Fallon Range Training Complex Modernization

FINAL ENVIRONMENTAL IMPACT STATEMENT

Executive Summary

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Acronyms

- ACEC: Area of Critical Environmental Concern
- AUM: animal unit months
- B: Bravo
- BLM: Bureau of Land Management
- CEQ: Council on Environmental Quality
- CFR: Code of Federal Regulations
- dBA: A-weighted decibels
- DMLGB: Dual Mode Laser Guided Bomb
- DNL: day-night average sound level
- DVTA: Dixie Valley Training Area
- EIS: Environmental Impact Statement
- FAA: Federal Aviation Administration
- FRTC: Fallon Range Training Complex
- JDAM: Joint Direct Attack Munition
- LGW: Laser Guided Weapon
- MEDEVAC: medical evacuation
- MSL: mean sea level
- NAS: Naval Air Station
- NAWDC: Naval Aviation Warfighting Development Center
- NDOT: Nevada Department of Transportation
- NDOW: Nevada Department of Wildlife
- NEPA: National Environmental Policy Act
- NWR: National Wildlife Refuge
- OHV: off-highway vehicle
- PILT: payments in lieu of taxes
- RMP: Resource Management Plan
- ROW: rights-of-way
- SEAL: Sea, Air, and Land
- SHPO: State Historic Preservation Officer
- TTP: tactics, techniques, and procedures
- USFWS: U.S. Fish and Wildlife Service
- U.S.: United States
- WSA: Wilderness Study Area

Introduction

The Fallon Range Training Complex (FRTC) is the United States (U.S.) Department of the Navy's (Navy) premier aviation training range, supporting aviation and ground training, including live-fire training. The Navy trains 100 percent of deploying naval aviation and naval special warfare units at the FRTC. The training conducted here is critical for defending and securing the United States and its interests abroad.

The Navy's ability to counter evolving current and future threats worldwide depends on the effectiveness of existing aviation training requirements. The FRTC is currently operating with significant gaps in aviation weapons training and ground mobility training capability. The current size of the Bravo (B) ranges and the Dixie Valley Training Area (DVTA) severely restricts the extent to which the Navy can use its various weapons systems to train, which has resulted in aircrews and special operations forces being unable to train in sufficiently realistic conditions. Thus, the Navy must reconfigure the FRTC to ensure the safety and success of service members in combat.

Modernization of the Bravo ranges and the DVTA would provide training capabilities that are more realistic and are needed to meet changing aviation and ground training requirements, while maintaining the safety of local communities.

The Navy's proposal to modernize the FRTC includes:

- Renewal of the current public land withdrawal.
- Land range expansion through additional withdrawal of federal land and acquisition of non-federal land.
- Airspace expansion and modifications.
- Upgrades to range infrastructure.

To assess the potential environmental impacts of the proposed modernization of the FRTC, the Navy has prepared a Final Environmental Impact Statement (EIS).

National Environmental Policy Act

The National Environmental Policy Act (NEPA) is a U.S. law that requires federal agencies to identify and analyze potential impacts on the environment before making a decision on a proposed action. The Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 Code of Federal Regulations [CFR] part 1500) provide guidance for considering alternatives to a proposed action. This guidance requires rigorous exploration and objective evaluation of reasonable alternatives (See 40 CFR section 1502.14). Only those alternatives that meet the purpose of and need for the proposed action, and are determined by the Navy to be reasonable, require detailed analysis. The law also encourages and facilitates community involvement in decisions that may affect the quality of the environment.

The Navy is the lead agency for the EIS (pursuant to 40 CFR section 1501.5), and has prepared the Final EIS in accordance with NEPA, as implemented by CEQ and Navy regulations.

Cooperating agencies for the EIS (pursuant to 40 CFR section 1501.6 and section 1508.5) include:

- Bureau of Land Management.
- Federal Aviation Administration.
- U.S. Fish and Wildlife Service.
- Nevada Department of Agriculture.
- Nevada Department of Transportation.
- Nevada Department of Wildlife.
- Nevada Division of Minerals.
- Nevada Governor's Office of Energy.
- Churchill County, Nevada.
- Eureka County, Nevada.
- Lander County, Nevada.
- Mineral County, Nevada.
- Nye County, Nevada.
- Pershing County, Nevada.

The Navy also worked with 13 federally recognized Indian Tribes and the Inter-Tribal Council of Nevada to prepare the Final EIS.

The Navy's mission is to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas. U.S. naval forces must be ready to respond to a wide range of situations, from contingency-type operations to large-scale conflicts, and missions related to homeland security, humanitarian assistance, and disaster relief. This mission requires personnel to be fully trained and prepared to perform these various and demanding military operations at a moment's notice.

The FRTC has served as a vital and irreplaceable asset for training naval aviation forces for more than 75 years. The Bravo ranges and the DVTA are supported logistically by Naval Air Station (NAS) Fallon. The ranges and training area are used to train deploying air and ground units in a realistic environment and prepare them for overseas operations.

Military readiness activities conducted at the Fallon Range Training Complex include:

- Air warfare.
- Strike warfare.
- Electronic warfare.
- Naval special warfare.
- Joint forces training.
- Expeditionary warfare.
- Tactics and weapons courses, such as TOPGUN and TOPDOME.

Location

Located in northern Nevada, approximately 65 miles east of Reno, Nevada, the FRTC is made up of 12,256 square nautical miles of airspace and approximately 232,000 acres of Navy-managed land. Land areas include target areas for both live and inert ordnance release, radio and camera instrumentation and training systems, and electronic warfare training systems.

The FRTC spans multiple county jurisdictions, from Elko County in the east to Washoe County in the west. Land-based ranges (B-16, B-17, B-19, B-20, and the DVTA [Figure 1]) are located primarily in Churchill County.

Training

The FRTC is the only location where an entire carrier air wing, consisting of more than 60 aircraft and associated support crews, can work together and train. Every Navy carrier air wing trains at the FRTC prior to deployment. Personnel who complete tactical courses at the FRTC are known throughout the Navy as experts in the latest and most effective tactics.

The Navy uses simulators to provide early skill repetition and enhance teamwork through classroom learning and computer training; however, there is no substitute for live training in a realistic environment. To reduce the potential for substantial loss of life among U.S. service members in combat, the Navy must train the way it is required to fight. This standard is achieved by continuously analyzing what occurred during past conflicts and making the changes necessary to improve future warfighting tactics.

Bravo Ranges and the Dixie Valley Training Area

The FRTC includes four Bravo ranges and the DVTA. The Bravo ranges, B-16, B-17, B-19, and B-20, are used for air-to-ground munitions delivery, close air support, tactical ground mobility, and live-fire training. The DVTA is typically used for convoy training, fixed-wing and helicopter night vision device training, helicopter mountain-flying training, and combat search and rescue activities.

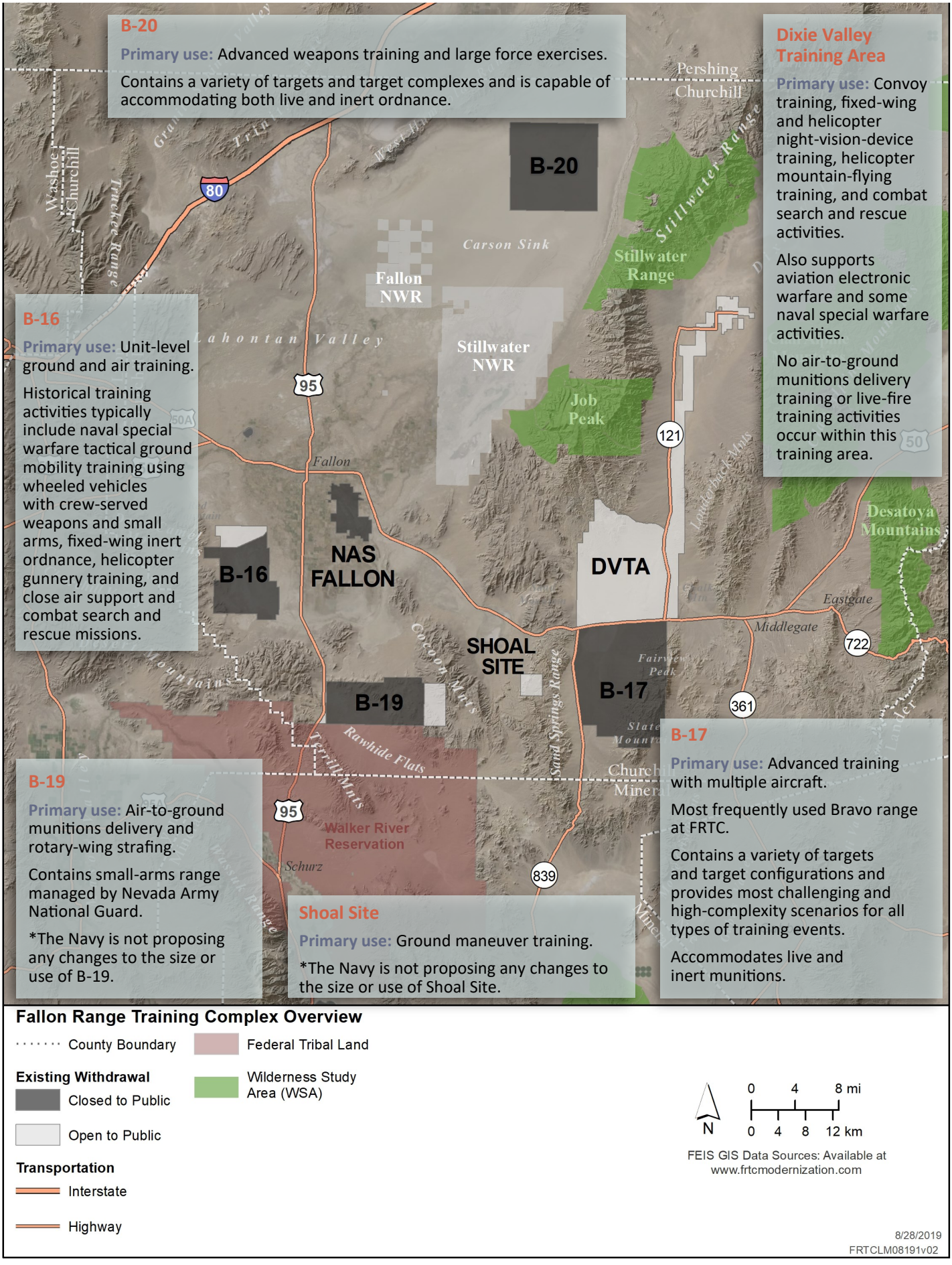


Figure 1: Current Fallon Range Training Complex Overview

The purpose of the Proposed Action is to provide sustainable and modernized airspace, ranges, maneuver areas, training facilities, and range infrastructure to support acceptably realistic air training activities and special operations ground training activities to meet emergent and future threats.

Ninety Days to Combat Study

To evaluate the Navy's ability to counter evolving current and future threats worldwide, the Naval Aviation Warfighting Development Center (NAWDC), naval aviation's warfare authority, initiated the *Ninety Days to Combat Required Training Capabilities Study* to evaluate the effectiveness of existing aviation training requirements and assess the need to reconfigure the FRTC. Through the study, the Navy identified significant gaps in aviation weapons training. At the same time, the U.S. Navy Sea, Air, and Land (SEAL) teams identified similar gaps in ground mobility training and actions needed to support such training at the FRTC. The analysis showed that the current size of the Bravo ranges and the DVTA severely restricts the extent to which the Navy can use its various weapons systems to train. As a result, aircrews and special operations forces are unable to train in sufficiently realistic conditions, which compromises their safety and success in combat.

Training Space Needs

Current aircraft and weapons require a far greater amount of training space than previous aircraft and weapons required (Figure 2). Historically, older aircraft flew at lower altitudes (10,000 feet), approached targets from close distances (4 to 5 miles away), and required a smaller impact area for weapons. Now, modern aircraft fly at higher altitudes (30,000 feet), release weapons from 10 to 12 miles away, and require a larger weapons safety area during training for containment.

At the FRTC, a number of new weapons systems have been introduced into the fleet in recent years, such as joint direct attack munitions. Additionally, new systems, including new aircraft, such as the F-35C Lightning II Joint Strike Fighter and EA-18G Growler, will need to be employed in future training activities. However, the Bravo ranges and the DVTA have not changed substantially in size or configuration since the 1990s.

Figure 3 depicts what the B-17 range would need to look like with full implementation of NAWDC's current tactics, techniques, and procedures (TTP). In this scenario, the weapons danger zones at B-17 would extend significantly beyond the current controlled range property. Therefore, to ensure public safety, the Navy currently trains at far below maximum capabilities.

While the Navy continues to train at the FRTC, the current configuration of the Bravo ranges forces the Navy to limit training in the air and on the ground. Training is limited to scenarios that only partially resemble what personnel would experience in actual combat, and that limit the extent to which the Navy can replicate enemy capabilities.

The Navy evaluated the identified training capability gaps against the real-world constraints (e.g., regional roadways, commercial airspace, population centers) on achieving full TTP compliance. Full compliance would require a prohibitively large area, approximately double the amount of land as proposed in the Final EIS. This evaluation resulted in the development of modified range tactical requirements that would approach full TTP specifications. Even though not all TTP specifications would be met, the proposed modernization would still allow the Navy to achieve an acceptable level of training capabilities. Concurrently, Naval Aviation Warfighting Development Center worked with Naval Special Warfare to identify similar gaps and actions that would support ground mobility training requirements that acceptably approach the full TTP (see the Ground Mobility Training Need versus Current Range Capability section of Chapter 1 of the Final EIS).

Figure 4 depicts the proposed modernization of the B-17 range with tactically acceptable parameters. These parameters do not represent the full capability recommended in *Ninety Days to Combat Study*, but were determined to be acceptable by the Navy for training purposes.

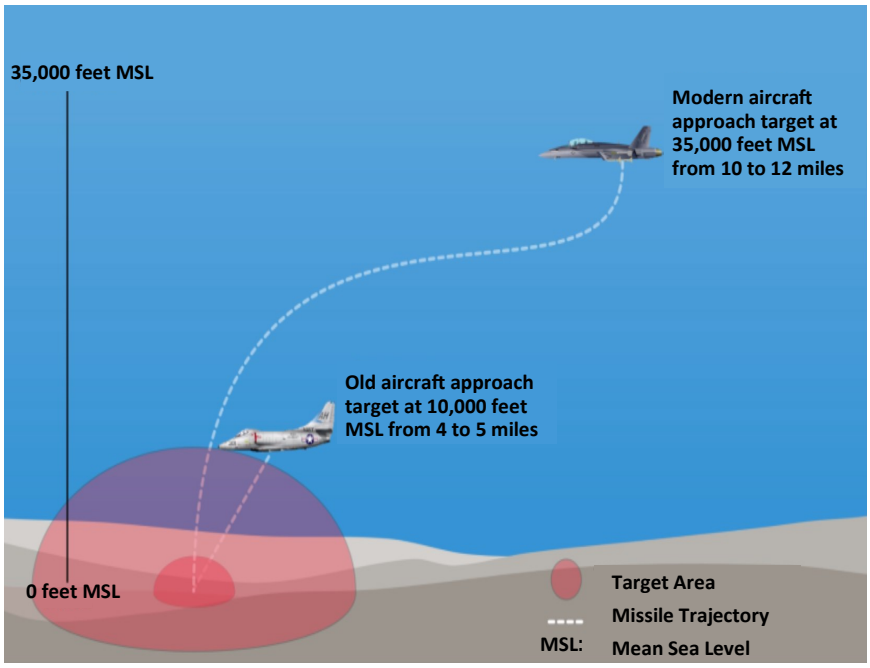


Figure 2: Current and Historic Training Space Needs

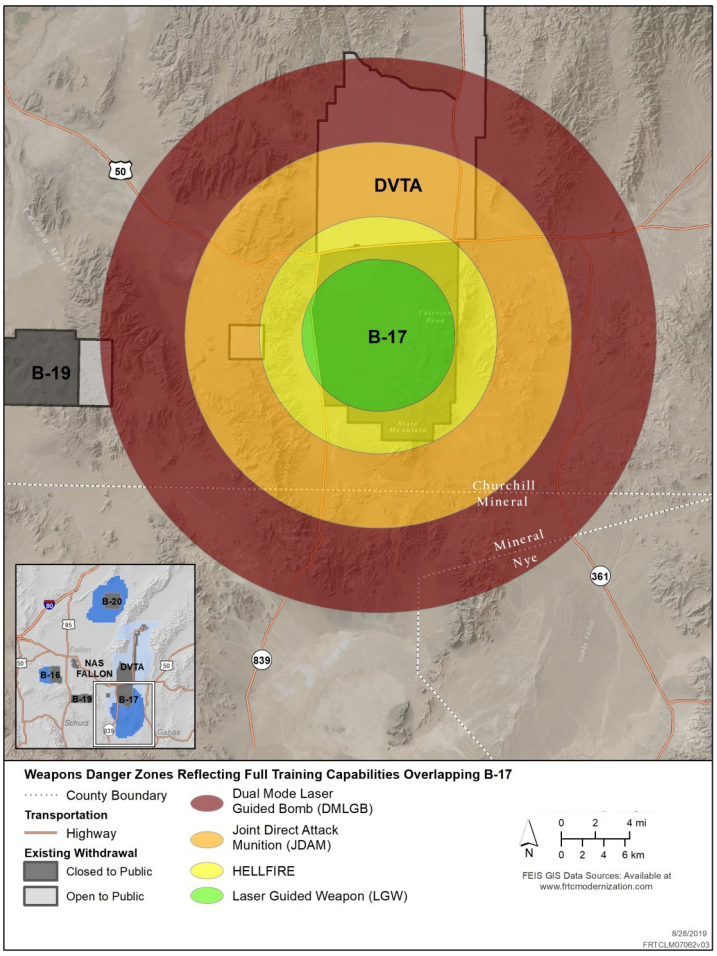


Figure 3: Weapons Danger Zones Reflecting Full Training Capabilities Overlapping Current B-17

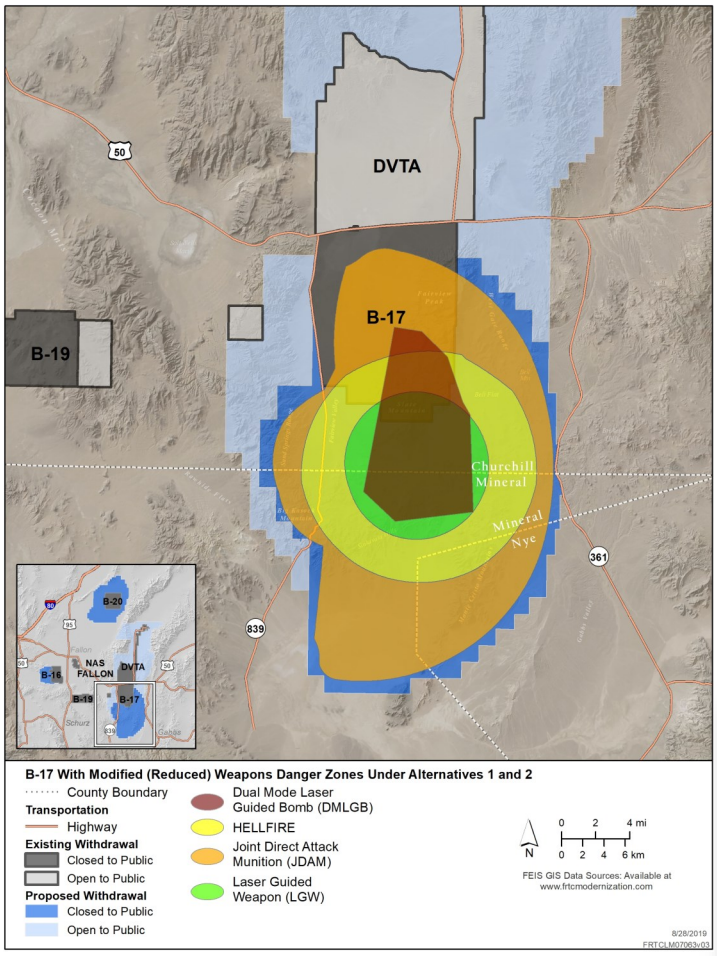


Figure 4: B-17 with Modified (Reduced) Weapons Danger Zones Under Alternatives 1 and 2

The modernization proposal would address the gaps between current training capabilities and current and future training requirements. Modernization of the ranges would provide the land and airspace necessary to train to tactically acceptable parameters in accordance with the Navy mission.

The Navy has conducted rigorous exploration and objective evaluation of reasonable action alternatives. Reasonable alternatives are those that meet the purpose and need and screening factors, and are practical or feasible from a technical and economic standpoint.

The Navy used the following primary screening factors to evaluate potential alternatives:

- Provide a realistic training environment that meets tactically acceptable parameters.
- Provide a training environment capable of supporting readiness training, including the use of high-explosive ordnance, in a manner that protects the safety of the public and military personnel.
- Provide adequate training tempo to support year-round air-to-ground and air-to-air carrier air wing training.

The Navy's Proposed Action is to modernize the FRTC, which would include the renewal of the Navy's current withdrawal, land range expansion through additional withdrawal of public lands and acquisition of non-federal land, airspace expansion and modifications, and upgrades to range infrastructure.

Under Alternatives 1, 2, and 3, the Navy would use the modernized FRTC to conduct aviation and ground training of the same general types and at the same tempo as currently authorized. The Navy is not proposing to increase the number of training activities under any of the alternatives in the Final EIS. Rather, the Navy would redistribute training activities across the expanded ranges for more effective use of training space. Expanding B-16, B-17, and B-20 would accommodate the larger safety zones needed for standoff weapons training. Expanding the DVTA would enhance the safety of aviators during low-altitude and nighttime non-weapons training events, and offer a more realistic environment for electronic warfare, convoy training, and search and rescue training. In general, construction activities would include the installation of perimeter fencing; land grading for placement of container express (conex) boxes and small, pre-engineered buildings; and construction of ground targets and communication towers.

All alternatives were compared to the environmental baseline to determine potential impacts on existing conditions. The environmental baseline for the Final EIS is based on current aviation and ground training activities and the existing land withdrawals at the FRTC.

No Action Alternative

The No Action Alternative consists of not renewing the 1999 Public Land Withdrawal of 202,864 acres, which is scheduled to expire in November 2021, and not withdrawing or acquiring any new land.

Alternative 1 (Modernization of the Fallon Range Training Complex)

Under Alternative 1, the FRTC would be expanded, except for B-19 and the Shoal Site (Figure 5).

Specifically, under Alternative 1, the Navy would:

- Request Congressional renewal of 1999 Public Land Withdrawal of 202,864 acres, which is scheduled to expire in November 2021.
- Request Congress withdraw and reserve for military use up to 618,727 acres of additional federal land for a term of 25 years.
- Acquire approximately 65,159 acres of private or state-owned (non-federal) land.
- Construct range infrastructure to support modernization, including new target areas.
- Expand and reconfigure existing special use airspace and establish new airspace within the FRTC airspace boundary to accommodate expanded Bravo ranges.

Alternative 1 includes the extension of B-17 over a portion of State Route 839 and part of the Paiute Pipeline, a natural gas pipeline. Implementation of Alternative 1 would require the rerouting of State Route 839 and the relocation of a portion of the Paiute Pipeline because Navy policy does not allow public land use of any kind to occur within active weapons danger zones. Follow-on, site-specific NEPA analysis of the anticipated impacts associated with any potential route(s) would be required.

Except for a slight expansion beyond the current northern boundary, airspace modifications would be within existing FRTC boundaries.

Currently, public use is allowed on public lands that are requested for withdrawal. Some of these uses include grazing, hunting, locatable mining, geothermal development, salable mining, solar and wind energy development, utilities and rights-of-way (ROW), off-highway vehicle (OHV) use, camping and hiking, academic and ceremonial visits, management access, and large-scale races. Under Alternative 1, the Navy would restrict public access from B-16, B-17, B-19, and B-20 for security and to safeguard against potential hazards associated with military activities. The DVTA would remain open to the public for certain uses.

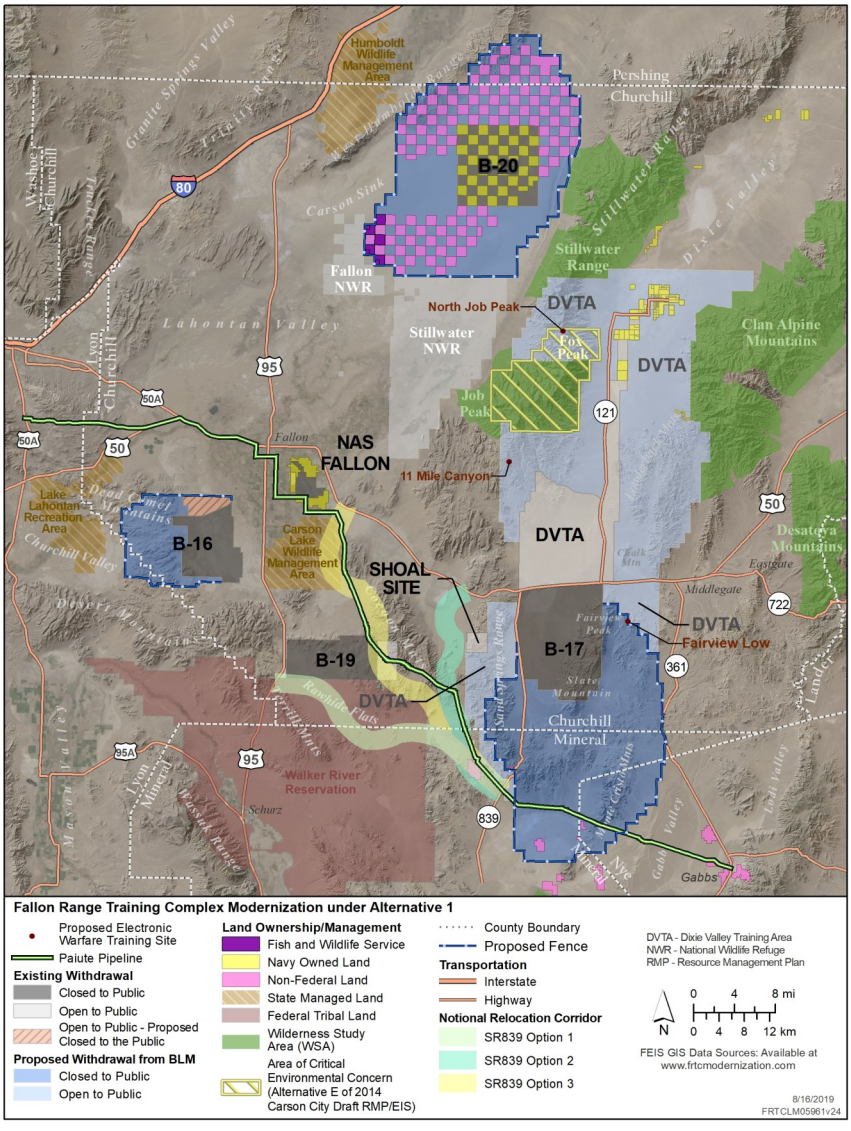


Figure 5: Fallon Range Training Complex Modernization Under Alternative 1

Activities Within the Land Areas of the Fallon Range Training Complex Under Alternative 1

The Navy issued a notice of intent to prepare an EIS on Aug. 26, 2016, and provided information to the public and collected comments from the public, cooperating agencies, and tribal participants regarding potential impacts and concerns, as well as suggestions for alternatives. The Navy reviewed all submitted comments and analyzed potential viable alternatives that met the purpose, need, and screening factors. The Navy met with various stakeholders to discuss potential alternatives and impacts. Many comments indicated the desire to have an alternative with a reduced level of public access restrictions. Alternative 2 (Managed Access) and Alternative 3 (Preferred Alternative) allow more public access for recreation, hunting, and leasable (geothermal) and salable mining than Alternative 1. Additionally, Alternative 3 would maintain greater access for locatable mining than Alternatives 1 and 2.

Alternative 2 (Managed Access)

Under Alternative 2, the Navy would expand the FRTC to the same extent as described in Alternative 1 and continue to allow certain public uses within specified areas of B-16, B-17, B-19, and B-20 when the ranges are not operational. However, under Alternative 2, the Navy proposes to allow a bighorn sheep hunting program on B-17, as described in the Draft Memorandum of Agreement between the Navy and Nevada Department of Wildlife (NDOW) in Appendix D (Memoranda, Agreements, and Plans) of the Final EIS.

Additionally, geothermal and salable materials exploration and development and water development would be conditionally allowed on the DVTA. Academic research, ceremonial and cultural visits, land management activities, and large event off-road races would be allowed on all ranges, subject to coordination with the Navy.

Allowing such public access would be more complex and challenging for the Navy. However, Alternative 2 would still meet the Navy's purpose and need to ensure the FRTC possesses the present and future capabilities necessary to train deploying forces for combat.

Activities Within the Land Areas of the Fallon Range Training Complex Under Alternative 2

Alternative 3 (Preferred Alternative)

Alternative 3 (Preferred Alternative) is similar to Alternatives 1 and 2 in terms of its requested land withdrawals and proposed acquisitions, except with respect to the orientation, size, and location of B-16, B-17, B-20, and the DVTA, and similar to Alternative 2 in terms of managed access, as shown in Figure 6. With respect to B-16, unlike Alternatives 1 and 2, Simpson Road and the lands south of it would not be withdrawn. Additionally, currently withdrawn lands south of Simpson Road would be relinquished by the Navy back to the Bureau of Land Management (BLM). Alternative 3 would move B-17 farther to the southeast and rotate it slightly counterclockwise, retaining access to Rawhide Mine, entirely avoiding Fairview Peak, and retaining access to Sand Springs Range. Under Alternative 3, the Navy would not withdraw East County Road or the land east of it for B-20.

Between the Draft EIS and Final EIS, the Navy received public comments requesting the size of the withdrawal and acquisition be reduced as much as possible. The Navy has reduced the size of the withdrawal from the proposal in the Draft EIS. This change in area is shown for B-17 in Figure 7 and for B-20 in Figure 8.

Under Alternative 3, the land requested for withdrawal for the DVTA north of U.S. Route 50 would remain the same as Alternative 1. Unlike Alternatives 1 and 2, the Navy would not withdraw land south of U.S. Route 50 as DVTA. Rather, the Navy proposes Congress categorize this area as a Special Land Management Overlay created through legislation. This Special Land Management Overlay would define two areas (one east and one west of the B-17 range) as "military electromagnetic spectrum special use zones." These two areas would be public lands under the jurisdiction of the BLM and would not be withdrawn by the Navy for land-based military training. The zones would remain open to public access and available for all BLM-allowable uses (e.g., grazing, hunting, recreation) and mining. However, prior to issuing any decisions on projects, permits, leases, studies, and other land uses, the BLM would consult with the Navy to ensure compatibility with training requirements.

In conjunction with shifting B-17 in this manner, the expanded range would leave State Route 839 in its current configuration, but would expand eastward, requiring the rerouting of State Route 361. B-17 would also expand southward, requiring the relocation of a portion of the Paiute Pipeline.

Under Alternative 3, airspace changes would be implemented largely in the same way as Alternatives 1 and 2. However, the Navy would create a new restricted area (R-4805) south of existing restricted areas (R-4804 A/B and R-4812) to overlay the reconfigured land withdrawal for B-17 (see the Airspace section of the Final EIS for details).

The Navy's Preferred Alternative is Alternative 3 because it best meets the purpose of and need for modernization while minimizing impacts on public land access and use.

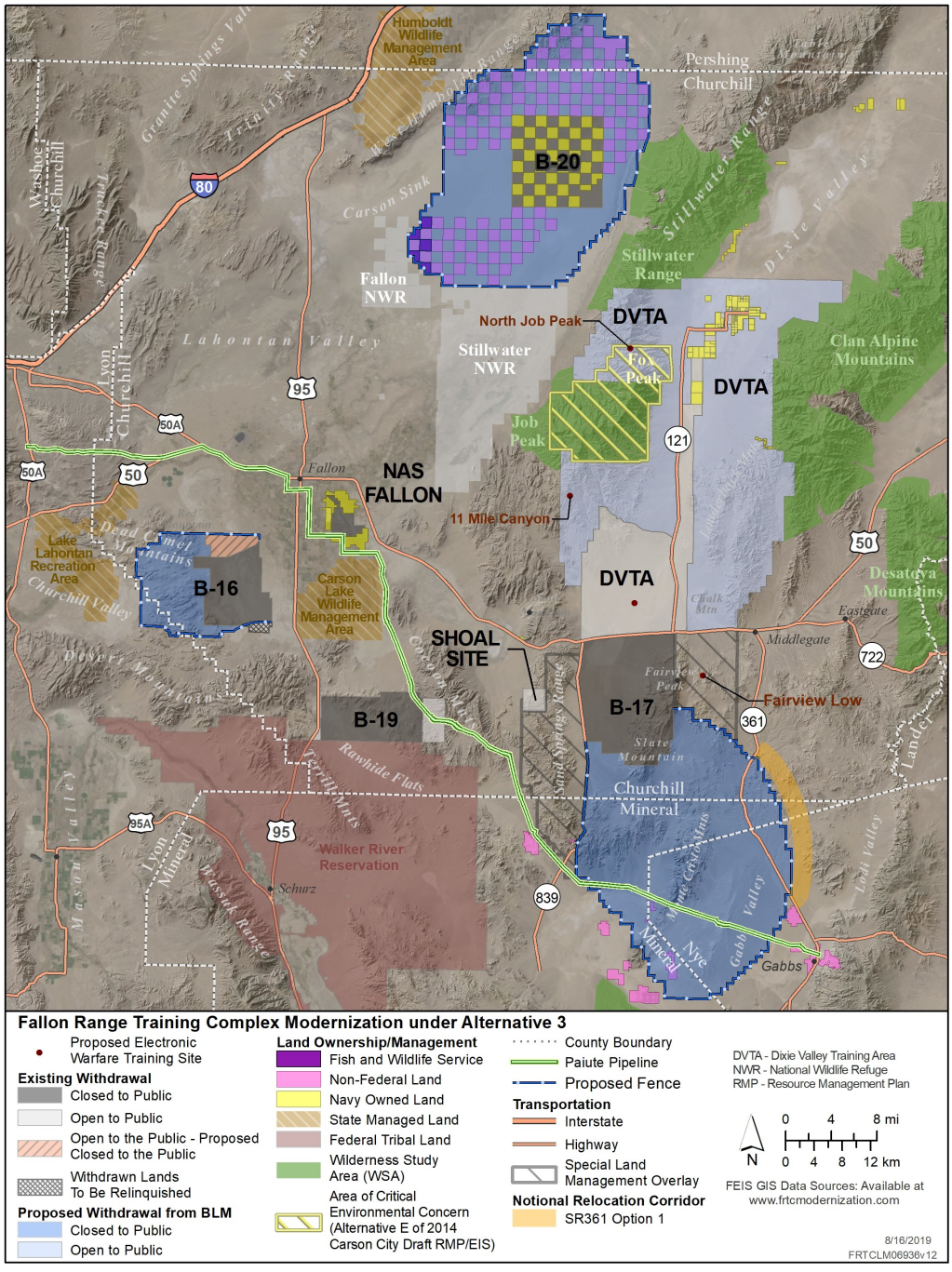
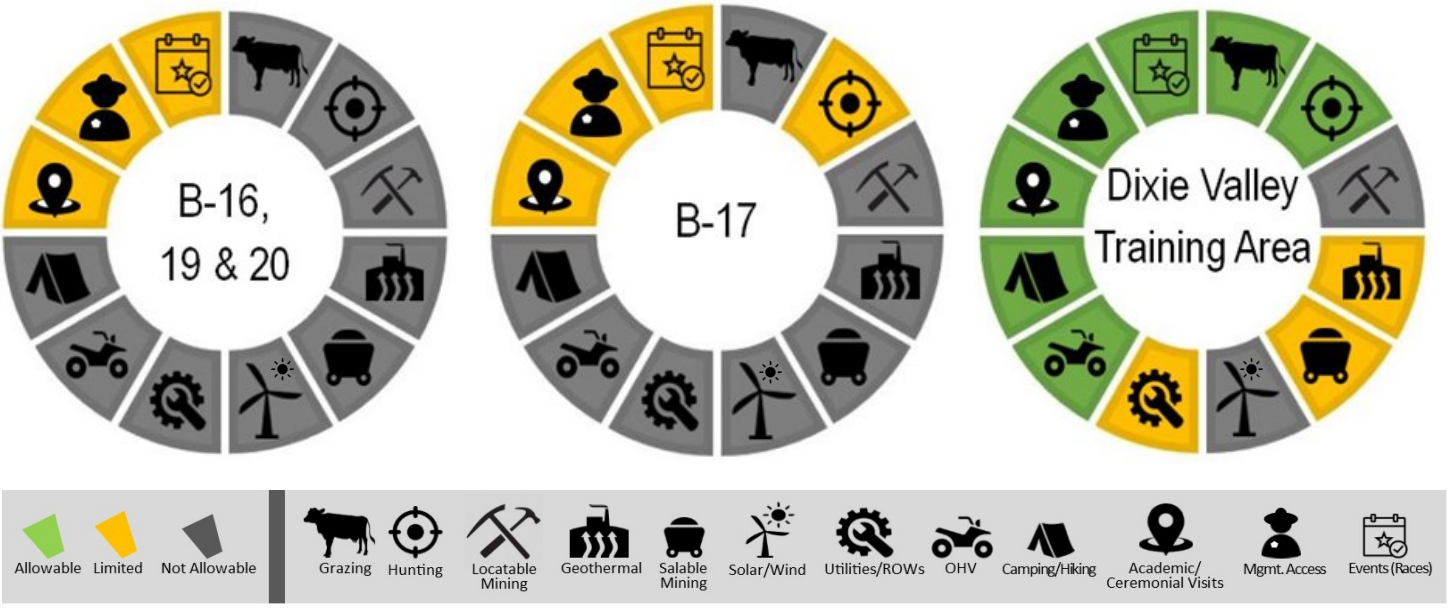


Figure 6: Fallon Range Training Complex Modernization Under Alternative 3

Activities Within the Land Areas of the Fallon Range Training Complex Under Alternative 3 (Preferred Alternative)



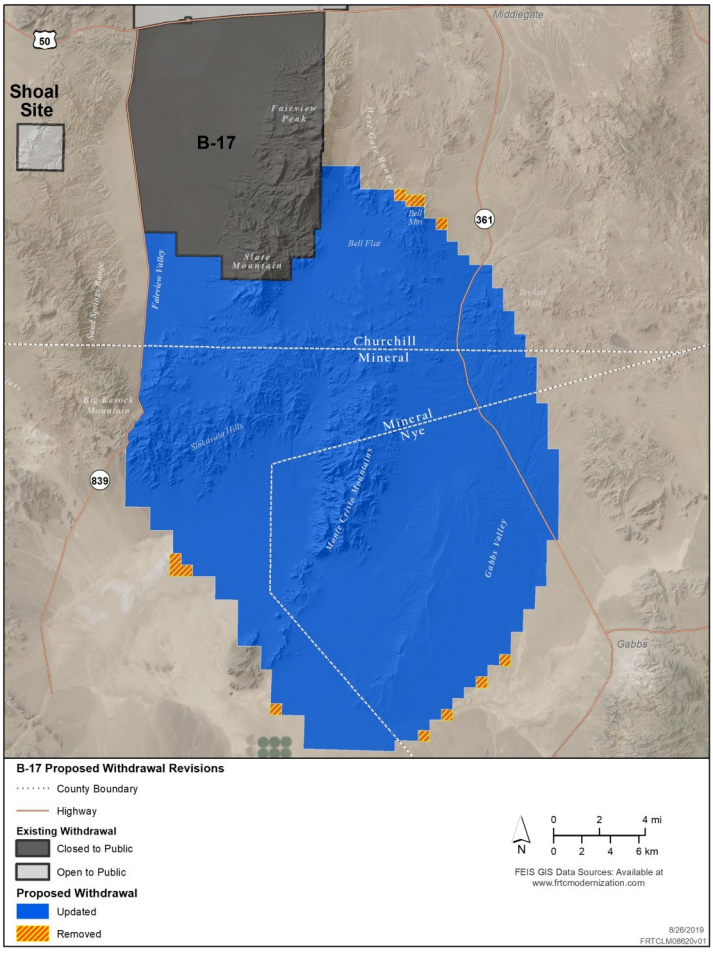


Figure 7: B-17 Proposed Withdrawal Revisions

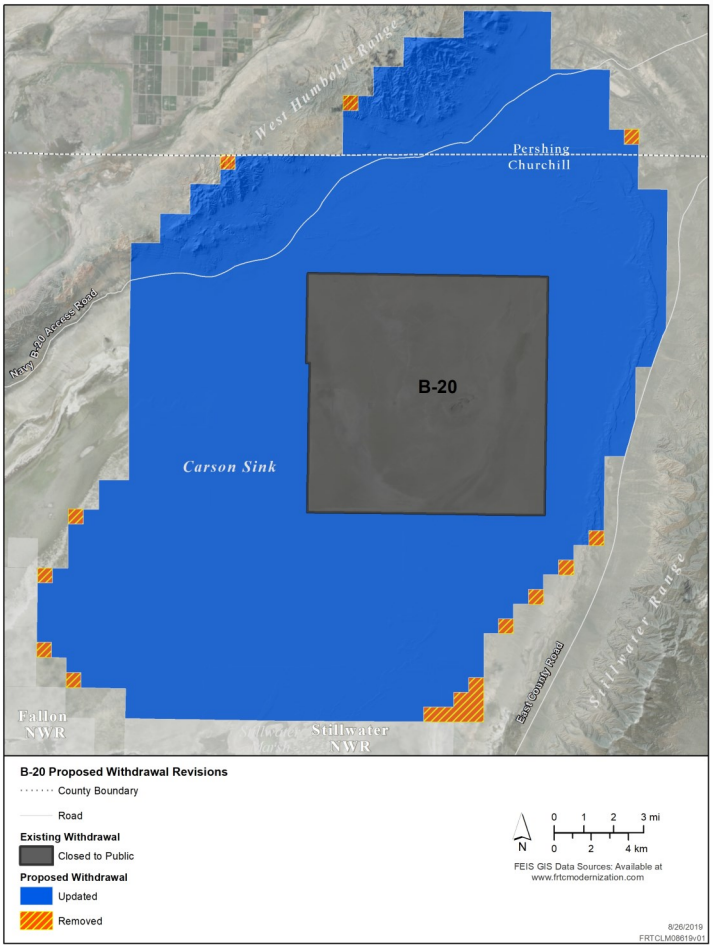


Figure 8: B-20 Proposed Withdrawal Revisions

The Final EIS documents the results of the environmental analysis and potential impacts of all alternatives on 15 resource areas. Additionally, the Navy conducted 20 supporting studies and worked closely with cooperating agencies and Indian Tribes to thoroughly review and incorporate the best available science relevant to analyzing environmental impacts.

The cumulative impacts of past, present, and reasonably foreseeable future actions were also assessed.

The following sections describe potential environmental impacts of Alternative 3 (Preferred Alternative) for each resource area and identify instances where potential impacts differ from Alternatives 1 and 2. Tables depicting potential impacts of all alternatives can be found at the bottom of each resource page of this Executive Summary.

The Navy currently has, or is proposing, management practices, monitoring, and mitigation measures to reduce impacts on the environment from the proposed modernization. More details on potential impacts and management practices, monitoring, and mitigation measures can be found in the Final EIS.

The Navy analyzed potential impacts on:

- Geological Resources.
- Land Use.
- Mining and Mineral Resources.
- Livestock Grazing.
- Transportation.
- Airspace.
- Noise.
- Air Quality.
- Water Resources.
- Biological Resources.
- Cultural Resources.
- Recreation.
- Socioeconomics.
- Public Health and Safety and Protection of Children.
- Environmental Justice.

Methodology

In accordance with NEPA and the Administrative Procedure Act of 1946 (5 U.S. Code sections 551–559), the Navy used the best available data accepted by the appropriate regulatory and scientific communities. The Navy reviewed primary literature, including journals; books; periodicals; bulletins; Department of Defense operations reports; county master plans; species management plans; other technical reports published by government agencies, private businesses, or consulting firms; and academic theses and dissertations to assist in the analysis of potential environmental consequences. The Navy conducted internet searches and evaluated websites for the credibility of the source, the quality of the information, and the relevance of the content to ensure the use of high-quality information.

The Navy considered both direct and indirect effects resulting from each alternative. Direct effects occur in the same location and at the same time as the agency action (40 CFR part 1508.8). Indirect effects are reasonably foreseeable and caused by the action, but occur later in time or at a distance (40 CFR part 1508.8).

The terms *significantly* and *significance*, as used in NEPA, require consideration of both context and intensity. *Context* means analyzing the significance of an action in several perspectives, such as society as a whole (e.g., human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of a proposed action. For instance, in the case of a site-specific action, significance would usually depend on the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant. *Intensity* refers to the severity or extent of the potential environmental impact. Intensity also relates to the potential extent of the likely change. In general, the more sensitive the receptor, the less intense a potential impact would need to be to be considered significant. The less sensitive the receptor, the more intense a potential impact would need to be to be considered significant.

The Navy developed mitigation methods to reduce the potential for or the severity of a potential impact. Please see resource pages 12 to 26 and page 28 of this Executive Summary for a description of these mitigation methods, as well as Chapter 5 of the Final EIS.

The Navy reviewed and evaluated additional information, such as unique resource characteristics; public and cooperating agency comments; previous environmental analyses; agency and tribal consultations; resource-specific information; and applicable laws, regulations, and executive orders. This process helped focus information presented in affected environment sections and analyses presented in the environmental consequences sections.

In the impact summary tables presented on each resource page, the following symbols are used to generally identify the impacts of each alternative; more detail is presented in Chapter 3 of the Final EIS. The public is highly encouraged to read the more detailed discussion and analysis.

●= Some impact.

◑= Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.

○= Minimal impact.

Blank= No impact.

While specific methods used to analyze the effects of the alternatives vary by resource, all resource analyses follow this general approach:

- Review existing federal and state regulations and standards relevant to each resource-specific management or protection.
- Describe existing resource conditions (affected environment) based on geographic areas within the FRTC or as otherwise appropriate based on the resource-area-specific region of influence. Because the FRTC is a large area, each resource section splits the affected environment discussion into five main areas (B-16, B-17, B-20, the DVTA, and special use airspace). Impacts pertaining to B-19 are analyzed in a more limited manner since the Navy is not proposing or requesting any changes to the current configuration of B-19.
- Identify resource conditions or areas that require specific analytical attention.
- Analyze specific actions within a given alternative (environmental consequences) to determine what components of the alternative may affect the particular resource.
    - Review and analyze data sources for information on the resource, including modeling efforts and scientific research.
    - Determine specific impacts on the resource that could result from Navy activities, given the applicable regulatory framework.
    - Adjust initial impact determinations as appropriate to account for use of standard operating procedures, management practices, and other impact avoidance, minimization, or mitigation measures.
    - Determine overall impacts on the resource associated with the alternatives.
- Summarize impact findings concerning resource impacts.

Geological Resources

When determining potential impacts on geological resources, the land's topography and soils are assessed along with its geology. The *region of influence* for geological resources includes the topography, rocks, geologic structure, and soil within the proposed withdrawal areas.

Geology: study of the earth, the materials of which it is made, the structure of those materials, and the processes that influence them. Geology includes rock types, geologic structures (e.g., faults, folds, tilting of rocks), mineral deposits, and fossil remains.

Topography: location of landforms and physical features of a land area. Topography is typically described with respect to a given area's elevation, slope, and surface features.

Soil: an accumulation of organic material and weathered rock and minerals that overlay bedrock in layers or horizons. Soil is the upper layer of the earth where plants grow and is typically described in terms of type, slope, physical characteristics, and whether or not it can support specific types of land use, such as construction or agriculture, including prime, unique, or important farmland.

Environmental Consequences

New target areas would be created at B-16, B-17, and B-20. Ordnance strikes would occur on targets in active target areas, resulting in the potential for munition constituents to impact soil or shallow bedrock; however, existing management practices would minimize long-term permanent impacts. Under Alternative 3 (Preferred Alternative), construction activities would permanently impact up to an estimated 241 acres (approximately 347 under Alternatives 1 and 2) and temporarily impact approximately 451 acres (approximately 454 acres under Alternatives 1 and 2).

Ground convoy training would result in soil disturbance and compaction, exposing soils to erosion in some limited areas.

Alternative 3 would not result in significant impacts on geological resources. Under the No Action Alternative, geological resources in the region of influence could be impacted by potentially foreseeable mineral development that may occur should the area not be withdrawn for Navy use.

Management Practices, Monitoring, and Mitigation

Current: The Navy would continue to implement management practices to avoid and minimize potential impacts on geological resources. Practices include conducting regular range-condition assessments and periodic range clearance activities to minimize accumulation of munitions constituents in target areas, mandating secondary containment areas for refueling activities, using drip pads under parked equipment, and requiring vehicles to use existing roads and two-track trails.

Proposed: During construction, personnel would stay within established corridors and follow posted speed limits. If warranted, pedestrian field surveys would be conducted by a qualified BLM-permitted paleontologist prior to surface grading or excavation. If there were an unanticipated discovery of a potential paleontological resource, surface-disturbing activities would cease in the immediate area of the discovery until the significance of the discovery could be analyzed and any applicable regulatory requirements could be met.

Table 1: Potential Impacts on Geological Resources	Alternatives			
	1	2	3	No Action*
Munitions constituents more widely distributed	◑	◑	◑	
Soil compaction or erosion increased	◑	◑	◑	●
Permanent impact from construction	●	●	●	●
Temporary impact from construction	◑	◑	◑	◑
Prime, unique, or important farmland converted				●

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Land Use

The term *land use* refers to property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. The two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. The meanings of land use descriptions, labels, and definitions may vary among jurisdictions.

For the Final EIS, the environmental analysis for land use includes the area on and within approximately five miles of the FRTC land and special use airspace. The region of influence is within western and central Nevada and includes all or portions of Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe counties.

Environmental Consequences

Withdrawn and acquired land would no longer be managed for the purpose of multiple use due to the hazardous nature of military activities occurring on the Bravo ranges (but not the DVTA). Access to previously open land would be closed and restricted from public use except for activities when authorized by and coordinated with the Navy, such as ceremonial site visits, research and academic pursuits, and regulatory or management activities conducted by the BLM, Bureau of Reclamation, the USFWS, or NDOW.

The expanded B-20 boundary would overlap the National Wildlife Refuge Complex, including 3,200 acres of the Fallon National Wildlife Refuge under Alternatives 1 and 2 and 2,720 acres under Alternative 3 (Preferred Alternative), and 1,920 acres of adjoining Churchill County conservation easements under Alternatives 1, 2, and 3. The refuge lands would continue to be maintained as refuge; however, the public would not have access to the portion of the refuge under the weapons danger zone.

The expanded DVTA would overlap 11,600 acres of the BLM's proposed Fox Peak Area of Critical Environmental Concern (ACEC). The BLM would change the boundaries of the Fox Peak ACEC to remove those areas within the expanded DVTA, as these acres would be withdrawn for the benefit of the Navy.

There would be no conversion of prime or unique farmland or farmland of statewide importance. Utility planning corridors within the range expansion areas would be incompatible with military operations.

Energy development and infrastructure, minerals exploration and development, and transportation would not be allowed on the expanded Bravo ranges due to the restriction of public access.

Changes in airspace, including the extension of military operations areas in the eastern portion of the FRTC special use airspace, would not result in low-altitude overflights.

Alternative 3 would result in less than significant impacts on land use.

Wilderness Study Area: an area for further study to determine whether it meets criteria to be designated by Congress as a Wilderness Area.

Wildlife Refuge: an area managed by the U.S. Fish and Wildlife Service for the conservation, management, and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats.

Area of Critical Environmental Concern: areas where special management is needed to protect and prevent irreparable damage to important historic, cultural, and scenic values, or wildlife resources.

Unique or Important Farmland: land used for production of specific high-value food and fiber crops, or that is of statewide or local importance and used for the production of food, feed, fiber, forage, or oilseed crops.

Utility Planning Corridor: tract of land that may serve as a passageway through which various commodities, such as oil, gas, and electricity, could be transported.

Management Practices, Monitoring, and Mitigation

Current: The Navy would continue to implement current land use policies and procedures, such as avoiding noise-sensitive areas.

Proposed: Due to changes in airspace, the Navy is proposing to designate Crescent Valley and Eureka as noise-sensitive areas and implement buffer zones (five nautical miles and 3,000 feet above ground level) to reduce noise impacts on these communities.

Table 2: Potential Impacts on Land Use

	Alternatives			
	1	2	3	No Action*
Public access restricted from Bravo ranges proposed for withdrawal or acquisition	●	◑	◑	
Public access restricted from the DVTA proposed for withdrawal or acquisition				
Proposed expansion area overlaps portions of Fallon National Wildlife Refuge	◑	◑	◑	
Proposed expansion area overlaps 11,600 acres of BLM's proposed Fox Peak Area of Critical Environmental Concern	◑	◑	◑	
Utility planning corridors within proposed Bravo range expansion areas not allowed	●	●	●	
Renewable resource development	●	◑	◑	
Prime, unique, or important farmland converted				●

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

A *mineral resource* is defined as a concentration of naturally occurring solid, liquid, or gaseous material in or on the earth's crust in such form that economic extraction of a commodity is currently or potentially feasible. The term *economic* implies that profitable extraction or production under defined investment assumptions has been established, analytically demonstrated, or assumed with reasonable certainty.

Environmental Consequences

The Navy's proposed modernization of the FRTC would impact and/or potentially impact planning activities related to mining and mineral resources, as well as potential exploration, development, and production of such resources. Although Alternative 3 (Preferred Alternative) includes changes from Alternatives 1 and 2 meant to reduce impacts on mineral resources, this alternative would still include the withdrawal of lands with high potential for locatable, leasable (geothermal), and salable minerals, and may have an economic impact if market conditions were favorable for more mineral resource development.

Under Alternative 3:

- Locatable mining would not be allowed within Bravo ranges or the DVTA.
- Access would be allowed to the mining districts west of State Route 839 B-17 and would not overlap active mine workings.
- Salable mining would be allowed in the DVTA with required design features.
- Geothermal development would be impacted; however, development would be allowed on the west side of the DVTA with required design features.
- Access for mining exploration and development in the Special Land Management Overlay would be allowed south of the U.S. Route 50.

Though anticipated to have fewer impacts than Alternatives 1 and 2, Alternative 3 would result in potential significant impacts on exploration and development of all applicable locatable, leasable, and salable mineral resources.

Management Practices, Monitoring, and Mitigation

Proposed: Under Alternative 3, the Navy proposes to allow geothermal development and salable mining activities to continue on the DVTA as long as the actions are compatible with training activities and approved by the Navy. The Navy would allow salable mining activities and, subject to conditions established in conjunction with BLM leasing procedures and inclusion of required design features, would allow geothermal development west of State Route 121.

The Navy is currently proposing the following required design features for geothermal development:

- Expand two ROWs adjacent to the current transmission corridor (as close to the current line as possible) to be a 90-foot (maximum) permanent and 300-foot (maximum) temporary ROW.
- Construct an underground transmission line connection from proposed facilities to existing transmission line ROW along State Route 121.
- Use compatible lighting with downward facing shades, and at a frequency that doesn't "wash out" night-vision devices and motion sensors.
- Use cooling towers and other permanent structures no higher than 40 feet.
- Avoid steam field piping blocking current access roads to/ from State Route 121 and canyon areas.
- Require a glint and glare analysis for photovoltaic solar/ geothermal hybrid design prior to construction.
- Coordinate with the Navy on frequency spectrum, exploratory and construction activities, temporary vertical obstruction safety lighting, and use of unmanned aerial vehicles in the DVTA.

Locatable minerals: Includes metallic minerals (e.g., gold, copper, silver, molybdenum, tungsten, iron, uranium) and industrial minerals (e.g., diatomaceous earth, sulfur, fluorspar, gypsum, barite).

Leasable minerals: Includes solid minerals (e.g., phosphate, coal, oil shale) and fluid minerals (e.g., oil, gas, geothermal resources).

Salable minerals: Minerals that are used mainly for construction materials and building roads (e.g., sand, stone, gravel, pumice, pumicite, cinders, petrified wood).

Table 3: Potential Impacts on Mining and Mineral Resources	Alternatives 1	2	3	No Action*
Exploration and development of locatable mineral resources restricted within proposed land boundaries of FRTC	●	●	◑	
Exploration and development of geothermal resources restricted within proposed land boundaries of FRTC	●	◑	◑	
Mineral exploration and development restricted within existing withdrawn areas	●	●	●	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Livestock Grazing

The resource discussion in the Final EIS includes current and planned livestock grazing and outlines the policies that regulate livestock grazing on public lands. The Navy identified and analyzed impacts on livestock grazing allotments, pastures, and areas that would be affected by the alternatives. The impacts on public land grazing in the proposed land boundaries of the FRTC would potentially affect 11 BLM grazing allotments and one Bureau of Reclamation grazing area. An *allotment* is a designated area or management unit that allows grazing and can be made up of multiple pastures.

The Navy reviewed grazing allotments on lands within or adjacent to the proposed FRTC withdrawal areas, whether or not grazing occurs there. If a particular grazing allotment would be affected, the region of influence would extend beyond the proposed FRTC withdrawal area to include the entire allotment. The environmental analysis also included any area that could potentially be impacted by construction noise, training noise, sonic booms, or engine noise from aircraft. This region is largely rural and is composed of public and private lands as well as Indian Reservations.

Environmental Consequences

The analysis indicates that Alternative 3 (Preferred Alternative) would result in a significant impact on livestock grazing due to the closure of approximately 335,255 acres of BLM allotments. The Navy obtained Geographical Information System data for each potentially affected allotment from the BLM in November 2017. These data were used to calculate potential changes to allotment acreage for each alternative and represent the most up-to-date information regarding potentially affected allotments. While a restrictive analysis provides the potential change in Animal Unit Months (AUMs) on the associated grazing permits due to a loss of acreage on the allotment, significance determinations for purposes of analysis of livestock grazing were made based on the combination of the percentage of allotment impacted, the quality of forage on removed acres, and range improvements lost under the alternatives.

Between 0 percent and 88 percent of the allotments would close under Alternative 3. Changes are presented by allotment in the Livestock Grazing and Socioeconomics sections of the Final EIS. Unlike Alternatives 1 and 2, this alternative would not split the Phillips Well Allotment into two non-contiguous areas, but it would close a larger portion of the allotment. A larger portion of the Eastgate Allotment would also be closed under this alternative. Alternative 3 would close off an area of the Pilot-Table Mountain Allotment where water ponds and rangeland improvements have been made; however, this alternative does not close as much of this land overall as Alternatives 1 and 2.

Therefore, Alternative 3 would result in significant impacts on livestock grazing.

Management Practices, Monitoring, and Mitigation

Current: The Navy would continue to implement policies and procedures in the Integrated Natural Resources Management Plan to avoid conflicts between livestock grazing and natural resources.

Proposed: Existing standard operating procedures address unauthorized livestock on the FRTC training ranges; these would be updated upon the withdrawal and would continue to be implemented. Livestock-friendly erosion controls would be used during construction on or adjacent to grazing land actively being used. The Navy would expand fence line patrol and maintenance procedures to include fences on withdrawn lands. The Navy proposes to establish two Conservation Law Enforcement Officers at NAS Fallon. Part of their duties would include patrolling the added fence line for trespassing and reporting to the Navy broken or downed fences for maintenance repair. The Navy would continue to work with local counties and municipalities and federal property land managers, including BLM, USFWS, U.S. Forest Service, Bureau of Reclamation, and Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe counties, to plan for compatible grazing beneath FRTC special use airspace. The Taylor Grazing Act provides the Navy with the authority to make payments for certain grazing-related losses. The Navy would work with grazing permittees on a case-by-case basis to try to minimize losses resulting from the cancellation of any grazing permits. The Navy would follow the process for determining payment amounts for losses resulting from permit modification or cancellation as documented in the Final EIS.

Potentially Affected Allotments

- Bell Flat.
- Bucky O'Neill.
- Copper Kettle.
- Cow Canyon.
- Dixie Valley.
- Eastgate.
- Frenchman Flat.
- Horse Mountain.
- Humboldt Sink.
- La Beau Flat.
- Lahontan.
- Mountain Well-LaPlata.
- Phillips Well.
- Pilot-Table Mountain.
- Rochester.
- Salt Wells.
- Sheckler Pasture.
- White Cloud.

Table 4: Potential Impacts on Livestock Grazing

	Alternatives			
	1	2	3	No Action*
BLM allotments or Bureau of Reclamation pastureland closed	●	●	●	
BLM allotments or Bureau of Reclamation pastureland closed on the DVTA				
AUMs lost	●	●	●	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Transportation

For the purpose of the Final EIS, *transportation* is defined as the capacity of individuals to move themselves or others, as well as to move vehicles and/or various goods over and through land areas. The Navy evaluated roadways, railways, bikeways, and trails as transportation facilities that overlap or are adjacent to existing and proposed Bravo ranges and the DVTA. The Airspace section of the Final EIS addresses special use airspace and impacts on airports, airspace, and air transportation. The Recreation section of the Final EIS addresses recreational characteristics of transportation facilities, such as OHV use.

In 2017, the Navy prepared a Transportation Study as part of the EIS effort to analyze on-road vehicle use within affected areas under Alternatives 1 and 2. In 2018, the Navy completed a Transportation Study for on-road vehicle use within affected areas under Alternative 3 (see Supporting Study: Transportation Study, available at **www.FRTCModernization.com**. OHV counts occurred on unpaved roads and trails near ranges B-16 and B-17. The Navy collected OHV traffic data across two seasons on roads and trails that would be subject to closure as a result of Alternative 3 (Preferred Alternative).

Environmental Consequences

Implementation of Alternative 3 would result in significant impacts on transportation and traffic by restricting access to range areas, road and OHV area closures, and the rerouting of State Route 361.

Traffic patterns on roads near B-16 would be impacted due to the closure of Sand Canyon Road. The expansion of B-17 and B-20 would result in the loss of access via customary and familiar transit routes due to the closure of non-traditional roads and Pole Line Road. Simpson Road would remain open for public use under Alternatives 2 and 3.

The level of service on all applicable roads and at intersections would not change because of the potential rerouting of State Route 361 as shown in the Transportation Study.

Management Practices, Monitoring, and Mitigation

Proposed: Using funding provided by the Navy, the Federal Highways Administration, in cooperation with the Nevada Department of Transportation (NDOT), would be responsible for planning, designing, permitting, and constructing any realignment of State Route 839 (under Alternatives 1 and 2) or State Route 361 (under Alternative 3). The Navy would coordinate with NDOT during each of these phases. The Navy has submitted a Needs Report requesting funding through the Department of Defense's Defense Access Roads program. If approved, the Navy would coordinate construction through the Federal Highway Administration. NDOT would ensure that construction of any new route is complete before closing any portion of the existing State Routes 839 or 361, and the Navy would not use any portion of an expanded B-17 range (if implemented) that overlaps the existing State Routes 839 or 361 unless and until a new route has been completed and made available to the public.

Monitoring measures are warranted for transportation based on the analysis presented in the Transportation section of the Final EIS. The Navy proposes to continue to work with ROW users to review potentially impacted county-designated access roads and other potential ROW in the lands requested for withdrawal or proposed for acquisition, and to look for appropriate replacement routes if appropriate and applicable.

Table 5: Potential Impacts on Transportation	Alternatives			
	1	2	3	No Action*
Portion of State Route 839 or 361 closed or relocated	●	●	●	
Transportation access via state/county ROWs or non-traditional roads closed to the public within expanded Bravo ranges	●	●	●	
Transportation access via state/county ROWs or non-traditional roads closed to the public within the DVTA				
Simpson Road closed	●	◑		

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Airspace

Airspace is defined in both vertical and horizontal dimensions and by time. It is considered to be a finite national resource that must be managed for the benefit of all aviation sectors, including commercial, general, and military. The Federal Aviation Administration (FAA) manages all airspace within the United States and its territories.

The Navy analyzed potential impacts from the reconfiguration of restricted areas over the Bravo ranges, changes in commercial and public use of the FRTC airspace, and effects on civil and private airports. The Navy and the FAA closely coordinated on the Final EIS. The FAA reviews Navy airspace proposals and conducts an aeronautical study to determine potential impacts on the National Airspace System.

Environmental Consequences

The Navy proposes to reconfigure existing military operating areas and air traffic control assigned airspace and create additional restricted airspace. The design of this special use airspace would maximize the Navy's use of the airspace while allowing as much public and commercial use as possible.

Under Alternative 3 (Preferred Alternative), the reconfiguration of B-17 would require new restricted airspace, named R-4805. Reconfigured airspace would not interfere with existing commercial air traffic patterns or airports/airstrips. To minimize aviation impacts under each of the alternatives, the Navy is requesting the FAA create "airport exclusion areas" (3-nautical-mile radius, surface to 1,500 feet above ground level) around the Gabbs, Crescent Valley, and Eureka airports. These exclusion areas would ensure those airports could continue to operate under all of the alternatives. Military aircraft would continue to comply with noise-sensitive area and airport exclusion area guidelines.

The Navy conducts activities in controlled airspace and implements safety procedures:

- Abiding by visual and instrument flight rules.
- Scheduling activities through the Naval Aviation Warfighting Development Center.
- Ensuring hazard zones are clear before beginning hazardous activities.
- Coordinating with range safety officers before expending military munitions.
- Continuing close working relationships with the FAA to manage special use airspace.

There would be no increase in collision potential between military and non-participating civilian operators, as the level of military operations would remain at current levels. There would be no impact on the extended Visual Flight Rules corridor or commercial or general aviation's use of the FRTC airspace. Unrestricted medical evacuation (MEDEVAC), wildlife management activity, and fire-suppression flights would continue to be supported, and civilian aviation would not be significantly restricted. Therefore, Alternative 3 would not result in significant impacts on airspace.

Management Practices, Monitoring, and Mitigation

Current: The Navy would continue current levels of operations and manage the FRTC airspace under the guidance of official policies, procedures, and Navy instructions, and maintain a close working relationship with the FAA in the management of FRTC special use airspace. The Navy would continue proactive outreach to civilian and commercial aviation to ensure safe and efficient transit across the FRTC via the Visual Flight Rules corridor, and safe and efficient managed access and civilian flight profiles within special use airspace.

Proposed: The Navy would continue to implement policies and procedures to avoid conflicts in new or reconfigured airspace and ensure range operations manuals are maintained with the most current airspace information, restrictions, and compliance requirements. The Navy would update operational guidance on any noise-sensitive areas and confirm FAA airport exclusion area guidelines.

Table 6: Potential Impacts on Airspace

	Alternatives			
	1	2	3	No Action*
Collision potential between military and non-participating civilian operators increased				
Visual Flight Rules corridor or commercial and general aviation's use of airspace impacted				
Existing commercial air traffic patterns or airports/airstrips interfered with			◑	
MEDEVAC flights interfered with or restricted				

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

The Final EIS includes an analysis of the types or sources of noise and associated sensitive receptors in the human environment, as well as noise in relation to biological resources and wildlife species. The environmental analysis includes the lands on and within the proposed FRTC and special use airspace. Noise from NAS Fallon is not addressed, as no proposed alternative changes the type or number of airfield operations.

Environmental Consequences

Overall, while noise would change in comparison to the environmental baseline, Alternative 3 (Preferred Alternative) would not have significant noise impacts in the areas surrounding the Bravo ranges. With the exception of B-16, all Day-Night Average Sound Level (DNL) contours above 65 A-weighted decibels (dBA) from air-to-ground munitions activities would be contained within the range boundaries. At B-16, the area where DNLs above 65 dBA would reach off range are similar to the environmental baseline and do not overlap sensitive receptors.

In the proposed military operations areas within the eastern portion of the FRTC airspace, DNLs would increase 10-20 dBA, although the noise contours themselves do not exceed 65 dBA. There would be a slight increase in the number of incidents of indoor and outdoor speech interference and classroom interference, and a slightly higher probability of awakening, especially for sensitive receptors near Gabbs.

While the number of supersonic activities would not change, the expansion of supersonic training areas would create new areas that could be impacted by sonic booms. While individual sonic booms may provide a brief, impulsive noise, the contribution to C-weighted DNLs would not represent a degradation of the noise environment with respect to DNLs.

Overall, noise associated with training activities occurring in special use airspace, away from the Bravo ranges, would result in significant impacts on the acoustic environment, but would not interfere with normal land use activities.

Management Practices, Monitoring, and Mitigation

Current: Existing policies and procedures would continue to be implemented to ensure proper use of the FRTC airspace and adherence to munitions release rules. The Navy's Air Operations Office would continue to log and respond to noise complaints. Pilots flying over designated noise-sensitive areas (Figure 9) are instructed to maintain altitudes no lower than 3,000 feet above ground level to minimize potential impacts.

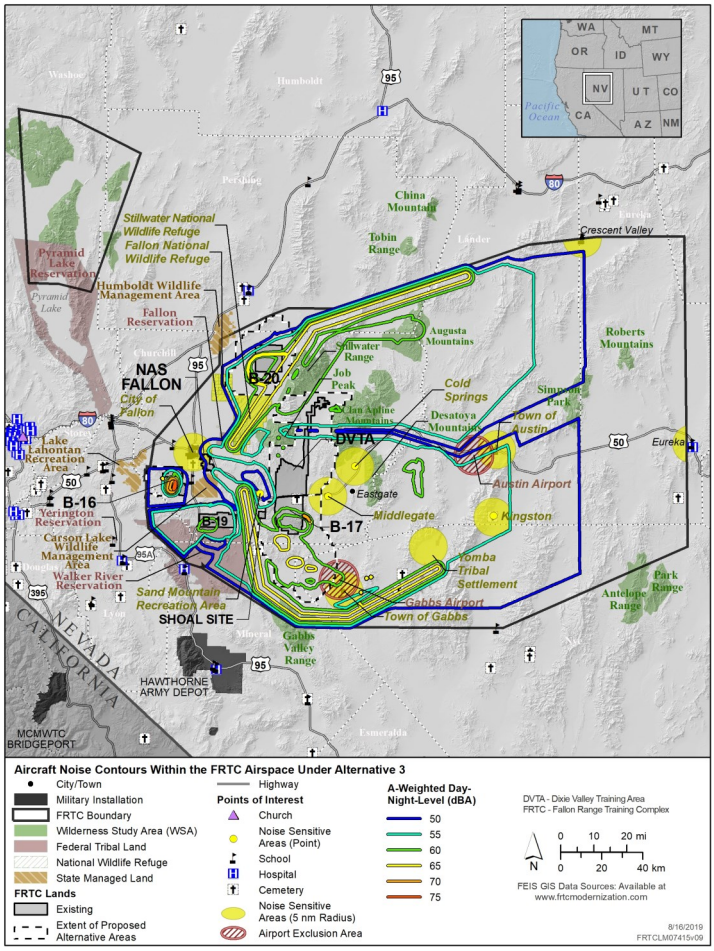


Figure 9: Aircraft Noise Contours Within the Fallon Range Training Complex Under Alternative 3 (Preferred Alternative)

Proposed: The Navy is proposing new noise-sensitive areas around the incorporated areas of Crescent Valley and Eureka. The establishment of these noise-sensitive areas is considered compatible with military training activities and would include a 5-nautical-mile radius and an elevation of 3,000 feet above ground level to reduce noise impacts on these communities. Additionally, the Navy is requesting the FAA create "airport exclusion areas" (3-nautical-mile radius, surface to 1,500 feet above ground level) around the Gabbs, Crescent Valley, and Eureka airports. Though established for airspace separation, the exclusion areas would serve as an additional means to reduce low-level overflights near Gabbs, Crescent Valley, and Eureka.

Table 7: Potential Impacts on Noise	Alternatives 1	2	3	No Action*
New areas of noise exposure created on lands under the eastern portion of FRTC special use airspace	●	●	●	
New areas potentially receiving sonic booms created	●	●	●	
Sensitive receptors impacted by noise contours above 65 dBA from aircraft and ordnance use near Bravo ranges	●	●	●	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Air Quality

Air quality is defined by atmospheric concentrations of specific air pollutants that the U.S. Environmental Protection Agency determined may affect the health or welfare of the public. The six major air pollutants of concern, called *criteria pollutants*, are carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone, particulate matter, and lead. Particulate matter is further categorized as particulates less than or equal to 10 microns in diameter (PM_{10}) and fine particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$). For the Final EIS, the environmental analysis includes resources in the Nevada Intrastate Air Quality Control region.

The environmental baseline for the Final EIS is comprised of the air emissions associated with the same general types and levels of aviation and ground training as analyzed in Alternative 2 of the *2015 Military Readiness Activities at Fallon Range Training Complex, Nevada Final EIS*. Because no changes are proposed to the level of training, this analysis focuses on air emissions from proposed construction activities.

Environmental Consequences

Small increases in emissions of criteria and hazardous air pollutants would occur, relative to baseline Nevada emissions and the environmental baseline for the Final EIS. Measurable changes in air quality would be expected locally, but the attainment status in the Northwest Nevada Intrastate Air Quality Control Region and Nevada Intrastate Air Quality Control Region would not be affected.

Small increases in fugitive dust from construction activities would occur; however, management practices would minimize the generation of dust. Construction emissions would be localized and temporary, minimizing the overall impact on ambient air quality. Alternative 3 (Preferred Alternative) includes the installation of approximately three additional miles of fence compared to Alternatives 1 and 2. However, this installation would not result in a significant change in air quality. The environmental analysis indicates there would not be significant impacts on air quality.

Management Practices, Monitoring, and Mitigation

Current: Strategies for dust control are described in the Navy's current dust control plan and would continue to be implemented.

Proposed: The Navy would implement the best practical methods available for fugitive dust suppression. Some of the procedures include:

- Phase activities, such as grading, leveling, or shoulder dragging, to reduce the surface area disturbed at one time.
- Use water trucks for water spraying.
- Schedule surface area disturbance activities immediately following periods of precipitation.
- Suspend operations when winds or other meteorological conditions make dust control difficult.
- Properly maintain equipment in accordance with applicable Navy requirements and federal and state emission standards.
- Minimize dust by operating vehicles on existing roads and two-track trails whenever possible.
- Implement traffic control measures by vehicles on unpaved surfaces, including vehicle speed controls.
- Restrict non-project vehicles in affected areas during surface area disturbance activities.
- Promptly remove any visible material tracked from surface area disturbance locations onto adjoining paved roads.
- Clean equipment and machinery at a designated on-base facility.
- Determine additional dust abatement measures during pre-construction planning.

Table 8: Potential Impacts on Air Quality	Alternatives 1	2	3	No Action*
Criteria and hazardous air pollutants increased above *de minimis* levels relative to baseline Nevada emissions and environmental baseline	○	○	○	
Fugitive dust above $PM_{2.5}$ and PM_{10} criteria levels increased from construction activities	○	○	○	
Attainment status affected in the Northwest Nevada Intrastate Air Quality Control Region and Nevada Intrastate Air Quality Control Region	○	○	○	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

For the EIS, *water resources* includes surface water (streams, floodplains, and playas), groundwater (confined and unconfined aquifers), climate factors that contribute to hydrologic conditions, and water rights. The Navy analyzed water resources in the project footprint of the proposed acquisition and withdrawal areas and any other area that could be directly or indirectly impacted by modernization.

Environmental Consequences

Under Alternative 3 (Preferred Alternative), there would be temporary impacts from road construction and facilities, but the Navy would implement current management practices to reduce impacts on water quality. Potential impacts on water quality would not be significant due to:

- Limited amount of disturbance from munitions use within withdrawal areas.
- Localized areas of disturbance from munitions use within withdrawal areas.
- Small footprint of new infrastructure.
- Management practices and mitigation measures specifically designed to reduce or avoid potential impacts on surface water and groundwater.
- Periodic removal of expended munitions and munitions fragments through operational range clearance activities in training ranges where they are expended (B-16, B-17, B-19, and B-20), thereby removing a source of potential contamination to surface and groundwater.
- Chemical compounds in expended munitions not retrieved and therefore likely to dry and degrade in the arid environment.

Under Alternative 3, the Navy would not seek to acquire water rights within the DVTA. Water rights holders would continue to exercise their beneficial uses associated with the water right. The Navy has and would continue to consult with Churchill County planners and engineers to ensure future water development projects are designed to meet Churchill County water development goals with project design features consistent with military training activities within the DVTA.

Management Practices, Monitoring, and Mitigation

Current: The Navy would continue to implement current management practices to minimize impacts on water resources, such as avoiding incidental spills, using drip pads under equipment, addressing potential groundwater contamination issues through regular range condition assessments, complying with the operational range clearance plan, and avoiding ground training in streams, ponds, and wetlands.

Proposed: The Navy completed a water resources study after the publication of the Draft EIS. This study includes a discussion of vested water rights. The findings of the study were incorporated into the Water Resources section of the Final EIS and are available at **www.frtcmodernization.com**. Private water rights would be purchased as real property, as necessary. Acquisition of water rights would be factored into the processes for valuing grazing and mining-related just compensation or other authorized payments. However, the Navy would not seek to acquire existing water rights in the DVTA. The Navy does not have the authority or the expertise to validate vested water rights or assist water rights holders with any other water rights actions, such as change applications. Only the State Engineer can validate water rights. However, valid water rights would be treated as real property in the valuation process.

Based on the analysis, mitigation measures are not warranted for water resources. As part of the Alternative 3, the Navy would acquire existing and valid water rights within the proposed withdrawal areas if the water right can be maintained for beneficial use. If a condition of the water right can be modified, e.g., the point of use moved outside for the withdrawal areas, then the water right would not be acquired by the Navy. The Navy would reimburse the movement of the water right on a case-by-case basis. If wells are associated with the water right, then the Navy would evaluate the disposition of the well, e.g., continued beneficial use or capping of the well, on a case-by-case basis. The Navy does not plan to use any water rights purchased for stock water but would request to modify the beneficial use as appropriate relative to mission requirements.

The Navy would continue to implement management practices to avoid and minimize potential impacts on water quality, as described in the Water Resources section (Proposed Management Practices, Monitoring, and Mitigation) of the Final EIS.

Table 9: Potential Impacts on Water Resources	Alternatives			
	1	2	3	No Action*
Potential for surface and subsurface contamination with trace amounts of residual munitions constituents increased	◑	◑	◑	
Water resources from road construction and facilities impacted	◑	◑	◑	
Surface and groundwater features from training activities impacted	◑	◑	◑	
Water rights changed	◑	◑	◑	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Biological Resources

Biological resources include living, native, or naturalized plant and animal species and habitats. Plant associations are referred to generally as *vegetation*, and animal species are referred to generally as *wildlife*. *Habitat* is defined as the resources and conditions present in an area that support a plant or animal.

For the purposes of the EIS, biological resources are divided into three categories: *vegetation types*, *wildlife*, and *special-status species*. Vegetation types include dominant plant species that occur within the project areas, and the study of wildlife includes all common animal species, such as birds, mammals, reptiles, fishes, and amphibians.

Environmental Consequences

Under Alternative 3 (Preferred Alternative), military training levels would continue at the same level of activities analyzed in the *2015 Military Readiness Activities at Fallon Range Training Complex, Nevada Final EIS*, with activities dispersed more widely with the inclusion of the proposed expansion areas. Alternative 3 would not result in significant impacts on biological resources.

Training activities within newly configured airspace would expand the area where birds and aircraft overlap. However, through the Navy's Bird/Animal Aircraft-Strike Hazard program, potential impacts on migratory birds would be avoided and minimized.

Based on available literature and the analysis, impacts on sage grouse are expected to be minimal. However, NDOW expressed concern regarding increased low-level overflights and requested a long-term study to further assess potential impacts. The Navy is proposing to fund a study that would be conducted by NDOW to monitor sage grouse lek behavior during aircraft overflights. Any commitment by the Navy to undertake a study will be addressed in the Record of Decision.

Construction activities would impact vegetation communities and wildlife habitat; however, the areas potentially impacted are small, relative to the extent of surrounding areas. Potentially impacted areas include approximately 5,730 acres under Alternative 3 and approximately 4,460 acres under Alternatives 1 and 2.

Implementation of Alternative 3 would not result in significant impacts on biological resources.

For the EIS, special-status species include:

- *Endangered Species Act-listed species.
- BLM-listed sensitive species.
- Bald eagle and golden eagle pursuant to the Bald and Golden Eagle Protection Act.
- Migratory Bird Treaty Act species.
- Birds of Conservation Concern as identified by the USFWS.
- Species listed as threatened, endangered, sensitive, or otherwise protected by the State of Nevada under the Nevada Administrative Code.
- Species listed as Species of Conservation Priority by NDOW in the 2013 Nevada Wildlife Action Plan.
- Species ranked by the Nevada Natural Heritage Program as critically imperiled, imperiled, or vulnerable.

*Considered in environmental analysis but none occur in the region of influence.

Management Practices, Monitoring, and Mitigation

Current: Current requirements and management practices for wildlife and vegetation present at the FRTC focus on minimizing disturbance, controlling invasive plants, and restoring native habitats. Management practices applied to existing ranges would continue to be implemented and expanded to withdrawn lands.

Proposed: If Alternative 1, 2, or 3 is implemented, the Navy would revise its Integrated Natural Resources Management Plan to include the expanded withdrawn and acquired lands. The Navy would coordinate with BLM, NDOW, and USFWS when revising the plan and consider whether additional management or monitoring activities should be incorporated. To the maximum extent possible, and if compatible with mission training requirements, the Navy would avoid placing targets in biologically sensitive areas as identified by NDOW.

Table 10: Potential Impacts on Biological Resources

	Alternatives			
	1	2	3	No Action*
Noise exposure stressors to biological resources increased from training activities within and near existing ranges and lands proposed for withdrawal or requested for acquisition	◑	◑	◑	◑
Wildlife populations impacted by proposed overflights at altitudes less than 500 feet	◑	◑	◑	○
Impacts on wildlife populations increased as a result of experiencing sonic booms	○	○	○	○
Potential impacts on migratory birds increased from proposed military aircraft activities	○	○	○	○
Vegetation impacted by proposed construction activities	◑	◑	◑	
Bighorn sheep and pronghorn habitat directly impacted by proposed construction activities within expansion areas	◑	◑	◑	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Cultural resources, as defined by the National Historic Preservation Act, are any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places. Properties of religious and cultural significance to Indian Tribes may be eligible for inclusion in the National Register of Historic Places.

Archaeological resources (prehistoric and historic): locations where human activity measurably altered the earth or left deposits of physical remains.

Architectural resources: buildings, structures, landscapes, and other built-environment resources of historic or aesthetic significance.

Traditional Cultural Properties: historic properties eligible for inclusion in the National Register of Historic Places due to their association with cultural practices and beliefs of a living community that are: 1) rooted in the community's history, and 2) important to maintaining the continuing cultural identity of the community.

The Navy currently abides by the 2011 Programmatic Agreement with the Nevada SHPO, BLM, and the Advisory Council on Historic Preservation for the identification, evaluation, and treatment of historic properties on lands managed by the Navy to ensure protection of cultural resources. Additionally, the NAS Fallon Integrated Cultural Resources Management Plan provides guidance to ensure all laws, regulations, policies, and directives related to cultural resources are appropriately followed while fulfilling the installation's mission.

For purpose of the EIS, the region of influence for cultural resources is referred to as a *potential impact area*, a term analogous to the National Historic Preservation Act Section 106 term *area of potential effect*. The present analysis differs from Section 106 to the degree that it: 1) considers an array of proposed actions that are not undertakings, and 2) considers the impact on a wider range of cultural resources than National Register of Historic Places-eligible or potentially eligible historic properties. Importantly, areas of potential effect and assessments of effect on historic properties under Section 106 would be addressed when specific undertakings are proposed and known in detail in the future. The Navy would continue to engage with all interested Indian Tribes. The Navy is working with the Nevada SHPO and the Advisory Council on Historic Preservation to amend the current 2011 Programmatic Agreement for withdrawn lands. The Navy would complete Section 106 consultation on impacts due to loss of access for Indian Tribes prior to fencing newly withdrawn and acquired lands after any ultimate Congressional decision.

Environmental Consequences

The Navy anticipates that through implementation of an amended 2011 Programmatic Agreement, management practices of avoidance, the use of monitors, and mitigation measures, the impacts of the Proposed Action on cultural resources would be lessened to a level less than significant with respect to training activities, construction, and aircraft overflights. Access to cultural resources within the FRTC would be managed and not eliminated. Given the proposed access Memorandum of Understanding has not been finalized, and the high degree of concern with respect to the potential loss of access documented in comments received from Indian Tribes, the Navy concludes limiting tribal access to cultural resources may result in significant impacts.

Management Practices, Monitoring, and Mitigation

Current: Current management practices would continue to be implemented on existing withdrawn lands and lands requested for withdrawal and proposed for acquisition.

Proposed: Management of proposed expansion areas would require updates to the Integrated Cultural Resources Management Plan. If the Proposed Action is implemented, the Integrated Cultural Resources Management Plan would be revised to include management practices for cultural resources in the expansion areas. The Navy would coordinate with BLM, Nevada SHPO, and affected Indian Tribes and consider whether additional management or monitoring activities can be incorporated. This coordination would include archaeological and tribal monitoring, as appropriate.

An amended 2011 Programmatic Agreement and Integrated Cultural Resources Management Plan would continue to be implemented on existing withdrawn lands and lands requested for withdrawal and proposed for acquisition. The Navy would consult with Indian Tribes who attach religious and cultural significance to any Traditional Cultural Properties. The Navy also proposes to manage access through a Memorandum of Understanding with Indian Tribes who attach religious and cultural significance to sites within the Potential Impact Area.

In cases where avoidance and minimization of adverse effects on historic properties is not possible, the process outlined in an amended 2011 Programmatic Agreement and 36 CFR Section 800.6 (resolution of adverse effects) would be followed. The Navy acknowledges that there may be impacts yet to be defined and would continue to develop and incorporate mitigation measures consistent with the established process.

Table 11: Potential Impacts on Cultural Resources

	Alternatives			
	1	2	3	No Action*
Cultural resources impacted from decommissioning, decontamination, and reuse of the closed range				●
Access for ceremonial or cultural activities restricted	◑	◑	◑	
Caves, rockshelters, or rock formations containing petroglyphs damaged as a result of noise and vibration from sonic booms	○	○	○	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Recreational activities refer to outdoor activities conducted in the region of influence such as hunting, fishing, hiking, popular racing events, camping, wildlife viewing, rock/fossil collecting, horseback riding, operating OHVs, sightseeing, and visiting historic sites. Recreation areas include federal, state, or local designated parks, playgrounds, recreation management areas, and wildlife refuges, as well as other discernable areas where the public regularly recreates.

Environmental Consequences

Alternative 3 (Preferred Alternative) would have significant impacts on public recreation, as approximately 421,005 acres would no longer be accessible to the public. However, impacts would be reduced to some extent by allowing bighorn sheep hunting within B-17 through a Memorandum of Agreement between NDOW and the Navy. Also, large racing events that currently occur near B-16, B-17, and B-19 would continue on those ranges in accordance with the requirements listed in the Large Event Race Activities section of Chapter 2 of the Final EIS. Additionally, B-17 would be shifted off the Sand Springs Range and Fairview Peak; therefore, these areas would remain publicly accessible.

Under Alternative 3, the Navy is proposing that Congress remove the designation as a Wilderness Study Area from those portions of the Clan Alpine, Job Peak, and Stillwater Wilderness Study Areas within the DVTA to accommodate training activities. The BLM would continue managing the remaining portions of the Wilderness Study Areas.

With the implementation of any proposed action alternatives, the Navy would recommend the removal of a portion of the ACEC designation that is proposed in the Carson City Draft Resource Management Plan 2014 (Preferred Alternative E) for the proposed Fox Peak ACEC within the DVTA. The BLM would change the boundaries to remove those portions of the ACEC that would be within the expanded DVTA.

Under all alternatives, refuge lands would continue to be maintained as refuge; however, the public would not have access to the portion of the refuge under the weapons danger zone. Under Alternatives 1 and 2, 3,200 acres of the Fallon National Wildlife Refuge would be closed to the public. However, under Alternative 3, 2,720 acres of the refuge would be closed. The USFWS would still be provided management access through a Memorandum of Understanding with the Navy on the Fallon National Wildlife Refuge-withdrawn lands. Approximately 1,920 acres of adjoining Churchill County conservation easements would also be withdrawn as the B-20 range under all action alternatives.

Management Practices, Monitoring, and Mitigation

Current: Management practices in place for other resources, such as noise and land use, which also affect recreation would continue to be implemented and serve to avoid and minimize impacts on recreation under special use airspace.

Proposed: The Navy and NDOW would manage and annually review the bighorn sheep hunting program on B-17, as described in the Draft Memorandum of Agreement in Appendix D (Memoranda, Agreements, and Plans) of the Final EIS.

The BLM or NDOW would continue to be able to access areas previously managed by these agencies on the Bravo ranges for management purposes through access agreements. The Navy would continue to support NDOW actions to install and maintain water guzzlers for wildlife within range or training areas.

The Navy would install wildlife-friendly fencing for any new fences and remove all existing fences not required for safety and security purposes within the withdrawal area. The Navy would expand their fence line patrol and maintenance procedures to include fences that are on withdrawn lands.

Table 12: Potential Impacts on Recreation	Alternatives 1	2	3	No Action*
Existing withdrawn lands under Public Law 106-65 not renewed and potentially converted to recreational use				●
General dispersed recreation (hunting, hiking, wildlife viewing, OHV use, mountain biking, rock hounding, and exploring) changed on lands proposed for Bravo ranges	●	●	●	
Public access restricted on the DVTA				
Large racing events and hunting opportunities lost on B-16, B-17, and B-20	●	◑	◑	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

In the context of NEPA, *socioeconomics* encompasses impacts on economic and social conditions of the region potentially affected by a proposed action. The purpose of the socioeconomic analysis in the Final EIS is to assess potential socioeconomic impacts of the proposed modernization in the region of influence. The region of influence includes Churchill, Lyon, Mineral, Pershing, and Nye counties because they would be directly affected by the proposed modernization. Eureka, Elko, and Lander counties are not included in the region of influence because impacts within these counties would be negligible.

The socioeconomic analysis includes economic data for communities affected by proposed modernization related to population and demographics, housing occupancy status, employment characteristics, economic activity, and tax revenue. Unlike other sections in the Final EIS, this section is analyzed in the context of state, regional, and local trends rather than in terms of the defined geographical areas (e.g., B-16, B-17).

Social impacts are addressed but are not discussed with respect to each action alternative individually because discussion of such impacts is captured in the analysis of impacts on other resource areas, and potential social impacts on the human environment would not be significantly different among the various alternatives.

Environmental Consequences

Alternative 3 (Preferred Alternative) would not result in significant impacts on population and demographics, housing, agriculture, property values, or recreation and tourism revenues.

Alternative 3 would, however, result in permanent economic impacts associated with lost federal land grazing. While there would be impacts on individual ranchers, there would not be a significant impact on the total economic activity within the affected counties.

Alternative 3 could potentially result in significant impacts with respect to mining and geothermal opportunities that could be lost. In general, impacts would be less compared to Alternative 1 due to greater access for geothermal operations within the DVTA and recreational opportunities (bighorn sheep hunting program) within B-17. Further, locatable, salable, and leasable activities would continue to be allowed within the Special Land Management Overlay, with coordination with the Navy.

Under Alternative 3, there would be no change in payments in lieu of taxes (PILT) for Churchill, Mineral, Nye, or Pershing counties, and minimal changes in PILT for Lyon County. While there would be no significant impact from lost sales and tax revenue, lost hunting opportunities could result in a reduction in wildlife application fees and funding sources for NDOW.

Management Practices, Monitoring, and Mitigation

Proposed: For any acquisition of privately owned property, landowners would receive just compensation for loss of any privately owned land (as well as water rights and certain improvements to real property) acquired by the United States due to the proposed expansion. Just compensation would be determined by calculating the fair market value of parcels in accordance with federal appraisal rules. The Final EIS has been updated to include the process by which the Navy would make payments to holders of mining claims, federal grazing permit holders, and water rights holders. These processes are discussed in the Mining and Mineral Resources, Livestock Grazing, and Water Resources sections of the Final EIS.

Table 13: Potential Impacts on Socioeconomics

	Alternatives			
	1	2	3	No Action*
PILT for Lyon County decreased	●	●	●	
PILT for Churchill, Mineral, Nye, or Pershing counties decreased				
Economic or employment opportunities lost	◑	◑	◑	●
Population and demographics changed	○	○	○	○
Property values reduced	○	○	○	●
Agriculture changed	○	○	○	●
Grazing opportunities lost	◑	◑	◑	
Mining and geothermal resource opportunities lost	●	◑	◑	
Recreational opportunities lost	●	◑	◑	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

The discussion of public health and safety and protection of children in the Final EIS includes consideration of activities, occurrences, or operations that have the potential to affect the safety, well-being, or health of the public. A *safe environment* is one in which there is either no potential, or an optimally reduced and ultimately minimal potential, for death, serious bodily injury, illness, or property damage.

The environmental analysis for public health and safety covers the entire FRTC, including both special use airspace and Navy-managed lands, and immediately adjacent lands. Within the region of influence, areas of heightened sensitivity to public health and safety and protection of children concerns include areas where large groups of people may gather, such as recreational areas and parks.

Environmental Consequences

Under Alternative 3 (Preferred Alternative), current plans and procedures for emergency services, aircraft and ground operations, range clearance, electromagnetic energy, use of lasers, and abandoned mine lands would continue to be implemented and include expanded range areas. B-16, B-17, B-19, and B-20 would be fenced and the public would be restricted from accessing the ranges except for managed access.

The DVTA would remain accessible to the public and safety procedures would be implemented to minimize risk to the public. Construction and improvement activities would follow standard safety measures to include construction fencing, signs, and security to minimize safety risks and unauthorized access. Therefore, Alternative 3 would not result in significant impacts on public health and safety and protection of children, and there would be no disproportionate environmental health or safety risks to children.

Management Practices, Monitoring, and Mitigation

Current: Measures are in place to ensure nonparticipants are not endangered by actions at the FRTC, and would remain in effect with the implementation of any of alternative. Standard operating procedures and range clearance procedures would remain in place to ensure training areas are clear of nonparticipants before an activity commences.

Proposed: The Navy is actively developing a Wildland Fire Management Plan to reduce the risk of wildfire in the region of influence. A draft outline of the Navy's updated Wildland Fire Management Plan has been added to Appendix D (Memoranda, Agreements, Plans).

With the implementation of existing management practices on lands requested for withdrawal or proposed for acquisition, no additional management practices or monitoring or mitigation measures are proposed for public health and safety and protection of children.

The following management practices would be implemented to reduce hazards associated with unexploded ordnance:

- Post signs warning of areas where unexploded ordnance clearance has not been confirmed when the public is authorized on Bravo ranges.
- Implement procedures, such as escorts, range clearance, and explosive ordnance disposal sweeps, to protect the public if authorized to enter the ranges.
- Maintain the Range Sustainability Environmental Program Assessment.
- Continue operational range clearance activities which remove unexploded ordnance and other materials to reduce munitions constituent loading.

Table 14: Potential Impacts on Public Health & Safety & Protection of Children	Alternatives 1	2	3	No Action*
Emergency responses within the FRTC restricted				
Aircraft-related accidents increased	○	○	○	
Exposure to aircraft-delivered ordnance increased	○	○	○	
Exposure to electromagnetic radiation increased	○	○	○	
Exposure to lasers increased				
Access to abandoned mines within Bravo ranges and the DVTA increased	○	○	○	
Exposure to hazardous materials and waste increased	○	○	○	

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. *Fair treatment* means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. *Meaningful involvement* means:

- People have an opportunity to participate in decisions about activities that may affect their environment or health.
- The public's contribution can influence the regulatory agency's decision.
- Public concerns will be considered in the decision-making process.
- Decision makers seek out and facilitate involvement of those potentially affected.

The environmental analysis for environmental justice considered any minority or low-income population that could be exposed to a disproportionately high and adverse human health or environmental effect as a result of implementing any of the alternatives. These populations include census block groups that overlap or are adjacent to existing Bravo ranges and training areas (also known as fence line communities) and any other community that could experience DNL noise of 65 dBA or above as a result of naval training activities.

Environmental Consequences

Implementation of Alternative 3 (Preferred Alternative) would not cause disproportionately high and adverse human health or environmental effects on any minority or low-income populations. Therefore, there would be no significant impact on environmental justice. Despite this finding, the Navy has embarked on robust community outreach and tribal engagement programs as part of the EIS process and will continue to engage with affected communities. The Navy acknowledges that there may be impacts that have yet to be defined and will continue to develop and incorporate mitigation measures as necessary.

Management Practices, Monitoring, and Mitigation

Current: It is the Navy's policy to identify and address any disproportionately high and adverse human health or environmental effects of its actions on minority and low-income populations.

Proposed: No new management practices, monitoring, or mitigation measures are warranted for environmental justice impacts based on the analysis.

Table 15: Potential Impacts on Environmental Justice	Alternatives 1	2	3	No Action
Noise contours above 65 dBA DNL would adversely affect minority or low-income communities in a manner that would be greater than comparison groups				
Air emissions or water discharges would adversely affect minority or low-income communities in a manner that would be greater than comparison groups				

●=Some impact.
◑=Some impact, but reduced as a result of project design changes, implementation of current or proposed management practices, monitoring, or mitigation.
○=Minimal impact.
Blank=No impact.

* Assumes that the Navy would retain administrative control of the land withdrawn under Public Law 106-65 until any required environmental remediation was completed and health and safety concerns were sufficiently addressed to allow the return of the land to BLM for reincorporation into the public domain. The Navy could still perform some training activities within the FRTC that are independent of the land withdrawn under Public Law 106-65.

Cumulative Impacts

Cumulative impacts were analyzed for each resource category across all action alternatives and in combination with past, present, and reasonably foreseeable future actions. In accordance with CEQ guidance, the cumulative impacts analysis focused on impacts that are "truly meaningful." Specific projects and actions identified as having the greatest likelihood to generate potential cumulative impacts when added to the Proposed Action are shown visually in the following figure (Figure 10), and described the Cumulative Impacts section of the Final EIS.

As a result of this analysis, the following conclusions were determined for each analyzed resource:

- The incremental contribution of Alternative 3 (Preferred Alternative) to cumulative impacts on geological resources, airspace, air quality, biological resources, cultural resources, public health and safety, and environmental justice would not have the potential to contribute meaningfully to any potential significant cumulative impact with respect to these resource areas.

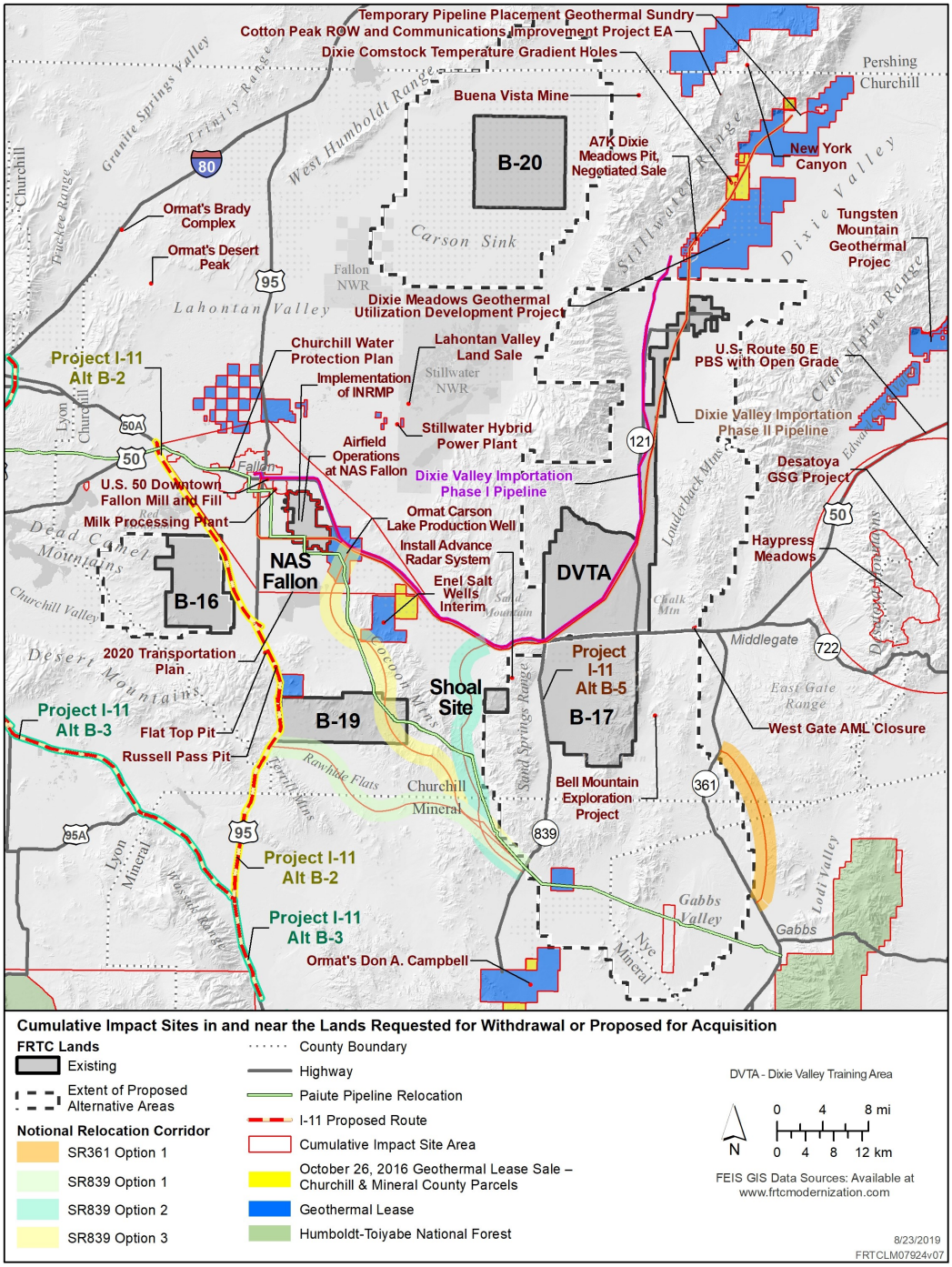


Figure 10: Cumulative Impact Sites in and near the Lands Requested for Withdrawal or Proposed for Acquisition

- The incremental contribution of Alternative 3 to cumulative impacts on socioeconomics would be appreciable due to the potential loss of revenue in some of the counties within the region of influence. However, for most counties these impacts would not rise to the level of significance except for potential impacts on mining and mineral resources. Additionally, Nye County would experience a significant impact on their economic resources due to the cumulative nature of the U.S. Air Force's Nevada Test and Training Range Proposed Action and therefore, the Navy's Proposed Action.

- The incremental contribution of Alternative 3, viewed in conjunction with other projects in the area, would result in cumulatively significant impacts with respect to land use, mineral resources and mining (including as an aspect of socioeconomics), grazing, transportation, water resources, noise, and recreation.

Management Practices, Monitoring, and Mitigation Measures

As part of the Navy's commitment to sustainable use of resources and environmental stewardship, the Navy incorporates measures to avoid, reduce, or minimize impacts on the environment and the community from its activities. Measures may include the employment of management practices, standard operating procedures, monitoring programs, mitigation measures, conservation practices, or others. Each of the alternatives considered in the Final EIS include proposed measures intended to avoid, reduce, or minimize potential impacts.

There are three categories that serve to potentially reduce impacts from any proposed alternative:

- **Management Practices:** Policies, procedures, or plans that aim to preserve the environment or the integrity of the ranges. Management practices are implemented to reduce impacts that projects can generally have on the surrounding environment.
- **Monitoring:** Measures that involve systematic sampling of physical and biological resources to derive knowledge of the environment, its resources, and processes or activities that affect them. Monitoring can be conducted for a number of purposes, including establishing environmental baselines and trends, informing decision-making for management actions, assessing the effects of natural and human influences, assessing the effectiveness of management practices and mitigation measures, and ensuring compliance with environmental regulations. Monitoring results inform coordination with regulatory agencies to ensure effective measures are employed. Monitoring measures facilitate adaptive management efforts and help to track completion of measures the action proponent has committed to implement in an environmental planning decision document.
- **Mitigation Measures:** Measures that reduce specific impacts a project or action could have on a particular resource, replace the impacted resource, or relocate threatened resources to a new location.

In addition to existing management practices and standard operating procedures that would be applied if the analysis identified potential adverse impacts on a resource from implementing the No Action or action alternatives, the Navy identified methods to minimize or mitigate those impacts through coordination with cooperating agencies and Indian Tribes, where appropriate and practicable. Cooperating agencies, Indian Tribes, and other stakeholders were solicited for potential mitigation or management actions through meetings, as well as through the public scoping process, and the public comment process on the Draft EIS. The Navy evaluated the suggestions received for compatibility with military training activities and range safety. The Navy conducted several mitigation working group meetings with cooperating agencies and Indian Tribes to discuss their concerns, as well as the feasibility of their suggested management practices or mitigations.

The Navy continued to work with cooperating agencies, tribal participants, and other public stakeholders between the Draft and Final EIS to refine or augment mitigation methods to reduce potential impacts. Suggestions for management practices, monitoring, and mitigation measures from the cooperating agencies and tribal participants, and other public comments received during scoping and the commenting period on the Draft EIS have been added to the Final EIS in Tables 5-1 through 5-16. General mitigation suggestions are shown along with the Navy's responses for each suggestion indicating whether it was adopted or not, including reasoning for considering but eliminating the suggestion, if applicable. Suggestions specific to different resource categories are discussed under their respective resource headers in Sections 5.2 through 5.16.

The Council on Environmental Quality regulations identify five ways to reduce or mitigate the severity or intensity of adverse impacts:

- Avoid the impact altogether by not taking all or part of the action.
- Minimize the impact by limiting the degree or magnitude of the action and its implementation.
- Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
- Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.
- Compensate for the impact by replacing or providing substitute resources or environments.

Community involvement is an important part of the NEPA process. Input from the public, agencies, and tribes allows decision makers to benefit from local knowledge and consider the concerns of the community. The public is given the opportunity to participate in the NEPA process during the scoping period, Draft EIS public review and comment period, and the Final EIS public review and wait period. The Navy has held additional stakeholder meetings with cooperating agencies and tribal participants since January 2017 to discuss constituent concerns and improve the analysis of potential impacts.

Notice of Intent and Public Scoping Period

Scoping is an early and open public process for developing the scope of issues to be addressed in an EIS and for identifying significant issues related to a proposed action. The Navy requested public input at this early stage to ensure public, agency, and tribal concerns were considered and appropriately addressed in the Final EIS.

- **Notice of Intent to Prepare an EIS and to Announce Public Scoping Meetings (Aug. 26, 2016):** The publication of this notice in the Federal Register initiated the public involvement phase of the NEPA process.
- **Scoping Period (Aug. 26 to Dec. 12, 2016):** The scoping period provided an opportunity for the public to learn more about the proposed modernization and comment on the scope of the environmental analysis and viable alternatives to be considered in the EIS. The Navy extended the public comment period at the request of the public, for a 109-day scoping period.
- **Public Scoping Meetings (Oct. 3-7, 2016):** The Navy held seven public scoping meetings in Fallon, Lovelock, Reno, Austin, Eureka, Hawthorne, and Gabbs, Nevada to provide information and answer questions from the public. Informational materials from the public scoping meetings can be found at **www.FRTCModernization.com**.
- **Public Scoping Comments:** A total of 328 comment letters were received during the scoping period. The Public Scoping section provides a summary of public comments. The Navy reviewed these comments and conducted more than 170 additional meetings with stakeholders and Indian Tribes to discuss potential alternatives.

Draft EIS Public Review and Comment Period

With the initiation of the Draft EIS public review and comment period, the public was able to further comment on the proposed modernization and the draft environmental impact analysis. This input was considered in the development of the Final EIS.

- **Notice of Public Meetings for the Draft EIS for the Modernization of the FRTC, Nevada (Nov. 15, 2018):** The publication of this notice in the Federal Register announced the dates and locations of seven public meetings and the beginning of the Draft EIS public review and comment period.
- **Notice of Availability (Nov. 16, 2018):** The publication of this notice in the Federal Register announced the availability of the Draft EIS for public review and comment.
- **Draft EIS Public Review and Comment Period (Nov. 16, 2018, to Feb. 14, 2019):** The public review and comment period provided an opportunity for the public to comment on the analysis presented in the Draft EIS. Comments were accepted via the website, by email, by mail, or at public meetings. The Navy extended the public comment period at the request of the public, for a 91-day comment period.
- **Draft EIS Public Meetings (Dec. 10-13, 2018):** The Navy held seven public meetings in Hawthorne, Gabbs, Austin, Eureka, Fallon, Lovelock, and Reno, Nevada to provide information, answer questions, and receive comments from the public. Informational materials from the public meetings can be found at **www.FRTCModernization.com**.
- **Draft EIS Comments:** The Navy received comment letters, postcards, form letters, oral comments, and electronic submissions during the Draft EIS public review and comment period. The Navy's responses to comments received on the Draft EIS are presented in Appendix F (Public Comment and Responses).

Final EIS Public Review and Wait Period

This Final EIS includes updates and revisions to the Draft EIS, all substantive public comments received on the Draft EIS, and the Navy's responses to these comments (see Appendix F in the Final EIS). The Navy's responses to public comments may also take other forms, including correction of data, clarifications of and modifications to analytical approaches, and inclusion of additional data or analysis in the Final EIS.

- **Notice of Availability of the Final EIS (Jan. 10, 2020):** The publication of this notice in the Federal Register announced the availability of the Final EIS. The Final EIS can be found at **www.FRTCModernization.com**.
- **Final EIS Public Review and Wait Period (Jan. 10, 2020, to Feb. 8, 2020):** The Navy provides a 30-day wait period after the Final EIS is released to the public before the Navy may take action.

Next Steps

A 30-day wait period follows the issuance of the Final EIS. The Navy will consider any public comments received and subsequently sign a Record of Decision. The Navy will publish a Notice of Availability of the Record of Decision in the Federal Register and local newspapers; distribute the Record of Decision to Indian Tribes, agencies, and interested parties; and post the Record of Decision on the project website. The Record of Decision will document the Navy's final decision on the Proposed Action (to include identifying an action alternative as a proposal to be submitted to Congress for action), the rationale behind that decision, and any commitments to mitigation and monitoring. Congress will then review the Navy's proposal and Record of Decision and consider legislation for the proposed land withdrawal. Congress must approve any land withdrawal before any alternative can be implemented.

The Record of Decision is expected to be completed in February 2020. The Navy will continue to discuss potential mitigation measures with cooperating agencies and federally recognized Indian Tribes.

See **www.FRTCModernization.com** for more information.

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