (k) ⁴	Mo'-vo ⁶ Mo-avw ⁶ Wah-war'-rah (ps) ⁴ Maw'-paw ⁴ Ahng-ē'-ve ⁴	NF ⁸
--	Moth	Moo-goo'-run-zits (lv) ⁴ Mo-goo'-ro-tsats (c) ⁴	Mo-woo'-ran-tut (k) ⁴	Pe-ag'-gah moo-rung-we (ps) ⁴ Pe-ag'-gah ⁴ Pe'-ag'-gah ⁴	
--	Stink Bug			Ku'-i-tsat ⁶	

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--	Tick				Pooh-ze-ah ⁸
--	Worm	Pē-av' (k) ⁴		Pish-shā-war'-rah (ps) ⁴ Wo'-ah-be ⁴ Woo-ah'-be ⁴	
--	Yellowjacket	We-koots (lv) ⁴	Pah-watch'-av (k) ⁴	Pi'-yah (ps) ⁴ O'-hah ben ⁴ Pi'-nah ⁴ Be'-hah-moo ⁴	

¹ Work done by Powell between 1867-1880: (Fowler and Matley 1979)
² Work done by Euler between 1956-1966: (Euler 1966)
³ Work done by Palmer before 1946: (Palmer 1978)
⁴ Work done by Merriam between 1902-1935: (Merriam 1979)
⁵ Work done by Sapir in 1910: (Sapir 1910)
⁶ Work done by Powell in 1873: (Fowler and Fowler 1971)
⁷ Work done by Presnall in 1936: (Presnall 1936)
⁸ Work done by Train between 1935-1941: (Train 1957)
⁹ Handbook of North American Indians-Great Basin (vol. 11, "Owens Valley Paiute") 1989

^a Stoffle, Austin, Halmo, and Banks (1996)
^b Stoffle, Halmo, Evans, and Austin (1994)
^c Stoffle et al. (1994)
^d Stoffle et al. (1989)
^e Stoffle, Halmo, Evans, and Olmsted (1990)
^f Stoffle and Dobyns (1982)
 Stoffle and Dobyns (1983a)
 Stoffle, Dobyns, and Evans (1983)
^g Names by CGTO members; April 1996 NTS-EIS meeting.

NF = Not found; mentioned in text but no Indian name given.
 (c) = Chemehuevi
 (k) = Kaibab
 (lv) = Las Vegas
 (mp) = Moapa Paiute
 (p) = Pahrump Paiute
 (ps) = Panamint Shoshone

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