
3.4 Livestock Grazing

No Action Alternative

Under the No Action Alternative, the 1999 Congressional land withdrawal of 201,933 acres from public domain (Public Law 106-65) would expire on November 5, 2021, and military training activities requiring the use of these public lands would cease. Expiration of the land withdrawal would terminate the Navy's authority to use nearly all of the Fallon Range Training Complex's (FRTC's) bombing ranges, affecting nearly 62 percent of the land area currently available for military aviation and ground training activities in the FRTC.

Alternative 1 – Modernization of the Fallon Range Training Complex

Under Alternative 1, the Navy would request Congressional renewal of the 1999 Public Land Withdrawal of 202,864 acres, which is scheduled to expire in November 2021. The Navy would request that Congress withdraw and reserve for military use approximately 618,727 acres of additional Federal land and acquire approximately 65,153 acres of non-federal land. Range infrastructure would be constructed to support modernization, including new target areas, and expand and reconfigured existing Special Use Airspace (SUA) to accommodate the expanded bombing ranges. Implementation of Alternative 1 would potentially require the reroute of State Route 839 and the relocation of a portion of the Paiute Pipeline. Public access to B-16, B-17, and B-20 would be restricted for security and to safeguard against potential hazards associated with military activities. The Navy would not allow mining or geothermal development within the proposed bombing ranges or the Dixie Valley Training Area (DVTA). Under Alternative 1, the Navy would use the modernized FRTC to conduct aviation and ground training of the same general types and at the same tempos as analyzed in Alternative 2 of the *2015 Military Readiness Activities at Fallon Range Training Complex, Nevada, Final Environmental Impact Statement (EIS)*. The Navy is not proposing to increase the number of training activities under this or any of the alternatives in this EIS.

Alternative 2 – Modernization of Fallon Range Training Complex with Managed Access

Alternative 2 would have the same withdrawals, acquisitions, and SUA changes as proposed in Alternative 1. Alternative 2 would continue to allow certain public uses within specified areas of B-16, B-17, and B-20 (ceremonial, cultural, or academic research visits, land management activities) when the ranges are not operational and compatible with military training activities (typically weekends, holidays, and when closed for maintenance). Alternative 2 would also continue to allow grazing, hunting, off-highway vehicle (OHV) usage, camping, hiking, site and ceremonial visits, and large event off-road races at the DVTA. Additionally under Alternative 2, hunting would be conditionally allowed on designated portions of B-17, and geothermal and salable mineral exploration would be conditionally allowed on the DVTA. Large event off-road races would be allowable on all ranges subject to coordination with the Navy and compatible with military training activities.

Alternative 3 – Bravo-17 Shift and Managed Access (Preferred Alternative)

Alternative 3 differs from Alternative 1 and 2 with respect to the orientation, size, and location of B-16, B-17, B-20 and the DVTA, and is similar to Alternative 2 in terms of managed access. Alternative 3 places the proposed B-17 farther to the southeast and rotates it slightly counter-clockwise. In conjunction with shifting B-17 in this manner, the expanded range would leave State Route 839 in its current configuration along the western boundary of B-17 and would expand eastward across State Route 361 potentially requiring the reroute of State Route 361. The Navy proposes designation of the area south of U.S. Route 50 as a Special Land Management Overlay rather than proposing it for withdrawal as the DVTA. This Special Land Management Overlay would define two areas, one east and one west of the existing B-17 range. These two areas, which are currently public lands under the jurisdiction of BLM, would not be withdrawn by the Navy and would not directly be used for land-based military training or managed by the Navy.

Environmental Impact Statement

Fallon Range Training Complex Modernization

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3.4 Livestock Grazing

This discussion includes current and planned livestock grazing and outlines the policies that regulate livestock grazing on public lands. It identifies and analyzes impacts to livestock grazing allotments, pastures, and areas that would be affected by the Proposed Action and the alternatives. Section 3.13 (Socioeconomics) analyzes the socioeconomic impacts of restricting or removing livestock grazing on public lands.

3.4.1 Methodology

This analysis addresses existing grazing allotments and pastures within the areas proposed for the Fallon Range Training Complex (FRTC) modernization.

3.4.1.1 Region of Influence

The region of influence includes all lands, whether or not grazing allotments exist there, that are within or adjacent to the proposed FRTC withdrawal areas for the Bravo (B) ranges and the Dixie Valley Training Area (DVTA) (Table 3.4-1). Should a particular grazing allotment be affected, the region of influence would extend beyond the proposed FRTC withdrawal area to include the entire allotment. The region of influence also includes 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 Native American reservations.

There are no changes proposed for the land withdrawal, training activities, public access, or construction on B-19. Therefore, B-19 is not discussed further and would be maintained as discussed in the *2015 Military Readiness Activities at Fallon Range Training Complex, Nevada Final Environmental Impact Statement* (U.S. Department of the Navy, 2015).

3.4.1.2 Regulatory Framework

Livestock grazing on public lands is regulated by several statutes and regulations. Those that pertain to grazing within the region of influence include the following:

- Federal Land Policy Management Act of 1976 (43 United States Code [U.S.C.] section 1701 et seq.)
- Taylor Grazing Act of 1934 (as amended) (43 U.S.C. sections 315–316o)
- Public Rangelands Improvement Act of 1978 (43 U.S.C. sections 1901–1908)
- National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. sections 668dd–668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57)
- Reclamation Reform Act of 1982 (43 U.S.C. section 390aa et seq.)
- 43 Code of Federal Regulations (CFR) Part 429
- 43 CFR subpart D, Group 4100
- Nevada Revised Statute Chapter 568 (Taylor Grazing Act)

For the Department of the Navy, grazing activities on Navy installations must be compatible with the Sikes Act (16 U.S.C. section 670a et seq.). Livestock grazing is regulated on Navy lands through the out-grant lease real estate authority granted under 10 U.S.C. section 2667.

The following instructions and manuals, which provide guidance and recommendations, were used in identifying potential land use incompatibilities for this Environmental Impact Statement (EIS):

- OPNAVINST 3710.7v, *Naval Air Training and Operating Procedures Standardization Program*, and Commander, Naval Air Force Manual 3710.7 (U.S. Department of the Navy, 2016)
- Bureau of Land Management (BLM) Standards and Guidelines for Nevada (Bureau of Land Management, 1997)
- Federal Aviation Administration Aeronautical Information Manual (Federal Aviation Administration, 2017)

3.4.1.3 Approach to Analysis

Information regarding the BLM grazing allotments within the region of influence was obtained from the BLM Rangeland Administration System, which provides grazing administrative support and management reports for the BLM and the public (Bureau of Land Management, 2017a). Public reports that were reviewed on the public Rangeland Administration System included allotment information, allotment master reports, authorized use by allotment reports, operator information, and permits schedule information. These reports are generated from data provided by BLM Field Office staff and include information regarding grazing permit information, allotment information, and billing information.

The Navy obtained Geographical Information System (GIS) data for each 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.

The Navy supplemented this effort by working closely with rangeland management specialists at the BLM Stillwater and Humboldt Field Offices. BLM staff provided information from the internal Rangeland Administration System and the Rangeland Improvements Projects Systems upon request. The Navy also conducted a physical records search of the potentially affected BLM allotments and permittee files in the summer and fall of 2017 (Bureau of Land Management, 2017–2018).

The Navy has reached out to all permittees with allotments that would potentially overlap the proposed FRTC withdrawal. The Navy also performed site visits to the potentially affected allotments on the Bravo ranges in August and September 2017. These efforts confirmed and updated publicly available information on the Rangeland Administration System. Affected allotments are identified in Table 3.4-1 and are depicted on Figure 3.4-1, Figure 3.4-2, Figure 3.4-4, and Figure 3.4-6.

The Bureau of Reclamation provided GIS data for Bureau of Reclamation grazing lands within the region of influence in October 2017. Additional information regarding Bureau of Reclamation grazing areas was obtained from the Bureau of Reclamation's *Grazing Management Plan Final Environmental Impact Statement Lahontan Basin Area Office Newlands Project, Nevada Mid-Pacific Region* (Bureau of Reclamation, 2014) and the Navy's *Final Environmental Assessment for Proposed Addition of Training Activities and Range Enhancements at Naval Air Station Fallon on Training Range Bravo-16 Churchill County, Nevada* (U.S. Department of the Navy, 2014a).

3.4.1.3.1 Determining Loss of Animal Unit Months

Closing portions of active grazing allotments on public lands could affect the number of livestock permitted on an allotment. An allotment is a designated area or management unit where livestock grazing is permitted and can be made up of multiple pastures (Bureau of Land Management, 2014). The

regulating authorities for public land grazing, previously listed in Section 3.4.1.2 (Regulatory Framework), require the BLM to determine the carrying capacity of allotments. Carrying capacity is defined as the number of grazing animals an allotment is able to support without depleting rangeland vegetation or soil resources (Holechek et al., 2011). The carrying capacity of an allotment informs the determination of permitted livestock numbers and Animal Unit Months (AUMs) on an allotment grazing permit.

The BLM provided guidance to the Navy in developing a methodology for how to estimate the potential loss in AUMs for affected allotments. A technical memo was prepared that documents the Navy's approach to determining the loss of AUMs (Supporting Study – Technical Memo, Livestock Grazing AUM Restrictive Analysis for Fallon Range Training Complex Modernization, available at <https://frtcmodernization.com>). Since forage is not uniformly distributed across an allotment, a reduction in AUMs for a given allotment would not necessarily be proportional to a percentage decrease in the lands comprising that allotment. The Navy used the following factors to estimate a change in AUMs for each BLM allotment and Bureau of Reclamation pasture:

- Percent of allotment closed to livestock grazing
- Percent of allotment with a greater than 30 percent slope
- Percent of allotment that is greater than 4 miles from water
- Percent of allotment with an annual forage production per acre of less than 100 pounds
- Percent of allotment with an annual forage production per acre between 100 pounds and 300 pounds
- Percent of allotment with an annual forage production per acre greater than 300 pounds

These factors were chosen because they are consistent with BLM parameters and are critical factors in determining how livestock will utilize forage in an allotment. It is acknowledged that this is influenced by the type and class of cattle, and that cattle can graze on slopes greater than 30 percent slope or will travel over 4 miles to water, but are less likely to do so under satisfactory grazing conditions.

The AUM restrictive analysis produced a range of AUMs that could be lost for each allotment for each action alternative (Tables 3.4-3, 3.4-4, and 3.4-6). It is anticipated that any potential loss in AUMs would be within the range and values identified in this EIS. The BLM would complete site-specific environmental analysis for each allotment prior to taking any action concerning such allotments based on any alternatives implemented.

Rangeland production data was sourced from the Natural Resources Conservation Service (NRCS) Web Soil Survey, which utilizes the Soil Survey Geographic Database developed by the National Cooperative Soil Survey (Natural Resources Conservation Service, 2017). The NRCS defines rangeland production as “the amount of vegetation that can be expected to grow annually in a well-managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals.” Rangeland production is measured in pounds per acres of air-dry vegetation (Natural Resources Conservation Service, 2017). This information was supplemented by identifying the ecological site descriptions for the land proposed to be closed from grazing. Ecological site descriptions were obtained from the NRCS's Ecological Site Information Services (<https://esis.sc.egov.usda.gov/Welcomes/pgReportLocation.aspx?type=ESD>), which is the NRCS's repository for ecological site descriptions and for forestland and rangeland plot data. However, ecological site descriptions are not available for all areas within the region of influence. The Navy performed vegetation surveys of the existing FRTC lands in 2008 (Tierra Data Inc., 2008) and of the

proposed expansion areas as part of this EIS effort in 2017 (Supporting Study – Plant Community Surveys and Mapping Report, available at <https://frtcmodernization.com>). Although these surveys did not estimate production potential, these surveys did identify the dominant vegetation classification within the requested withdrawal areas.

3.4.1.4 Public Scoping Concerns

The public raised several concerns regarding potential impacts on existing livestock grazing practices and management during scoping for this EIS. The public was largely concerned with how the Proposed Action would limit or otherwise affect specific grazing allotments within the region of influence. In particular, the public was concerned about the potential losses of AUMs, winter grazing lands, and rangeland improvements (fencing, corrals, seedings, stockwater development, wells, tanks, and pipeline) that could result from the Proposed Action.

Some counties expressed concerns about the potential loss of revenue received from grazing-related funds. Counties where federal grazing districts are located may receive a portion of certain grazing-related funds received by the U.S. Treasury under the authority of the Taylor Grazing Act (43 U.S.C. section 315(i)), with the initial distribution of such funds being made to the State and distributed thereafter to the relevant counties as determined by the State Legislature. The Navy is attempting to ascertain the amounts of any such distributions to counties in the Proposed Action's Region of Influence in order to be able to factor such amounts into its discussion of potential impacts to local government revenue streams within the overall socioeconomic analysis.

The Nevada Department of Agriculture and multiple counties have expressed their concerns about the potential loss of water rights associated with grazing operations as well as the impact that a loss of water rights might have on the region's customs and culture (i.e., potential loss of multi-generational family ranches). During public scoping, Churchill and Eureka Counties requested that the Navy work with the BLM and grazing permittees to identify potential impacts on livestock grazing. The Navy met with several of the potentially affected BLM permit holders and interested individuals in October 2017 to discuss potential alternatives and impacts on individual allotments. The Navy will provide the opportunity to meet individually with permittees and the BLM between the Draft and Final EIS.

3.4.2 Affected Environment

This section serves as the environmental baseline and describes current livestock grazing within the region of influence. It first gives an overview of livestock grazing in the region of influence before discussing the affected environment for B-16, B-17, B-20, and the DVTA. No grazing occurs on B-19, and FRTC modernization does not propose to expand B-19. Accordingly, no changes in grazing would be experienced with retention of B-19 as part of the FRTC modernization action. Livestock grazing has had an important and historical role in the State of Nevada and continues to represent local customs and cultural traditions that influence day-to-day life for many individuals and families in the State, especially in its rural areas. Farms and ranches in Nevada are relatively large compared to the national average, and the majority (83 percent) of Nevada's agricultural operations (most of which are family owned) are primarily engaged in raising livestock (Nevada Department of Agriculture, 2017). It is common for livestock grazing by one operator to occur in more than one county. As such, changes to AUMs can sometimes affect socioeconomics throughout the region, not just in the county where the AUMs are located. Additional details regarding the socioeconomic role of livestock grazing and ranching is described in Section 3.13 (Socioeconomics). Table 3.4-1 identifies the livestock grazing allotments (BLM) and pastures (Bureau of Reclamation) within the region of influence.

Table 3.4-1: Allotments Within the Affected Environment

Allotment Name	Period Begin (MM/DD) ¹	Period End (MM/DD) ¹	Total Acres ²	Permitted AUMs	Livestock Kind	Livestock Permitted	Management Status ³	Affected Environment
Bell Flat	12/01	03/31	92,008	3,688	Cattle	927	Improve	B-17, DVTA
Bucky O'Neill	11/15	04/15	40,946	1,500	Cattle	300	Maintain	DVTA
Copper Kettle	03/01	02/28	108,220	2,333	Cattle	219	Improve	B-20
Cow Canyon	10/01	04/15	149,168	2,382	Cattle	366	Improve	DVTA
Dixie Valley	06/01	05/31	275,782	6,341	Cattle	528	Improve	DVTA
Eastgate	11/01	04/15	310,564	9,767	Cattle	1,503	Maintain	B-17
	04/16	10/31				239		
Frenchman Flat	10/15	03/15	70,323	2,001	Cattle	403	Maintain	DVTA
Horse Mountain	11/01	03/31	63,184	3,000	Cattle	601	Maintain	B-16
Humboldt Sink	05/01	11/30	190,728	63	Cattle	9	Custodial	B-20
	04/01	11/30		1,516	Cattle	189		
La Beau Flat	10/01	04/15	122,626	3,035	Cattle	468	Maintain	B-17, DVTA
Lahontan	11/01	03/31	77,890	1,155	Cattle	232	Maintain	B-16
Mountain Well-LaPlata	03/01	02/28	139,610	8,004	Cattle	667	Maintain	DVTA
Phillips Well	12/01	03/31	79,717	1,450	Cattle	364	Maintain	B-17, DVTA
Pilot-Table Mountain	11/01	03/31	540,426	5,667	Cattle	900	Improve	B-17
	04/01	10/31			Cattle	150		
	03/01	02/28			Horse	12		

Table 3.4-1: Allotments Within the Affected Environment (continued)

Allotment Name	Period Begin (MM/DD) ¹	Period End (MM/DD) ¹	Total Acres ²	Permitted AUMs	Livestock Kind	Livestock Permitted	Management Status ³	Affected Environment
Rochester	01/01	10/31	255,332	1,379	Cattle	138	Maintain	B-20
	04/01	04/24	255,332	111	Sheep	700	Maintain	
	03/01	02/28	255,332	1,289	Sheep	537	Maintain	
	03/01	02/28	255,332	777	Cattle	166	Custodial	
Salt Wells	10/15	04/15	51,421	1,626	Cattle	270	Maintain	DVTA
Sheckler Pasture ⁴	04/01	11/30	22,210	145	Cattle		Relinquish (2,611) Retain (19,599)	B-16
White Cloud	10/01	03/31	79,717	1,885	Cattle	115	Maintain	B-20, DVTA
	04/01	09/30				199		

¹Period End and Period Begin are identified in the permit according to the BLM's Rangeland Administration System.

²Acres were calculated using ArcGIS data provided by the BLM (UTMz11 NAD83 projection) and may not be consistent with acres reported in the BLM's Rangeland Administration System.

³"Maintain" means to maintain the current resource condition; "Improve" means to improve the current resource condition; and "Custodial" means to custodially manage the existing resource condition.

⁴Bureau of Reclamation managed pasture. Bureau of Reclamation (2014) proposes to relinquish portions of the Sheckler Pasture to the BLM.

Sources: (Bureau of Land Management, 2017a; Bureau of Reclamation, 2014; U.S. Department of the Navy, 2014a)

The percent of allotments affected is discussed in Section 3.4.3 (Environmental Consequences). Grazing within the region of influence occurs throughout the year, with much of the use concentrated during winter and spring months. Summer grazing is common at higher elevations, while winter grazing areas are primarily found in lower elevations associated with an arid climate. The BLM has identified the management status of allotments within the region of influence as belonging to one of three objective categories according to rangeland resource characteristics, potential, opportunities, and needs: maintain the current resource condition, improve the current resource condition, and custodially manage the existing resource condition (Bureau of Land Management, 1982, 1989).

A report prepared for the Nevada Department of Agriculture and the Nevada Association of Counties in 2001 reported an estimated 16 percent decline in total AUMs in Nevada from 1980 to 1999. This report projected that the decrease in AUMs may continue but would nearly level off in the future (Resources Concepts Inc., 2001). Currently, there is a considerable interest in acquiring public land grazing permits as they become available within the region of influence. Some grazing land may lose available acreage as urban areas expand, which ensures a continual demand for areas that will remain open to livestock grazing in the foreseeable future (Bureau of Land Management, 2014). Wildfires and regulatory changes could also result in the loss of grazing land within the region of influence.

Nevada's climate is arid with large variations in temperature. The region of influence falls within the geographic feature known as the Great Basin, which is in the Basin and Range Province. Elongated mountain chains alternating with flat, dry basins characterize this province. The western portion of the Great Basin averages 9 inches of precipitation per year, while the Fallon area averages 5 inches per year.

Vegetation production within most of the region of influence is relatively low. Playas, which have little to no vegetation, occupy much of the lowest elevation levels in the region. At these lower elevations, where temperatures are the hottest and the soil is the most saline, members of the Chenopodiaceae (Goosefoot family) are the dominate vegetation. Here, saltbush (*Atriplex*) and greasewood (*Sarcobatus*) species are common as well as four-wing saltbush (*Atriplex canescens*) and spiny hopsage (*Grayia spinosa*). Asteraceae are also common in these areas. At slightly higher elevations, where the soils are less saline, and more moisture is available, varieties of sagebrush (*Artemisia* spp.) become the dominant vegetation. Cheatgrass (*Bromus tectorum*) is known to often form in large, dense stands in these areas. The mid-to-upper range elevations support riparian habitats in canyons and washes. Fremont cottonwood (*Populus fremontii*), willows (*Salix* spp.), and Wood's rose (*Rosa woodsia*) vegetation are species commonly encountered in these areas (Supporting Study – Plant Community Surveys and Mapping Report, available at <https://frtcmodernization.com>). Meanwhile, in the upper elevations, the dominant vegetation changes to pinyon-juniper (*Pinus* spp., *Juniperus* spp.) woodlands, which generally have an understory consisting of sagebrush, rabbitbrushes, and other common shrubs. These woodlands provide a valuable resource for livestock forage, but livestock carrying capacity is variable depending on the characteristics of the understory (Tueller, 1989).

With the exception of small isolated strands, grasslands are incredibly rare in Nevada (Tueller, 1989). Perennial grasses occur throughout all elevations, interspersed with shrubs and trees. Perennial grasses within the region of influence include Indian ricegrass (*Achnatherum hymenoides*), desert needlegrass (*Achnatherum speciosum*), needleandthread (*Hesperostipa comata*), galleta (*Pleuraphis jamesii*), crested needlegrass (*Achnatherum parishii* var. *depauperatum*), bottlebrush squirreltail (*Elymus elymoides*), Sandberg's bluegrass (*Poa secunda*), King's desertgrass (*Blepharidachne kingii*), fluffgrass (*Erioneuron*

pulchellum), threeawn (*Aristida*), sand dropseed (*Sporobolus cryptandrus*), basin wildrye (*Leymus cinereus*), and alkali sacaton (*Sporobolus airoides*) (U.S. Department of Agriculture, n.d.).

Historic overgrazing has contributed to the establishment of invasive plant species within the region of influence (Eiswerth & Shonkwiler, 2006). Current livestock management and regulations have diminished overgrazing throughout the region and reduced the spread of invasive species. Grazing may also be used as a habitat management tool (Bates & Davies, 2014) as well as an effective tool to reduce the potential for wildfires, which could potentially lessen the spread of invasive grasses.

Portions of the grazing areas within the region of influence are used more extensively than others. In most grazing areas in the region, parts of the overall area are used more extensively as a practical matter, and other areas are used only a little or effectively not at all. In addition to livestock grazing, rangeland improvement projects have been implemented within the region to aid in the control of livestock and improve grazing management (Bureau of Land Management, 2014).

3.4.2.1 Bravo-16

B-16 is located southwest of Naval Air Station (NAS) Fallon and west of U.S. Route 95. The affected environment for B-16 includes BLM and Bureau of Reclamation land. Figure 3.4-1 identifies BLM allotments and Bureau of Reclamation pastures within this affected environment.

B-16 currently overlaps portions of the Lahontan Allotment and the Bureau of Reclamation's Sheckler Pasture. The Horse Mountain Allotment is also located in the affected environment for B-16. The Cleaver Peak Allotment and the Southeast Sheckler #1 and Southeast Sheckler #2 pastures are adjacent to the proposed B-16 withdrawal area.

Livestock grazing is not allowed within the existing withdrawn and closed lands of B-16. The Bureau of Reclamation manages livestock grazing within the withdrawn but open lands of B-16 (approximately 4,563 acres) (U.S. Department of the Navy, 2014d, 2015). In 2014, the Navy decided to close areas within B-16 and construct a fence around these areas as part of its range enhancement (U.S. Department of the Navy, 2014a); however, these improvements have yet to be made and these lands are currently open to the public.

The Bureau of Reclamation's Sheckler Pasture overlaps northern B-16. This pasture is part of the Bureau of Reclamation's Newlands Project. With the exception for the Fallon National Wildlife Refuge and the Fernley Wildlife Management Area, the Truckee-Carson Irrigation District manages grazing programs on all Newland Project lands through an agreement with the Bureau of Reclamation (Bureau of Reclamation, 2014). The Bureau of Reclamation currently issues annual use authorizations on the Sheckler Pasture, including the B-16 lands it overlaps for livestock grazing, but it is anticipated that this will be revised to incorporate issuance of a multi-year lease (U.S. Department of the Navy, 2014d).

The Bureau of Reclamation is relinquishing portions of the Sheckler pasture and Southeast Sheckler #1 and Southeast Sheckler #2 pastures to the BLM. Southeast Sheckler #1 Pasture is less than 1 mile east of the existing B-16. Southeast Sheckler #2 Pasture is directly east of the existing B-16 range. As an interim process, BLM has agreed to administer these lands. To avoid any encumbrances on land to be relinquished, no long-term grazing leases are being issued on these lands (Bureau of Reclamation, 2014).

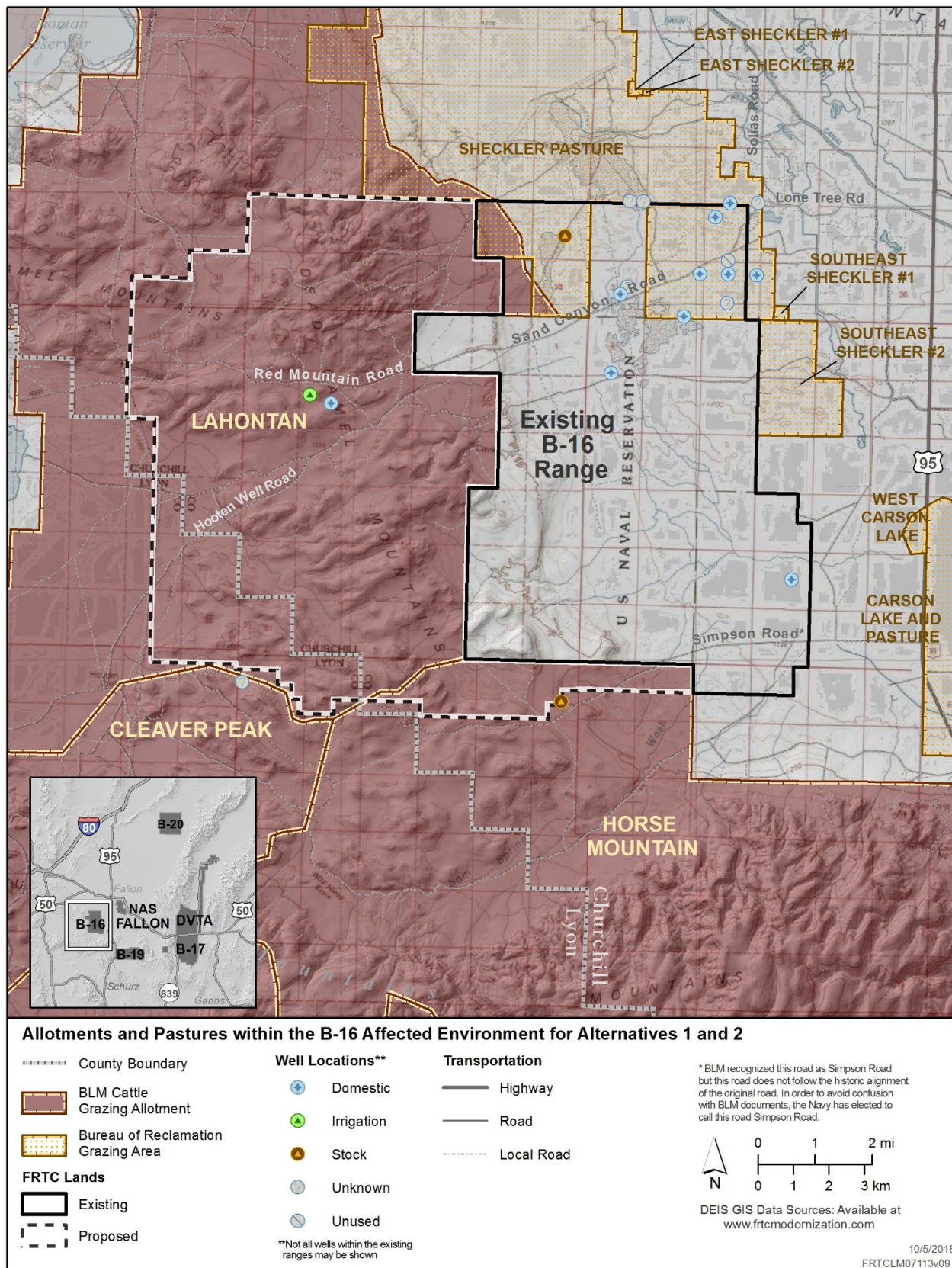


Figure 3.4-1: Allotments and Pastures within the B-16 Affected Environment for Alternatives 1 and 2

The existing B-16 is largely located within a relatively flat area known as the Lahontan Depression Valley. Within B-16, this valley is primarily underlain by soils within the apian-playas association (Natural Resources Conservation Service, 2017; Tierra Data Inc., 2008). The northwest trending Dead Camel Mountains are west of B-16, within the B-16 expansion area. These mountains are generally sandy and of varying terrain.

Surface water in the B-16 affected environment is composed of ephemeral washes. No perennial or intermittent waters have been identified within the affected environment for B-16, but water may pond seasonally in low areas (Section 3.9, Water Resources). The Bureau of Reclamation constructed a new bypass canal off the V-Line Canal in 2017 to provide flood protection for the City of Fallon. The V-Canal is located east of B-16. Bureau of Reclamation will use this bypass as needed in future high-water years. In addition, 39 wells are within the proposed boundary of B-16, five of which were identified as being used for stockwater and are shown in Figure 3.4-1. The remaining wells are used for a variety of purposes, including domestic uses, testing, and monitoring (Nevada Division of Water Resources, n.d.). According to BLM records, there are no additional range improvements on lands proposed for withdrawal on B-16.

Vegetation within B-16 consists mainly of black greasewood plant communities (e.g., black greasewood-alkali seepweed) (Tierra Data Inc., 2008). The area west of the existing B-16 has relatively diverse vegetation with a good representation of upland vegetation alliances. This area is largely composed of cool semi-desert scrub and grassland alliances, which usually includes a high cover of cheatgrass as well as various shrubs (Supporting Study – Plant Community Surveys and Mapping Report, available at <https://frtcmodernization.com>).

B-16 and the surrounding areas have relatively poor forage production. There is a small area within the southwest portion of the proposed B-16 expansion area that is estimated to produce more forage than the surrounding area (Natural Resources Conservation Service, 2017). This area falls within the Lahontan Allotment and is accessible by Sand Canyon Road from the east as well as several unnamed roads from the west.

3.4.2.2 Bravo-17

B-17 is east of NAS Fallon and south of U.S. Route 50. The surrounding area is composed primarily of BLM and Navy (i.e., B-19 and Shoal Site) land. There are also a few private parcels within BLM land. Figure 3.4-2 shows allotments in the affected environment for B-17 and Figure 3.4-3 shows range improvements within the affected environment for B-17. Range improvements have not been field verified for accuracy. Livestock grazing is not allowed within the existing boundary of B-17 but is allowed at the Shoal Site, which is west of B-17 (U.S. Department of the Navy, 2014d).

B-17 currently overlaps portions of the Bell Flat Allotment, and is adjacent to the La Beau Flat Allotment. The Eastgate, Phillips Well, and Pilot-Table Mountain allotments are also within the affected environment for B-17.

The existing B-17 range is within the Fairview Valley and includes the western foothills of the Fairview Range. Fairview Valley is bounded to the west by the Sand Springs Range and by Fairview Peak and Slate Mountain to the east. The La Beau Flat, which is an alkaline flat underlain by alluvial deposits and silty clay, is within B-17. The surrounding mountains are largely gravelly and steep with some rocky outcrops. Gabbs Valley is south of B-17, within the affected environment area for B-17.

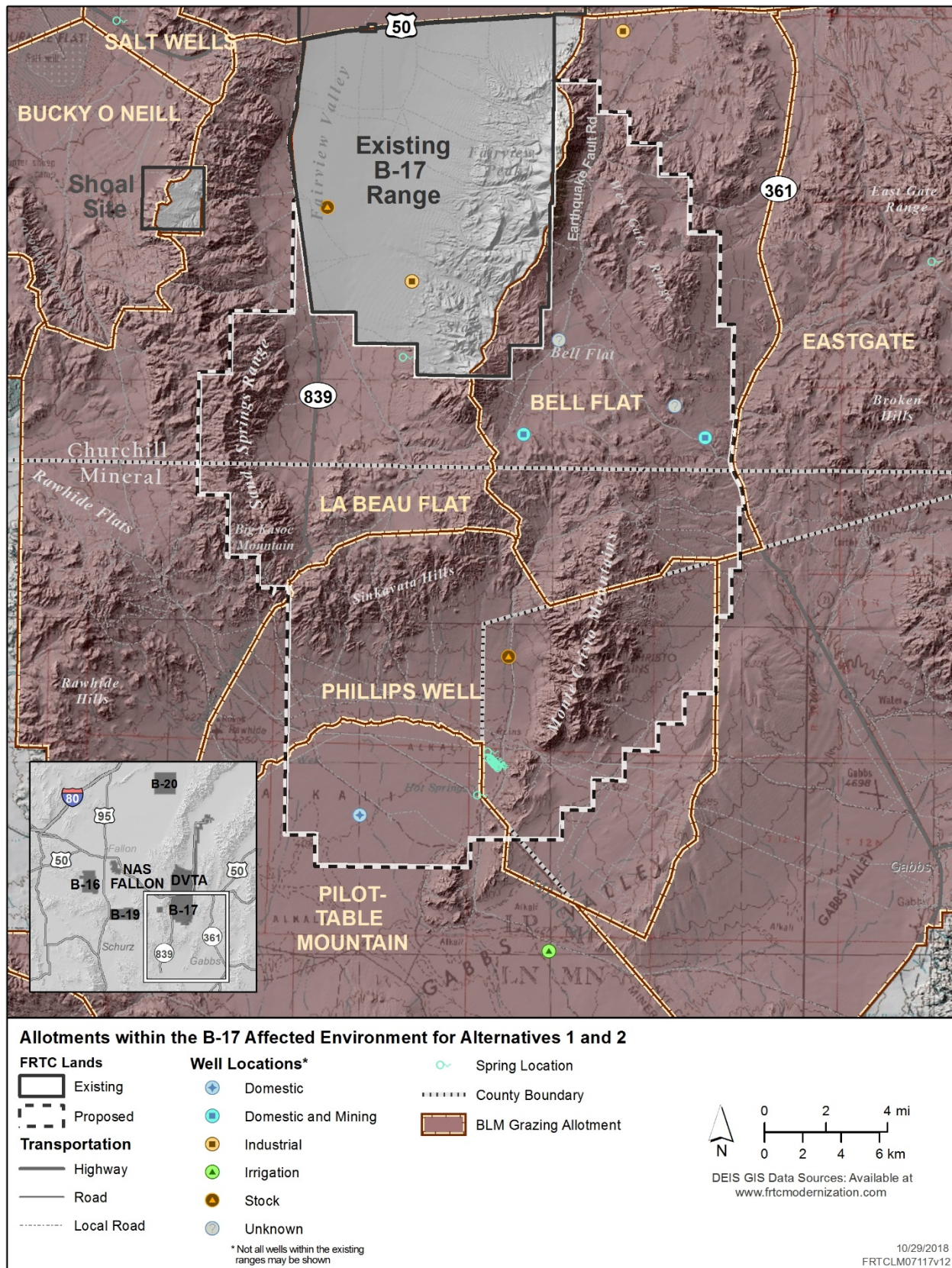


Figure 3.4-2: Allotments within the Bravo-17 Affected Environment for Alternatives 1 and 2

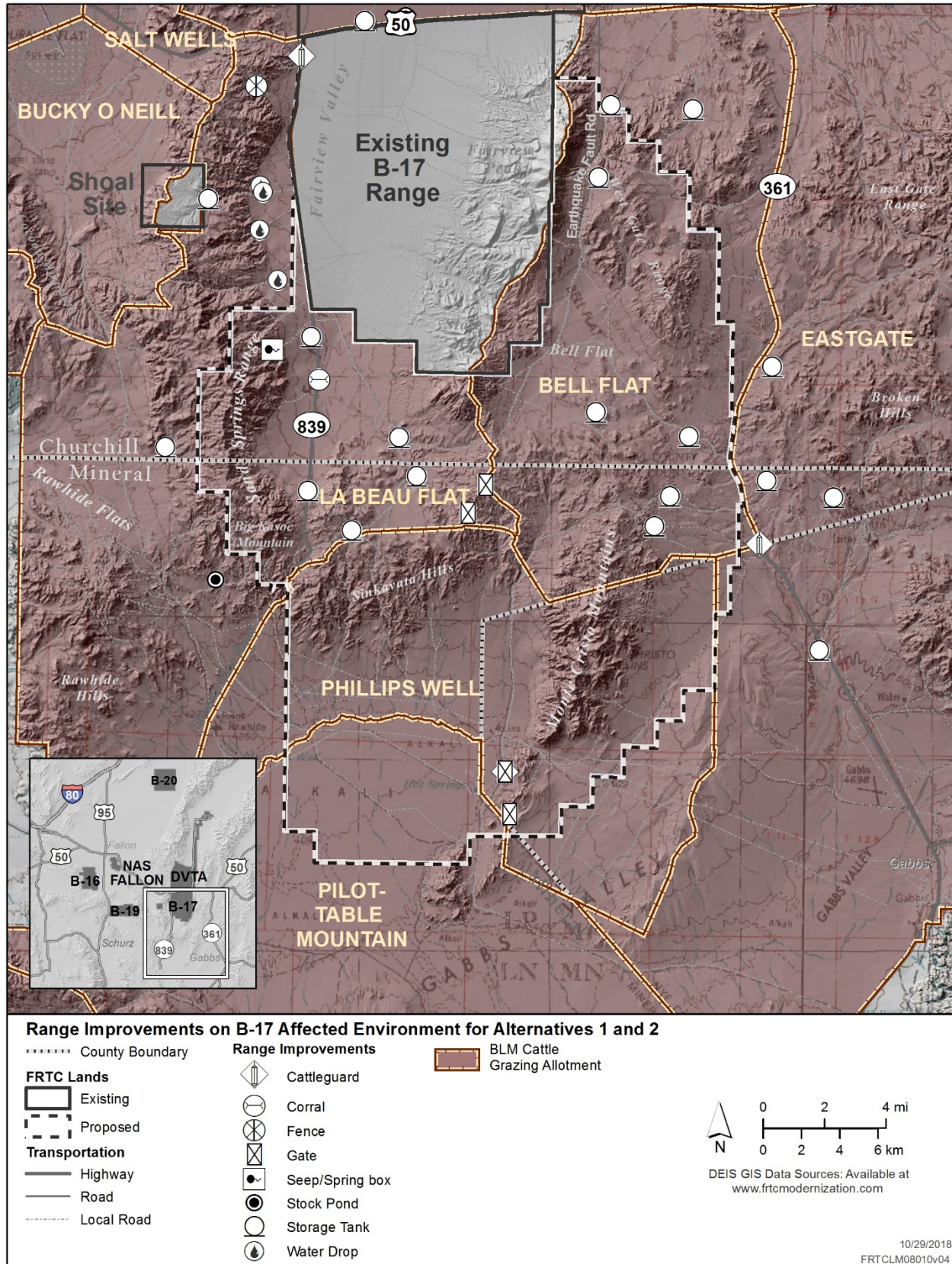


Figure 3.4-3: Range Improvements on B-17 Affected Environment for Alternatives 1 and 2

There are no perennial streams in B-17 or the proposed B-17 expansion areas. There are ephemeral washes around B-17, which tend to drain into the La Beau Flat. Floodwater also drains into an alkali flat south of B-17 into Gabbs Valley where floodwater is known to pool (Eaken, 1962). There are 10 wells within the B-17 expansion areas, three of which are known to be used as stock water and are shown in Figure 3.4-2. The remaining wells are used for a variety of purposes, including irrigation, domestic uses, and mining (Nevada Division of Water Resources, n.d.).

Vegetation within B-17 is primarily dominated by Bailey's greasewood communities. The dominant vegetation in this area is cool semi-desert scrub and grassland with large areas of Bailey's greasewood shrubland. There is some cool temperate forest and woodlands (i.e., Utah Juniper/Shrub Understory Woodland) in the mountainous areas, particularly around Fairview Peak (Supporting Study – Plant Community Surveys and Mapping Report, available at <https://frtcmmodernization.com>).

Although annual vegetation growth varies, the area has relatively low forage production. However, there are areas of higher forage production within Gabbs Valley in the Phillips Well and Pilot Table Mountain allotments (Natural Resources Conservation Service, 2017). Field surveys performed in 2017 found this area to be inundated and sparsely vegetated by intermountain greasewood wet shrubland, which is composed largely of cheatgrass and various shrubs (Supporting Study – Plant Community Surveys and Mapping Report, available at <https://frtcmmodernization.com>).

3.4.2.3 Bravo-20

B-20 is north of NAS Fallon and the Stillwater National Wildlife Refuge, and east of Fallon National Wildlife Refuge. The surrounding area includes BLM and U.S. Fish and Wildlife Service (USFWS) land (e.g., the Fallon National Wildlife Refuge), as well as private land and Churchill County Conservation Easements adjacent to USFWS land.

Figure 3.4-4 identifies BLM allotments within the affected environment for B-20 and Figure 3.4-5 shows range improvements within the affected environment for B-17. Range improvements have not been field verified for accuracy. The Copper Kettle and White Cloud allotments overlap eastern B-20, livestock grazing is not allowed on B-20. The Humboldt Sink and Rochester allotments also overlap portions of the B-20 affected environment. Livestock grazing is also currently not allowed within the boundaries of the Fallon National Wildlife Refuge or the Stillwater National Wildlife Refuge.

B-20 is located in the Carson Sink, which is a relatively flat salt marsh between the Humboldt and Stillwater Mountain Ranges. The northwestern portion of the B-20 affected environment overlaps the Humboldt Mountains. The Humboldt and Stillwater Mountains are rocky mountains with steep slopes and canyons.

The Carson Sink is the terminus of both the Carson River and the Humboldt Rivers, and may be inundated during wet years; water is known to pond on the playas. There are ephemeral washes west and east of B-20 within Humboldt and Stillwater Mountain ranges, which also drain into the Carson Sink. Although there are no wells within B-20, there are 12 wells within the proposed B-20 expansion area. These wells are largely used for industrial and mining purposes (e.g., geothermal test wells) and are shown in Figure 3.4-4. There were no irrigation, stock, or domestic wells identified within the B-20 affected environment (Nevada Department of Water Resources, 2018).

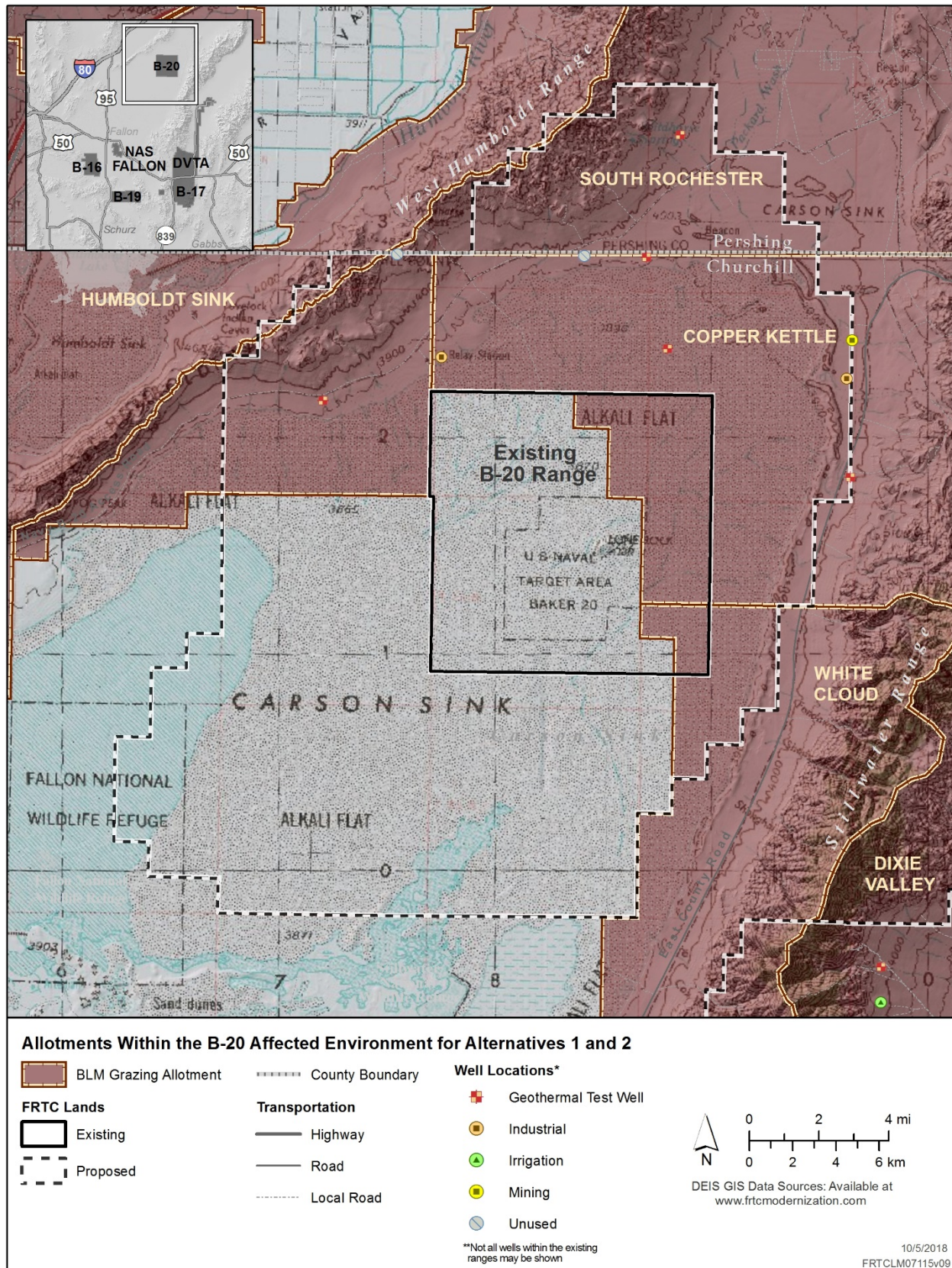


Figure 3.4-4: Allotments within the Bravo-20 Affected Environment for Alternatives 1 and 2

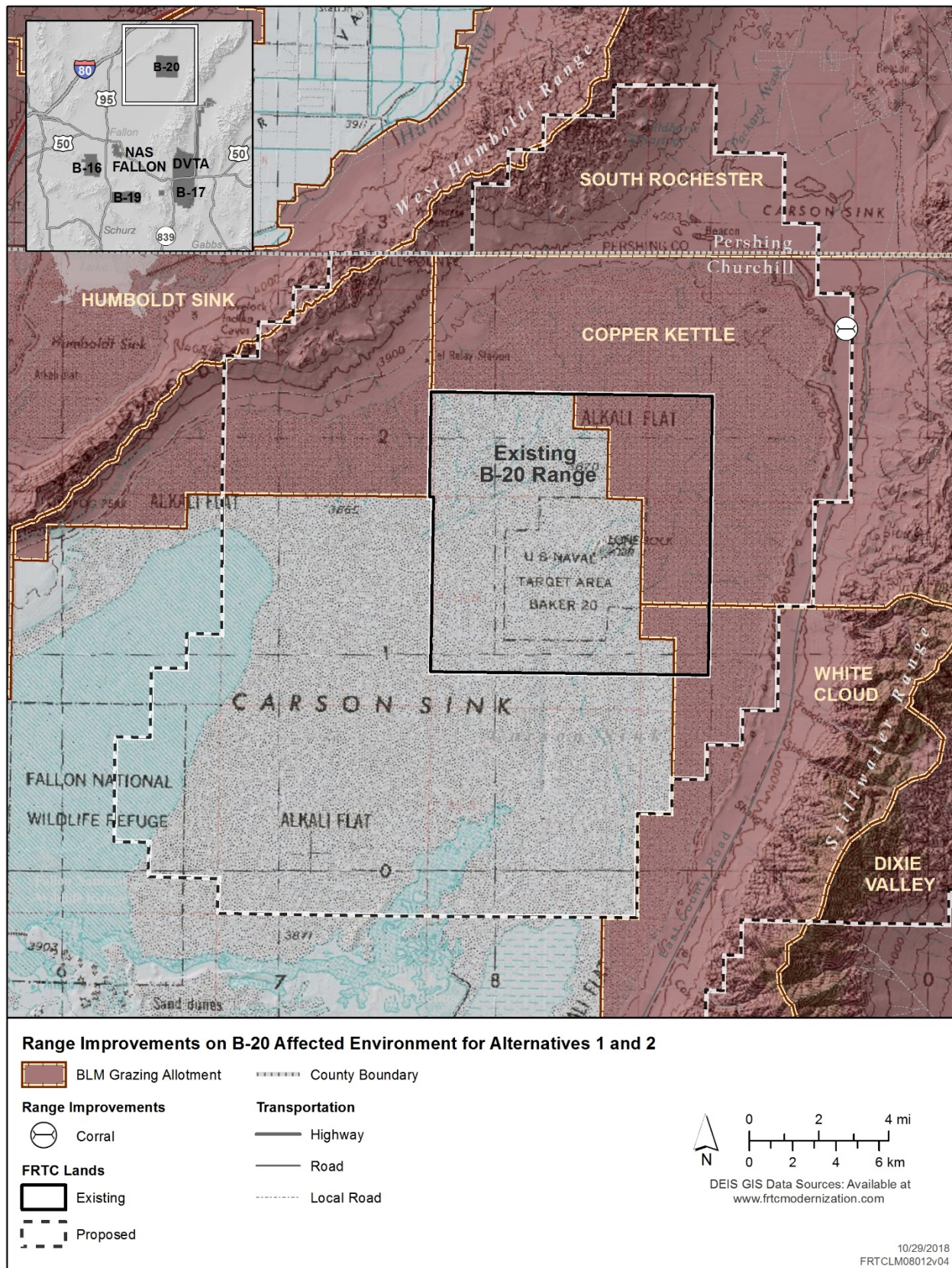


Figure 3.4-5: Range Improvements on B-20 Affected Environment for Alternatives 1 and 2

B-20 is described as being “very desolate, almost devoid of any vegetation, with only an island of vegetation on a rocky outcrop towards the center of the range,” which is referred to as “Lone Rock” (Tierra Data Inc., 2008). Land northwest of B-20 is sparsely vegetated by cool semi-desert scrub and grassland formation, which consist largely of Bailey’s greasewood shrubland (Supporting Study – Plant Community Surveys and Mapping Report, available at <https://frtcmmodernization.com>).

3.4.2.4 Dixie Valley Training Area

The existing DVTA is east of NAS Fallon and north of U.S. Route 50. The proposed DVTA expansion would expand this range west, north, and east of existing DVTA and south of U.S. Route 50 on either side of B-17. The proposed expansion area is composed of BLM land with some private parcels. Figure 3.4-6 identifies the BLM allotments within the affected environment for the DVTA. Figure 3.4-7 shows the range improvements (these have not yet been field verified) within the affected environment for the DVTA.

The DVTA currently overlaps portions of the Cow Canyon, Dixie Valley, Frenchman Flat, and Mountain Well-LaPlata allotments. In addition to including larger portions of these areas, the proposed DVTA expansion would also include the Bell Flat, Bucky O’Neill, La Beau Flat, Phillips Well, Salt Wells, and White Cloud allotments.

Grazing occurs within the DVTA in accordance with the BLM Resource Management Plan (Bureau of Land Management, 2013) and the Navy’s Integrated Natural Resources Management Plan (U.S. Department of the Navy, 2014d). NAS Fallon has identified 1,280 acres within the existing DVTA as suitable for agricultural outlease, with 742 acres of irrigable lands, and the remainder available for livestock grazing based on forage availability. This area has not been under lease since 2011.

The BLM manages cattle on the DVTA in a manner consistent with grazing practices on adjacent public lands, per amended BLM allotment management plans. The BLM consults with the Navy before constructing or removing rangeland improvements per these allotment management plans. The Navy maintains fences and gates to prohibit grazing on areas of Horse Creek and specific pond areas in Dixie Valley to protect sensitive species habitats. (U.S. Department of the Navy, 2014d). The Navy has a 2007 Memorandum of Understanding (MOU) with the BLM that describes the management responsibilities of each agency within the Dixie Valley. In addition, the Navy completed a Grazing, Vegetation, and Water Resource Management Plan for the Dixie Valley Settlement Area in 2002.

The 2007 MOU between the Navy and BLM provides the following management responsibilities of the BLM for livestock grazing on the Navy withdrawn lands:

- Notify the Navy when grazing is to occur in the Navy’s designated retention areas in Dixie Valley.
- Continue allotment management programs on three grazing allotments in Dixie Valley and adjust AUMs as necessary to protect vegetation conditions.
- Continue to manage grazing in accordance with its Grazing Allotment Management Plans and in a manner that is compatible with current and future military training requirements on Navy-acquired and withdrawn lands.
- Consult with the Navy before constructing or removing rangeland improvements per amended allotment management plans.

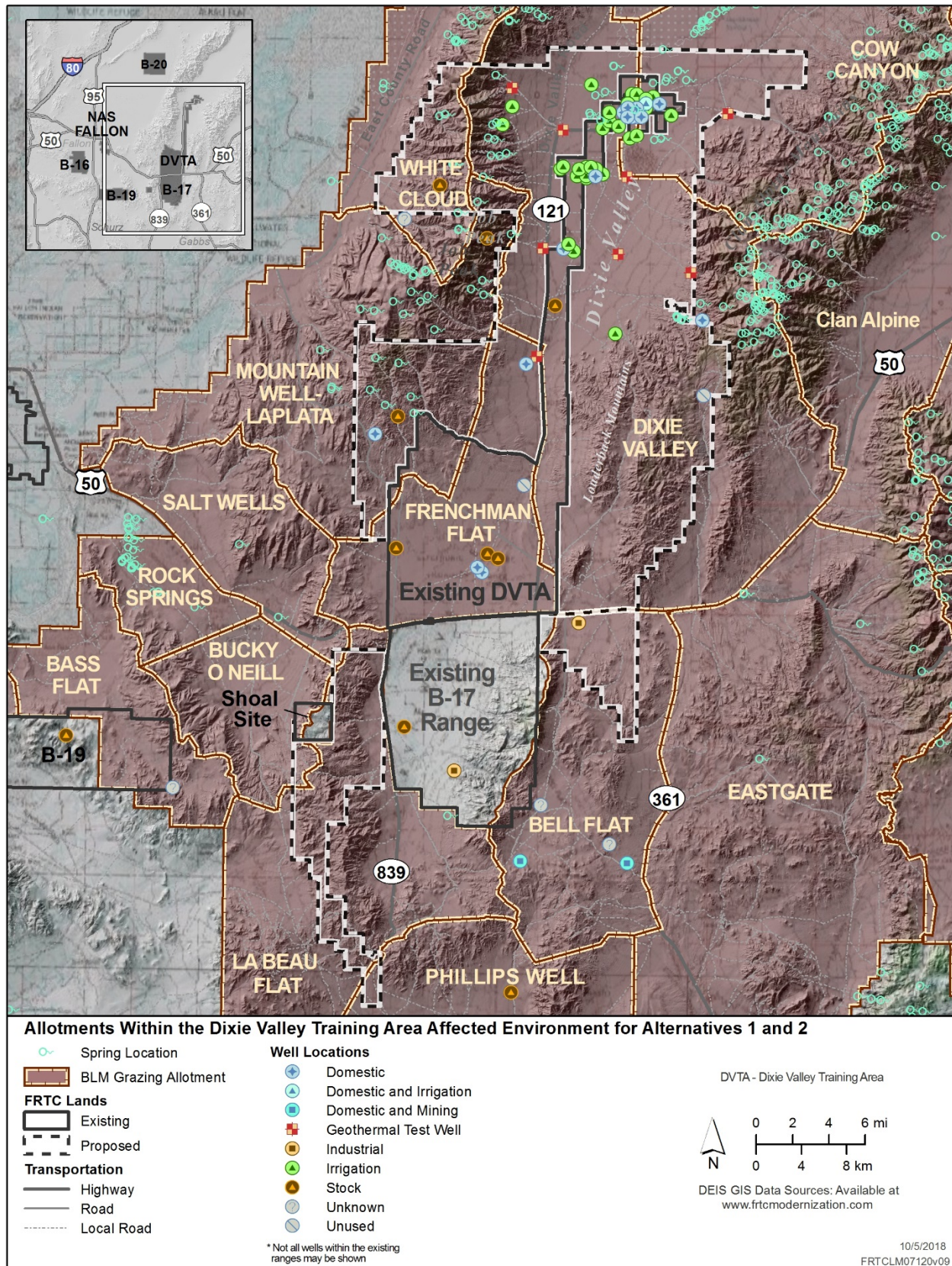


Figure 3.4-6: Allotments Within the Dixie Valley Training Area Affected Environment for Alternatives 1 and 2

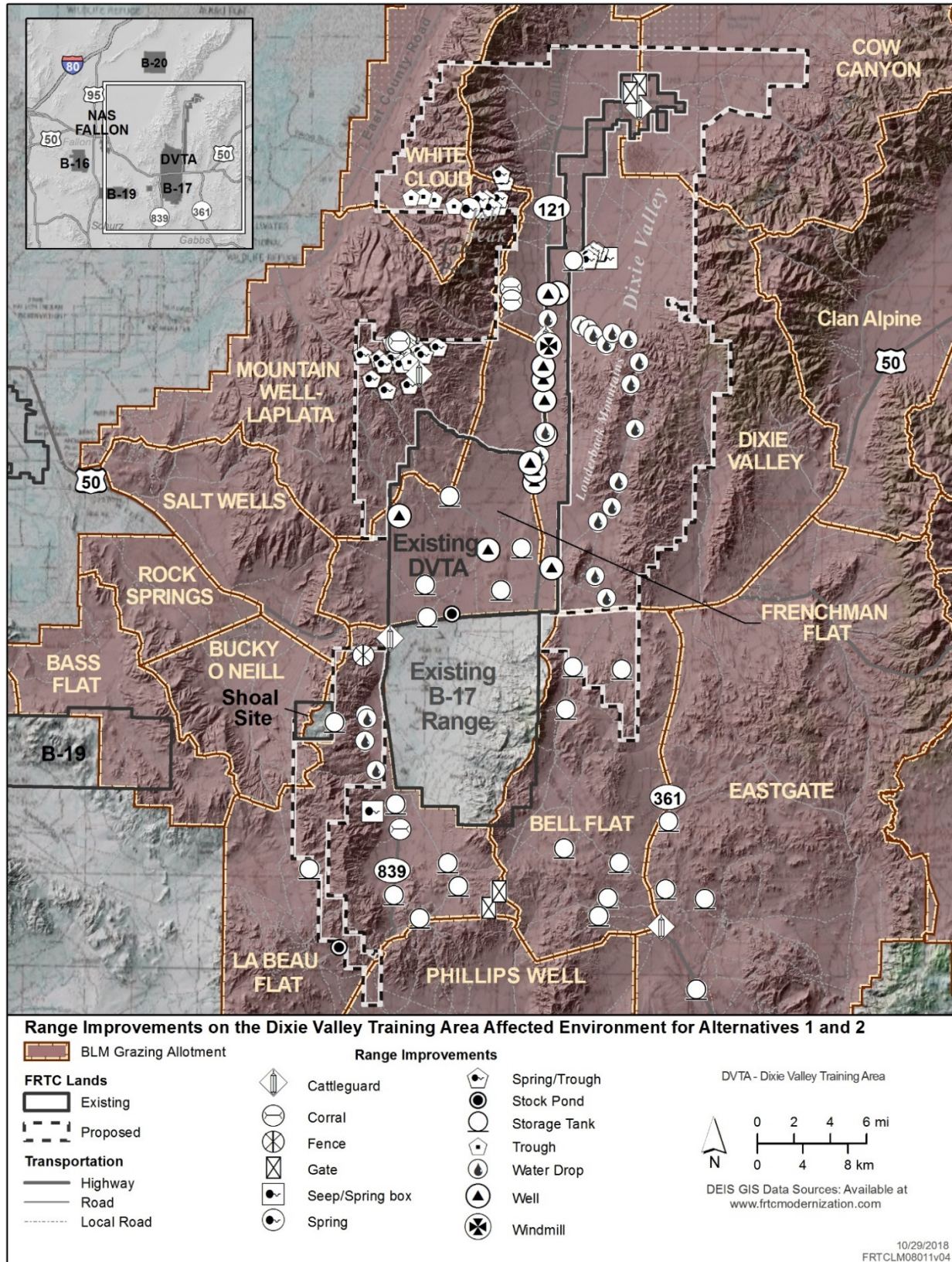


Figure 3.4-7: Range Improvements on the Dixie Valley Training Area Affected Environment for Alternatives 1 and 2

The 2007 MOU also provides the following shared management responsibilities of the BLM and the Navy for livestock grazing on the Navy withdrawn lands:

- Manage vegetation and grazing in Dixie Valley per the 2002 Grazing, Vegetation, and Water Resource Management Plan for the Dixie Valley Settlement Area, Churchill County, Nevada. This plan shows the locations of water sources that would be maintained for livestock and the management of vegetation to be protected for wildlife habitat and Navy training purposes.
- Manage the 10 identified ponds in Dixie Valley with the goal of maintaining the existing ecological values. These areas are fenced to exclude livestock, but they may be opened for grazing for short periods if determined to benefit management.
- Continue to prohibit domestic sheep grazing on Navy lands within nine miles of desert bighorn sheep habitat. These areas would likely include B-17, Dixie Valley, and Horse Creek.
- Dempsey, Turley, and Casey Ponds are prohibited from livestock grazing and are fenced to exclude livestock from accessing the waters.

The existing DVTA is within the Dixie Valley, which is a relatively flat valley between the Stillwater and Clan Alpine Mountain Ranges. Soils in the area are generally gravelly and sandy. Both the Stillwater and the Clan Alpine Mountain Ranges, which envelope the Dixie Valley, include very steep and rugged mountain ranges.

There are no perennial waters within the affected environment for the DVTA expansion area. However, there are numerous ponds within the Dixie Valley settlement area and the Navy has identified 84 wells in this affected environment using the Nevada Division of Water Resources online database, seven of which are used for stockwater, and are shown in Figure 3.4-6. The remaining wells are used for geothermal testing, domestic, and irrigation purposes (Nevada Department of Water Resources, 2018).

The majority of the DVTA has relatively low forage production; however, the northeastern portion of the Dixie Valley Allotment and the southern portion of the Cow Canyon Allotment have higher forage production potential (Natural Resources Conservation Service, 2017). Characteristic of the region, the DVTA includes vegetation dominated by Bailey's greasewood community. The area also includes vegetative communities dominated by annual herbaceous species. These communities include Russian thistle (*Salsola tragus*), cheatgrass (*Bromus tectorum*), and mustard (Brassicaceae) (Tierra Data Inc., 2008).

3.4.2.5 Special Use Airspace

Livestock grazing occurs on public and private lands underlying FRTC special use airspace (SUA). FRTC SUA overlies approximately 10.4 million acres of land, including large portions of Churchill, Lander, and Eureka Counties as well as portions of Pershing, Nye, Mineral, Lyon, and Washoe Counties. FRTC airspace also overlaps portions of the following Native American reservations: Walker River Paiute Indian Reservation, Fallon Paiute-Shoshone Reservation, Pyramid Lake Reservation, Duckwater Reservation, and Yomba Indian Reservation. Approximately 94 percent of the lands beneath the FRTC SUA are federally managed public lands, including BLM land (Carson City, Winnemucca, Elko, and Battle Mountain Districts), USFWS refuges (e.g., Stillwater Wildlife Refuge Complex), and U.S. National Forests (e.g., the Humboldt-Toiyabe National Forest).

3.4.3 Environmental Consequences

This section evaluates each alternatives' potential effect on livestock grazing. Closing public land that is partially or completely used for livestock grazing has the potential to directly affect opportunities for grazing. Livestock grazing can also be affected when changes in grazing management practices are needed to support objectives for other resources. For example, closing livestock grazing areas to protect sensitive species, cultural resources, or paleontological resources—as well as during vegetation treatments, fire, drought, or watershed or riparian restoration efforts—would also affect grazing. A summary of the potential impacts with implementation of the No Action Alternative or any of the three action alternatives (Alternatives 1, 2, and 3) is provided at the end of this section (see Section 3.4.3.6, Summary of Effects and Conclusions).

Potential forage production as well as the topography, distance to water, and type or class of livestock are considered in determining whether livestock grazing would be significantly affected. For this analysis, an example indicator of a significant impact would be a long-term loss or closure of all or a substantial portion of a livestock grazing area(s) with high forage potential during critical grazing seasons (e.g., grazing) or the loss of a substantial amount of rangeland improvements. The Navy's analysis also looks at whether potential noise or safety zones would be incompatible with livestock grazing.

Alternatives may affect grazing management due to the loss of ingress or egress to allotments and watering sites or the loss of historic trailing routes. The BLM is required to notify permittees two years prior to any land withdrawal that would preclude livestock grazing, except in cases of emergency (43 CFR 4110.4-2) (Bureau of Land Management, 2013). In addition, holders of federal permits for grazing on lands under the control of the United States would be eligible for potential payments in accordance with 43 U.S.C. section 315q of the Taylor Grazing Act of 1934 (as amended) for losses suffered by such persons as a result of the withdrawal or other use of such lands for war or national defense purposes.

Any changes to livestock grazing management as well as any revisions to the boundary of any grazing allotment could potentially affect the local economy. As discussed in Section 3.13 (Socioeconomics), the most direct economic effects of such changes would be on livestock grazing permittees. In addition, as discussed in Section 3.10 (Biological Resources), the elimination of livestock grazing could potentially affect biological communities, decreasing the competition between livestock and wildlife for resources, and potentially could have a positive impact on some plant communities. However, the removal of livestock grazing could also result in increased fuel loads, which would increase fire risk and could further spread annual invasive species.

3.4.3.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur (withdrawal and acquisition), and the current withdrawal would expire on November 5, 2021. In comparison to the environmental baseline, livestock grazing would be anticipated to continue where permitted. Areas previously used by the Navy that could be rendered safe could potentially be used for livestock grazing following military range closure activities, either by expanding existing livestock grazing areas or by creating new livestock grazing areas. As such, the No Action Alternative could potentially have a limited beneficial impact on livestock grazing by opening appropriate areas for additional grazing permits. However, the DVTA is currently open for grazing, and the existing bombing ranges are primarily alkaline flats with low forage production. Therefore, any beneficial impact would be minor, and implementation of the No Action Alternative would not have a significant impact on livestock grazing.

3.4.3.2 Alternative 1: Modernization of the Fallon Range Training Complex

Under Alternative 1, the Navy proposes renewal by Congress of the current public land withdrawal at the FRTC. Additional public lands would be requested for withdrawal, and public lands would be proposed for acquisition (see Section 2.3.2, Alternative 1 – Modernization of the Fallon Range Training Complex). The Navy proposes to construct range infrastructure to support modernization, including new target areas. Additionally, the Navy proposes to expand and reconfigure existing SUA to accommodate the expanded ranges. Alternative 1 would continue current livestock grazing activities within the DVTA but would discontinue livestock grazing within the proposed B-16, B-17, and B-20 boundaries.

Impacts on grazing permittees would occur because Alternative 1 would close grazing on currently-active grazing lands. These impacts would increase when land that is proposed to be closed represents the allotment's primary use area. Ultimately, these types of changes could cause a financial hardship to a permittee, who may have to seek grazing lands elsewhere to replace the area lost, and may necessitate purchase or rental of other lands and/or grazing permits, or construction of new rangeland improvements. It is possible that replacement lands would not be available or might become prohibitively expensive. If such costs would be prohibitive to continuing grazing, permittees could potentially go out of business. Section 3.13 (Socioeconomics) further addresses these impacts.

Livestock grazing would no longer be available to be used as a habitat management tool within areas proposed for expansion of the Bravo ranges. This may result in an increased fuel load and increased potential for large or catastrophic wildfires (Davies et al., 2015). This may also result in an increased use of herbicides and other methods (e.g., mowing and weeding) to manage vegetation within the Bravo ranges around sensitive habitat and target areas. These activities would be conducted in accordance with the Navy's Integrated Natural Resources Management Plan and applicable federal, state, and local regulations.

While the BLM would conduct further site-specific evaluations to make a final determination as to whether AUM allowances would need to be adjusted, the Navy estimates that Alternative 1 would result in the loss of between 6,394 and 8,557 AUMs. As depicted in Table 3.4-2, this would result in a loss of up to approximately 5.40 percent of AUMs within the BLM Carson City District, 0.05 percent of AUMs within the Winnemucca District, and 0.41 percent of all AUMs in Nevada.

Table 3.4-3 identifies the allotments within the proposed FRTC boundaries, the number of acres that would be closed from livestock grazing, and the projected loss in AUMs that would result from Alternative 1. A loss of AUMs would occur where large blocks of land would be withdrawn, and livestock grazing would be precluded. Forage and rangeland improvement projects could be permanently lost as a result of the action, which could further affect AUM estimates. The Navy would acquire any surface water rights within B-16, B-17, and B-20 (see Section 3.9, Water Resources) and would evaluate whether individuals may transit the Bravo ranges to access rangeland improvements on a case-by-case basis.

The Navy calculated the loss of AUMs using the method described in Section 3.4.1.3.1 (Determining Loss of Animal Unit Months) and described in detail in the Supporting Study: Livestock Grazing AUM Restrictive Analysis (available at <https://frtcmodernization.com>). Any potential loss in AUMs would be within the range and values identified in Table 3.4-3. The BLM's follow-on site-specific analysis would determine the actual change in permitted AUMs for each allotment.

Table 3.4-2: Alternative 1: Percent Loss of Animal Unit Months (AUMs) for BLM Districts and State of Nevada

State/BLM District	Approximate Existing AUMs	Projected AUMs Lost		Percent of AUMs Lost	
		Low	High	Low	High
BLM Carson City District	156,406 ¹	6,351	8,446	4.06%	5.40%
BLM Winnemucca District	335,435 ¹	43	131	0.01%	0.05%
Nevada	2,085,167 ²	6,394	8,557	0.31%	0.41%

¹The BLM provided the existing number of AUMs for the Carson City District and the Winnemucca District in July 2018. This number may not match the number of AUMs in the public Rangeland Administration System.

²(Bureau of Land Management, 2017b)

Table 3.4-3: Alternative 1: Allotments within the Proposed FRTC Boundaries, Acres Closed, and Projected Loss of Animal Unit Months (AUMs)

Allotment Name	Existing Total Acres	Permitted Total AUMs	Alternative 1				
			Proposed FRTC Land	Acres Closed	Percent Closed	Projected Loss of AUMs	
						Low	High
Bell Flat	92,008	3,688	B-17, DVTA	63,771	70%	2,987 (81%)	3,233 (88%)
Bucky O'Neill	40,946	1,500	DVTA	0	0%	0	0
Copper Kettle	108,220	2,333	B-20	54,024	50%	286 (12%)	948 (14%)
Cow Canyon	149,168	2,382	DVTA	0	0%	0	0
Dixie Valley	275,782	6,341	DVTA	0	0%	0	0
Eastgate	310,564	9,767	B-17	698	<1%	22 (<1%)	33 (<1%)
Frenchman Flat	70,323	2,001	DVTA	0	0%	0	0
Horse Mountain	63,184	3,000	B-16	2,411	4%	67 (2%)	137 (5%)
Humboldt Sink (summer)	190,728	63	B-20	1,438	1%	8 (13%)	26 (41%)
Humboldt Sink (winter)	190,728	1,516	B-20	1,438	1%	1 (<1%)	19 (1%)
La Beau Flat	122,626	3,035	B-17, DVTA	40,852	33%	1,003 (33%)	1,056 (35%)
Lahontan	77,890	1,155	B-16	30,681	39%	442 (38%)	618 (54%)
Mountain Well-La Plata	139,610	8,004	DVTA	0	0%	0	0
Phillips Well	79,717	1,450	B-17, DVTA	57,010	72%	969 (67%)	1,058 (73%)

Table 3.4-3: Alternative 1: Allotments within the Proposed FRTC Boundaries, Acres Closed, and Projected Loss of Animal Unit Months (AUMs) (continued)

Allotment Name	Existing Total Acres	Permitted Total AUMs	Alternative 1				
			Proposed FRTC Land	Acres Closed	Percent Closed	Projected Loss of AUMs	
						Low	High
Pilot Table Mountain	540,426	5,667	B-17	18,008	3%	36 (1%)	317 (6%)
Rochester	255,332	777	B-20	43,369	17%	34 (4%)	86 (11%)
Salt Wells	51,421	1,626	DVTA	0	0%	0	0
Sheckler Pasture	22,210	145	B-16	4,187	19%	0 (0%)	27 ² (19%)
White Cloud	79,717	1,885	B-20, DVTA	8,364	10%	539 (29%)	1,046 (55%)
TOTAL¹	2,860,600	56,335	FRTC	326,251	11%	6,394 (11%)	8,557 (15%)

¹Total acres do not add up because of the overlap of Sheckler Pasture and the Lahontan Allotment.

²In the absence of production data, potential loss of AUMs was calculated as a ratio of available acreage to permitted AUMs.

Notes: (1) Acres were calculated using ArcGIS data provided by BLM (UTMz11 NAD83 projection) and may not be consistent with acres reported in the BLM's public Rangeland Administration System. (2) FRTC = Fallon Range Training Complex, DVTA = Dixie Valley Training Area

3.4.3.2.1 Bravo-16

Land Withdrawal and Acquisition

Alternative 1 would expand B-16 to approximately 59,560 acres, which would be an increase of approximately 32,201 acres from existing conditions (Table 2-1). The proposed expansion of B-16 would withdraw public land (i.e., BLM and Bureau of Reclamation land) and would not require the acquisition of any non-federal land. Expanding B-16 under this alternative would result in a loss of between 509 and 755 permitted AUMs from two BLM allotments and a loss of between 0 and 27 AUMs from one Bureau of Reclamation pasture.

Training Activities

Training activities would occur within B-16 and expand into areas where they did not previously occur, but neither the public nor livestock would be able to access B-16. The B-16 surface danger zone would be contained within the fenced boundary of B-16, and livestock grazing would not be allowed within this zone. Training noise could elicit a behavioral response from livestock outside B-16. The type of behavioral response depends on many variables, but it is typically a temporary startle, freezing, or fleeing response. Noise from training activities would be consistent with current noise levels but would be dispersed over a larger area. Modeled training noise associated with Navy activities would not be experienced beyond the range at levels that would significantly affect livestock grazing.

Public Accessibility

Under Alternative 1, the public would not be able to access B-16 for any purpose other than for ceremonial or cultural site visits and land management activities, which are currently occurring within

the requested withdrawal area. Areas that were previously used for livestock grazing would no longer be used for these purposes. B-16 would be fenced and closed for public safety. The public is not allowed within a surface danger zone when a range is actively being used. B-16 would also include signage warning the public to not enter this area. Expanding and fencing off B-16 would close approximately 33,092 acres of BLM allotments and 4,187 acres of Bureau of Reclamation pasture land. Implementation of this alternative would require the closure of approximately 39 percent of the Lahontan Allotment, 4 percent of the Horse Mountain Allotment, and 19 percent of the Sheckler Pasture. These portions of the allotment/pastures would be fenced, preventing permittee access. It has been identified in previous studies that the majority of B-16 that is proposed to be withdrawn is not frequently used for grazing because of low vegetation production (U.S. Department of the Navy, 2014b). A prior environmental assessment assessed closing 983 acres of the Sheckler Pasture within this range (U.S. Department of the Navy, 2014c). These 983 acres would be fenced under this alternative.

Construction

Construction would occur within the proposed B-16 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.2.2 Bravo-17

Land Withdrawal and Acquisition

Alternative 1 would expand B-17 to approximately 232,799 acres, which would be an increase of approximately 178,013 acres from existing conditions (Table 2-1). The proposed expansion of B-17 would include withdrawing public land (i.e., BLM land) and acquiring non-federal land. These non-federal parcels are largely undeveloped land, which have historically been used for mining, livestock grazing, and other uses. Expanding B-17 under this alternative would result in a loss of between 5,017 and 5,697 permitted AUMs from five BLM allotments.

Training Activities

Training activities would occur within B-17 and expand into areas where they did not previously occur, but neither the public nor livestock would be able to access B-17. The B-17 weapons danger zone (WDZ) would be contained within the fenced boundary of B-17, and livestock grazing would not be allowed within this zone. As described in Section 3.4.3.2.1 (Bravo-16), training noise could elicit a behavioral response from livestock outside B-17. Noise from training activities would be consistent with current noise levels but would be dispersed over a larger area. Modeled training noise associated with Navy activities would not be experienced beyond the range at levels that would significantly affect livestock grazing.

Public Accessibility

Under Alternative 1, the public would not be able to access the proposed B-17 for any purpose other than for ceremonial or cultural site visits and land management activities, which are currently occurring within the requested withdrawal area. Areas previously used for livestock grazing would no longer be used for these purposes. B-17 would be fenced and closed for public safety. No one is allowed within a WDZ when a range is actively being used. B-17 would also include signage warning the public to not enter this area.

Expanding and fencing off B-17 would close approximately 180,339 acres of BLM allotments. Alternative 1 would close 70 percent of the Bell Flat, less than 1 percent of the Eastgate, 33 percent of La Beau Flat, 72 percent of the Phillips Well, and 3 percent of the Pilot Table Mountain Allotments. In addition, fencing off B-17 would fragment the eastern and western portions of the Phillips Well Allotment, creating two non-contiguous areas, which would prevent livestock from accessing areas with higher forage production within this allotment. These actions would likely lead to an overall increase in the number of AUMs that would be lost. In addition, this alternative would close off an area of Gabbs Valley where water ponds and rangeland improvements have been installed within the proposed expansion area.

Construction

Construction would occur within the proposed B-17 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

Road and Infrastructure Improvements to Support Alternative 1

State Route 839

This alternative includes the potential relocation of State Route 839 outside the proposed expansion of B-17 WDC, which would affect access to allotments west of State Route 839. Relocating State Route 839 could fragment existing grazing land depending on any route ultimately proposed for its relocation. This could also result in further reductions of AUMs and/or the loss or need to replace or relocate rangeland improvements. The BLM or other land manager would conduct follow-on, site-specific National Environmental Policy Act (NEPA) analysis of any proposed routes for such ROWs, prior to making any decision with respect to any final route and would include analyzing potential impacts on livestock grazing. The Navy would support and participate in any such NEPA analysis. The NDOT would ensure that construction of any new route is complete before any closure of any portion of the existing State Route 839, and the Navy would not utilize any portion of an expanded B-17 range (if implemented) that would overlap the existing State Route 839 unless and until any such new route has been completed and made available to the public.

Paiute Pipeline

Likewise, the potential relocation of the Paiute Pipeline could temporarily (e.g., from construction) or permanently prevent access to grazing land outside the proposed B-17 boundary. Site-specific environmental analysis and NEPA planning would be required before any potential relocation of the pipeline could occur which would include analyzing potential impacts on livestock grazing, and the Navy would not utilize any portion of an expanded B-17 range (if implemented) that would overlap the existing pipeline unless and until any such re-routing of the pipeline has been completed and made available to the pipeline owner. The BLM would have decision authority with respect to any proposed final routing subsequent to completion of site-specific environmental analysis.

3.4.3.2.3 Bravo-20

Land Withdrawal and Acquisition

Alternative 1 would expand B-20 to approximately 221,334 acres, which would be an increase of approximately 180,329 acres from existing conditions (Table 2-1). The proposed expansion of B-20 would include withdrawing public land (i.e., BLM, Bureau of Reclamation, and USFWS land) and

acquiring non-federal land. These non-federal parcels are largely undeveloped land with some grazing land in the northern and eastern portions of the range. Expanding B-20 under this alternative would result in a loss of between 868 and 2,125 permitted AUMs from five BLM allotments.

Training Activities

Training activities would occur within B-20 and expand into areas where they did not previously occur, but neither the public nor livestock would be able to access B-20. The B-20 WDZ would be contained within the fenced boundary of B-20, and livestock grazing would not be allowed within this zone. As described in Section 3.4.3.2.1 (Bravo-16), training noise could elicit a behavioral response from livestock outside B-20. Noise from training activities would be consistent with current noise levels but would be dispersed over a larger area. Modeled training noise associated with Navy activities would not be experienced beyond the range at levels that would significantly affect livestock grazing.

Public Accessibility

Under Alternative 1, the public would not be able to access B-20 for any purpose other than for ceremonial or cultural site visits and land management activities, which are currently occurring within the requested withdrawal area. Areas previously used for livestock grazing would no longer be used for these purposes. B-20 would be fenced and closed for public safety. No one is allowed within a WDZ when a range is actively being used. B-20 would also include signage warning the public to not enter this area.

Expanding and fencing off B-20 would close approximately 107,195 acres of BLM allotments. Implementation of this alternative would result in closing approximately 50 percent of the Copper Kettle Allotment, 1 percent of the Humboldt Sink Allotment, 17 percent of the Rochester Allotment, and 10 percent of the White Cloud Allotment.

East County Road and lands east of the road would remain open under this alternative. As such, this alternative would not affect the ability for permittees to access grazing lands east of the proposed boundary of B-20. Alternative 1 would close the Navy B-20 Access Road (locally known as "Pole Line Road"), which could affect permittees' ability to access grazing areas north and west of B-20. The Department of the Navy is currently the only authorized user of this road.

Construction

Construction would occur within the proposed B-20 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.2.4 Dixie Valley Training Area

Land Withdrawal and Acquisition

Alternative 1 would expand the DVTA to approximately 370,903 acres, which would be an increase of approximately 302,065 acres from existing conditions (see Table 2-1). Expanding the DVTA would entail the withdrawal of public land (i.e., BLM land) and would include the acquisition of non-federal land. These non-federal parcels are largely undeveloped land, which have historically been used for mining, livestock grazing, and other uses. Grazing on federal allotments would continue within the DVTA under this alternative. Therefore, expanding the DVTA would not result in a loss of permitted AUMs under this alternative.

Training Activities

Training activities would expand within the proposed DVTA boundary into areas where they have not previously occurred. The public and livestock may see and hear aircraft and support vehicles during training activities within this area. As described in Section 3.4.3.2.1 (Bravo-16), training noise could elicit a behavioral response from livestock. The military has no authority to ask civilians to exit or leave open land areas within the DVTA. If the public enters a training area within the DVTA while a training event is underway, the training would temporarily cease or move elsewhere while the public uses the area.

Public Accessibility

The public would be able to continue to access the DVTA for livestock grazing under this alternative. The BLM would continue managing allotments in the DVTA in accordance with the Federal Land Policy Management Act, applicable Resource Management Plans, and as outlined in the MOU between the Navy and BLM, which would be updated accordingly (see Section 3.4.2.4, Dixie Valley Training Area).

Construction

Construction on three 5-acre sites would occur within the proposed DVTA boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.2.5 Fallon Range Training Complex Special Use Airspace

Livestock grazing has been conducted beneath FRTC SUA for over 70 years. Although some studies find the data to be inconclusive, most of the scientific literature indicates that livestock exhibit some form of behavioral response to aircraft noise (Wyle, 2014). The type of behavioral response depends on many variables (e.g., aircraft's size, speed, altitude, distance, color, and type of engine), but it is typically a startle, freezing, or fleeing response. Some studies have reported other adverse effects to livestock, including reduced milk yields, increased heart rate, and increased respiration (Manci et al., 1988; Wyle, 2014); however, these physiological effects have proven difficult to assess, and any such effect would likely be very minor. In general, studies suggest that aircraft noise and sonic booms would not substantially affect livestock production or reproduction (Pepper et al., 2003), and some studies have demonstrated that domestic animals may adjust to aircraft noise over time (Manci et al., 1988).

Following the EIS process, the Navy would update relevant documents to formalize any recommendation for new safety and noise zones and confirm existing safety and noise zones. The Navy would continue to work with the local counties and municipalities as well as federal property land managers to plan for compatible land use development, which would include the BLM, USFWS, U.S. Forest Service, Bureau of Reclamation, and Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe Counties.

3.4.3.2.6 Summary of Effects and Conclusions

Under Alternative 1, the Navy would close public access to approximately 319,653 acres of BLM allotments and 4,187 acres of Bureau of Reclamation pastureland in western and central Nevada. Although most of this land has low forage production, the southern portion of the proposed B-17 range includes areas with higher forage potential and rangeland improvements. The Navy estimates that Alternative 1 would result in a loss of between 6,394 and 8,557 AUMs for all livestock (approximately 11 to 15 percent from affected allotments). This would result in a loss of up to approximately 5.40 percent of AUMs within the BLM Carson City District, 0.05 percent of AUMs within the

Winnemucca District, and 0.41 percent of all AUMs in Nevada. Therefore, implementation of Alternative 1 would significantly impact livestock grazing.

3.4.3.3 Alternative 2: Modernization of Fallon Range Training Complex and Managed Access

Under Alternative 2, the Navy would renew its current public land withdrawal and would also withdraw and acquire additional land to be reserved for military use similar to Alternative 1. Alternative 2 would close public access to B-16, B-17, B-19, and B-20 but would allow certain uses when the ranges are not in operation (e.g., holidays and weekends). Meanwhile, public access within the DVTA would be similar to existing baseline conditions (see Section 2.3.3, Alternative 2 – Modernization of Fallon Range Training Complex with Managed Access).

Table 3.4-4 identifies the allotments within the proposed FRTC boundaries, the number of acres that would be closed from livestock grazing, and the projected loss in AUMs that would result from Alternative 2. It is anticipated that this would result in the same percent loss of AUMs as Alternative 1 (see Table 3.4-2). A loss of AUMs would occur where large blocks of land would be withdrawn, and livestock grazing would be precluded. Forage and rangeland improvement projects could be permanently lost as a result of the action, which could further affect AUM estimates. The Navy would acquire surface water rights within B-16, B-17, and B-20 (see Section 3.9, Water Resources). The Navy would evaluate whether individuals may transit these ranges to access rangeland improvements off-range on a case-by-case basis based on compatibility with military training activities and range safety.

The BLM would complete site-specific environmental analysis for each allotment prior to implementing any of the alternatives assessed in this EIS. It is anticipated that any potential loss in AUMs would be within the range identified in Table 3.4-4, and the actual change in AUMs would be in the BLM's follow-on site-specific analysis.

3.4.3.3.1 Bravo-16

Land Withdrawal and Acquisition

Alternative 2 would have the same land configuration as Alternative 1. The proposed expansion areas for B-16 would be the same as Alternative 1, with one exception. Simpson Road at B-16 and a small portion of land south of Simpson Road would be open to public use under Alternative 2. In addition, as with Alternative 1, the FRTC Bravo ranges would be closed from livestock grazing.

Training Activities

Under Alternative 2, the types of training activities conducted at B-16 would be the same as under Alternative 1, and neither the public nor livestock would be able to access B-16 during training events.

Public Accessibility

Under Alternative 2, B-16 would be closed to public access as described under Alternative 1, with the exception of special events (racing events). A small portion of B-16 south of Simpson Road would also remain open to the public under this alternative. Grazing would not be allowed on B-16 under Alternative 2.

Construction

The proposed construction areas for B-16 would be the same as under Alternative 1. Construction would occur within the proposed B-16 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

Table 3.4-4: Alternative 2: Allotments within the Proposed FRTC Boundaries, Acres Closed, and Projected Loss of Animal Unit Months

Allotment Name	Existing Total Acres	Permitted Total AUMs	Alternative 2				
			Proposed FRTC Land	Acres Closed	Percent Closed	Projected Loss of AUMs	
						Low	High
Bell Flat	92,008	3,688	B-17, DVTA	63,771	70%	2,987 (81%)	3,233 (88%)
Bucky O'Neill	40,946	1,500	DVTA	0	0%	0	0
Copper Kettle	108,220	2,333	B-20	54,024	50%	286 (12%)	948 (41%)
Cow Canyon	149,168	2,382	DVTA	0	0%	0	0
Dixie Valley	275,782	6,341	DVTA	0	0%	0	0
Eastgate	310,564	9,767	B-17	698	<1%	22 (<1%)	33 (<1%)
Frenchman Flat	70,323	2,001	DVTA	0	0%	0	0
Horse Mountain	63,184	3,000	B-16	2,411	4%	67 (2%)	137 (5%)
Humboldt Sink (summer)	190,728	63	B-20	1,438	1%	8 (13%)	26 (41%)
Humboldt Sink	190,728	1,516	B-20	1,438	1%	1 (<1%)	19 (1%)
La Beau Flat	122,626	3,035	B-17, DVTA	40,852	34%	1,003 (33%)	1,056 (35%)
Lahontan	77,890	1,155	B-16	30,681	40%	442 (38%)	618 (54%)
Mountain Well-LaPlata	139,610	8,004	DVTA	0	0%	0	0
Phillips Well	79,717	1,450	B-17, DVTA	57,010	72%	969 (67%)	1,058 (73%)
Pilot Table Mountain	540,426	5,667	B-17	18,008	4%	36 (1%)	317 (6%)
Rochester	255,332	777	B-20	43,369	17%	34 (4%)	86 (11%)
Salt Wells	51,421	1,626	DVTA	0	0%	0	0
Sheckler Pasture	22,210	145	B-16	4,187	19%	0 (0%)	27 ² (19%)
White Cloud	79,717	1,885	B-20, DVTA	8,364	11%	539 (29%)	1,046 (55%)
TOTAL¹	2,860,600	56,335	FRTC	326,251	11%	6,394 (11%)	8,557 (15%)

¹Total acres do not add up because of the overlap of Sheckler Pasture and the Lahontan Allotment.

²In the absence of production data, potential loss of AUMs was calculated as a ratio of available acreage to permitted AUMs.

Notes: (1) Acres were calculated using ArcGIS data provided by BLM (UTMz11 NAD83 projection) and may not be consistent with acres reported in the BLM's public Rangeland Administration System. (2) FRTC = Fallon Range Training Complex, DVTA = Dixie Valley Training Area

3.4.3.3.2 Bravo-17

Land Withdrawal and Acquisition

Under Alternative 2, B-17 would have the same land configuration as under Alternative 1. The proposed expansion areas for B-17 would be the same as Alternative 1. In addition, as with Alternative 1, the FRTC Bravo ranges would be closed from livestock grazing.

Training Activities

Under Alternative 2, the types of training activities conducted at B-17 would be the same as under Alternative 1, and neither the public nor livestock would be able to access B-17 during training events.

Public Accessibility

Under Alternative 2, B-17 would be closed to public access as described under Alternative 1, with the exception of special events (racing events), and hunting. Grazing would not be allowed on B-17 under Alternative 2.

Construction

The proposed construction areas for B-17 would be the same as Alternative 1. Construction would occur within the proposed B-17 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

Road and Infrastructure Improvements to Support Alternative 2

The proposed construction areas for B-17 would be the same as under Alternative 1. Follow-on, site-specific NEPA analysis would be required to analyze the impacts of any potential relocations of State Route 839 and the Paiute Pipeline, which would include analyzing potential impacts on livestock grazing.

3.4.3.3.3 Bravo-20

Land Withdrawal and Acquisition

Under Alternative 2, B-20 would have the same land configuration as under Alternative 1. The proposed expansion areas for B-20 would be the same as Alternative 1. In addition, as with Alternative 1, the FRTC Bravo ranges would be closed from livestock grazing.

Training Activities

Under Alternative 2, the types of training activities conducted at B-20 would be the same as under Alternative 1, and neither the public nor livestock would be able to access B-20 during training events.

Public Accessibility

Under Alternative 2, B-20 would be closed to public access as described under Alternative 1, with the exception of special events (racing events). Impacts to grazing would be the same as described under Alternative 1.

Construction

Under Alternative 2, the proposed construction areas for B-20 would be the same as under Alternative 1. Construction would occur within the proposed B-20 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.3.4 Dixie Valley Training Area

Land Withdrawal and Acquisition

Under Alternative 2, the DVTA would have the same land configuration as under Alternative 1. The proposed expansion areas for the DVTA would also be the same as under Alternative 1. In addition, there would be no change to livestock grazing activities or management within the DVTA under this alternative compared to current conditions.

Training Activities

Under Alternative 2, the types of training activities conducted at the DVTA would be the same as under Alternative 1. Training activities would expand within the proposed DVTA boundary into areas where they have not previously occurred. The military has no authority to ask civilians to exit or leave open land areas within the DVTA. If the public enters a training area within the DVTA while a training event is underway, the training would temporarily cease or move elsewhere while the public transits the training area.

Public Accessibility

As stated under Alternative 1, the public would be able to continue to access the DVTA for livestock grazing under this alternative. The BLM would continue managing these allotments in accordance with the Federal Land Policy Management Act, applicable Resource Management Plans, and as outlined in the MOU between the Navy and BLM, which would be updated accordingly (see Section 3.4.3.4.4, Dixie Valley Training Area).

Construction

Under Alternative 2, the proposed construction areas for the DVTA would be the same as under Alternative 1. Construction would occur within the proposed DVTA boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.3.5 Fallon Range Training Complex Special Use Airspace

Under Alternative 2, FRTC would have the same airspace configuration as under Alternative 1, and would be expected to generate the same relatively minimal impacts with respect to livestock. Following the EIS process, the Navy would update relevant documents to formalize the recommendation for new safety and noise zones and confirm existing safety and noise zones. The Navy would continue to work with the local counties and municipalities as well as federal property land managers to plan for compatible land use development, which would include the BLM, USFWS, U.S. Forest Service, Bureau of Reclamation, and Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe Counties.

3.4.3.3.6 Summary of Effects and Conclusions

Under Alternative 2, the Navy would close public access to approximately 319,653 acres of BLM allotments and 4,187 acres of Bureau of Reclamation pastureland in western and central Nevada. Although most of this land has low forage production, the southern portion of the proposed expansion of the B-17 range includes areas with higher forage potential and rangeland improvements. The Navy estimates that Alternative 2 would result in a loss of between 6,394 and 8,557 AUMs for all livestock (approximately 11 to 15 percent from affected allotments). This would result in a loss of up to approximately 5.40 percent of AUMs within the BLM Carson City District, 0.05 percent of AUMs within

the Winnemucca District, and 0.41 percent of all AUMs in Nevada. Therefore, implementation of Alternative 2 would significantly impact livestock grazing.

3.4.3.4 Alternative 3: Bravo-17 Shift and Managed Access (Preferred Alternative)

Alternative 3 is similar to Alternative 1 in terms of its proposed land withdrawals and acquisitions, except with respect to the orientation, size, and location of B-17 and the DVTA; and similar to Alternative 2 in terms of managed access. Alternative 3 would move B-17 farther to the southeast and rotate it slightly counter-clockwise (see Section 2.3.4, Alternative 3 – Bravo-17 Shift and Managed Access [Preferred Alternative]). In addition, unlike Alternatives 1 and 2, Alternative 3 would not withdraw land south of U.S. Route 50 for the DVTA (see Section 2.3.4.4.1, Land Acquisition and Withdrawal). Rather, the Navy proposes that Congress categorizes this area as a Special Land Management Overlay. This Special Land Management Overlay will define two areas (one east and one west of the B-17 range) as Military Electromagnetic Spectrum Special Use Zones. These two areas, which are public lands under the jurisdiction of BLM, would not be withdrawn by the Navy and would not be used for land-based military training or managed by the Navy.

While the BLM would conduct further site-specific evaluations to make a final determination as to whether AUM allowances would need to be adjusted, the Navy estimates that Alternative 3 would result in the loss of between 7,920 and 10,965 AUMs within the region of influence. As depicted in Table 3.4-5, this would result in a loss of up to approximately 6.93 percent of AUMs within the BLM Carson City District, 0.04 percent of AUMs within the Winnemucca District, and 0.53 percent of all AUMs in Nevada.

Table 3.4-5: Alternative 3: Percent Loss of Animal Unit Months (AUMs) for BLM District and State of Nevada

State/BLM District	Approximate Existing AUMs	Projected AUMs Lost		Percent of AUMs Lost	
		Low	High	Low	High
BLM Carson City District	156,406 ¹	7,877	10,834	5.04%	6.93%
BLM Winnemucca District	335,435 ¹	43	131	0.01%	0.04%
Nevada	2,085,167 ²	7,920	10,965	0.38%	0.53%

¹The BLM provided the existing number of AUMs for the Carson City District and the Winnemucca District in July 2018. This number may not match the number of AUMs in the public Rangeland Administration System.

²(Bureau of Land Management, 2017b)

The loss of AUMs was calculated using the method described in Section 3.4.1.3.1 (Determining Loss of Animal Unit Months). Table 3.4-6 identifies the allotments within the proposed FRTC boundaries, the number of acres that would be closed from livestock grazing, and the projected loss in AUMs that would result from Alternative 3. A loss of AUMs would occur where large blocks of land would be withdrawn, and livestock grazing would be precluded. Forage and rangeland improvement projects could be permanently lost as a result of the action, which could further affect AUM estimates. It is anticipated that any potential loss in AUMs would be within the range identified in Table 3.4-6, and the BLM's follow-on site-specific analysis would determine the actual change in AUMs for each affected allotment.

Table 3.4-6: Alternative 3: Allotments Within the Proposed FRTC Boundaries, Acres Closed, and Projected Loss of Animal Unit Months

Allotment Name	Existing Total Acres	Permitted Total AUMs	Alternative 3				
			Proposed FRTC Land	Acres Closed	Percent Closed	Projected Loss of AUMs	
						Low	High
Bell Flat	92,008	3,688	B-17, DVTA	53,195	58%	2,483 (67%)	3,325 (90%)
Bucky O'Neill	40,946	1,500	DVTA	0	0%	0	0
Copper Kettle	108,220	2,333	B-20	54,024	50%	286 (12%)	948 (14%)
Cow Canyon	149,168	2,382	DVTA	0	0%	0	0
Dixie Valley	275,782	6,341	DVTA	0	0%	0	0
Eastgate	310,564	9,767	B-17	48,096	16%	1,556 (16%)	1,822 (19%)
Frenchman Flat	70,323	2,001	DVTA	0	0%	0	0
Horse Mountain	63,184	3,000	B-16	2,411	4%	67 (2%)	137 (5%)
Humboldt Sink (summer)	190,728	63	B-20	1,438	1%	8 (13%)	26 (41%)
Humboldt Sink	190,728	1,516	B-20	1,438	1%	1 (<1%)	19 (1%)
La Beau Flat	122,626	3,035	B-17, DVTA	22,795	19%	1,003 (33%)	1,056 (35%)
Lahontan	77,890	1,155	B-16	30,681	40%	442 (38%)	618 (54%)
Mountain Well-LaPlata	139,610	8,004	DVTA	0	0%	0	0
Phillips Well	79,717	1,450	B-17, DVTA	70,396	88%	1,288 (89%)	1,395 (96%)
Pilot Table Mountain	540,426	5,667	B-17	20,193	4%	213 (4%)	487 (9%)
Rochester	255,332	777	B-20	43,369	17%	34 (4%)	86 (11%)
Salt Wells	51,421	1,626	DVTA	0	0%	0	0
Sheckler Pasture	22,210	145	B-16	4,187	19%	0 (0%)	27 ² (19%)
White Cloud	79,717	1,885	B-20, DVTA	8,364	11%	539 (29%)	1,046 (55%)
TOTAL¹	2,860,600	56,335	FRTC	360,587	13%	7,920 (14%)	10,965 (20%)

¹Total acres do not add up because of the overlap of Sheckler Pasture and the Lahontan Allotment.

²In the absence of production data, potential loss of AUMs was calculated as a ratio of available acreage to permitted AUMs. Notes: (1) Acres were calculated using ArcGIS data provided by BLM (UTMz11 NAD83 projection) and may not be consistent with acres reported in the BLM's public Rangeland Administration System. (2) FRTC = Fallon Range Training Complex, DVTA = Dixie Valley Training Area

Forage and rangeland improvement projects could be permanently lost as a result of the action, which could further affect AUM estimates. The Navy would acquire surface water rights within B-16, B-17, and B-20 (see Section 3.9, Water Resources). The Navy would evaluate whether individuals may transit these ranges to access rangeland improvements on a case-by-case basis based on compatibility with military training activities and range safety.

3.4.3.4.1 Bravo-16

Land Withdrawal and Acquisition

Under Alternative 3 B-16 would have a similar land configuration as under Alternatives 1 and 2, with the exception of land south of Simpson Road. Under Alternative 3, those lands would not be withdrawn and lands previously withdrawn would be relinquished to BLM (Figure 3.4-8). The proposed expansion areas for B-16 would be slightly less than Alternatives 1 and 2.

Training Activities

Under Alternative 3, the types of training activities conducted at B-16 would be the same as under Alternatives 1 and 2, and neither the public nor livestock would be able to access B-16 during training events.

Public Accessibility

Under Alternative 3, B-16 would be closed to public access as described under Alternatives 1 and 2, with the exception of special events (racing events). Unlike Alternatives 1 and 2, the land south of Simpson Road would not be withdrawn under this alternative. Grazing would not be allowed on B-16 under Alternative 3.

Construction

Under Alternative 3, the proposed construction areas for B-16 would be the same as Alternatives 1 and 2. Construction would occur within the proposed B-16 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.4.2 Bravo-17

Land Withdrawal and Acquisition

Alternative 3 would expand B-17 to approximately 267,448 acres, which would be an increase of approximately 212,661 acres from existing conditions (see Table 2-5). The proposed expansion of B-17 would include withdrawing public land (i.e., BLM land) and acquiring non-federal land (Figure 3.4-9). These non-federal parcels are largely undeveloped land, which have historically been used for mining, livestock grazing, and other uses. B-17 would be closed from livestock grazing. Expanding B-17 under this alternative would result in a loss of between 6,543 and 8,085 permitted AUMs from five BLM allotments.

Training Activities

Under Alternative 3, the types of training activities conducted at B-17 would be the same as under Alternatives 1 and 2, and neither the public nor livestock would be able to access B-17 during training events. The B-17 WDW would be contained within the fenced boundary of B-17, and livestock grazing would not be allowed within this zone.

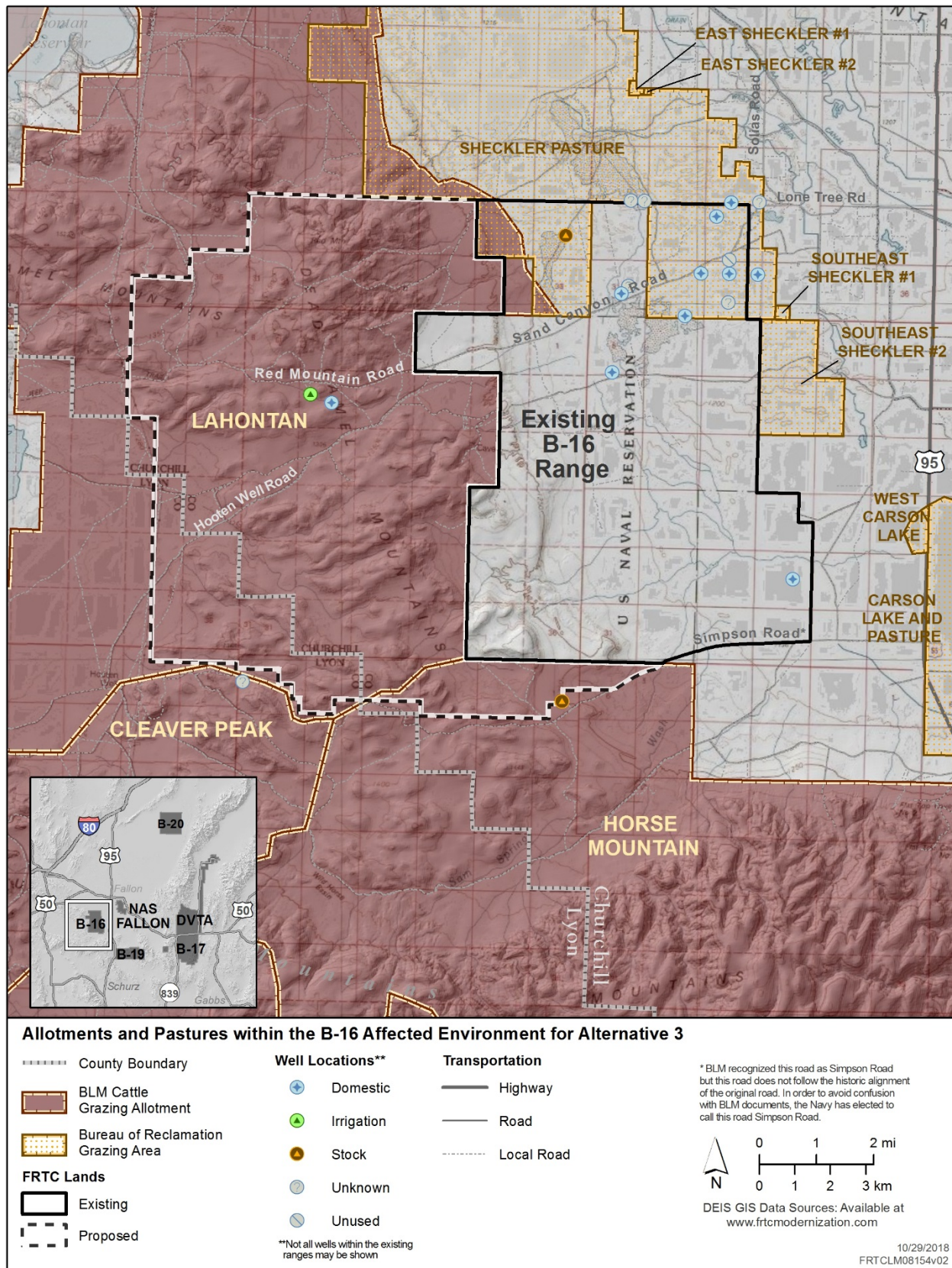


Figure 3.4-8: Allotments and Pastures within the B-16 Affected Environment for Alternative 3

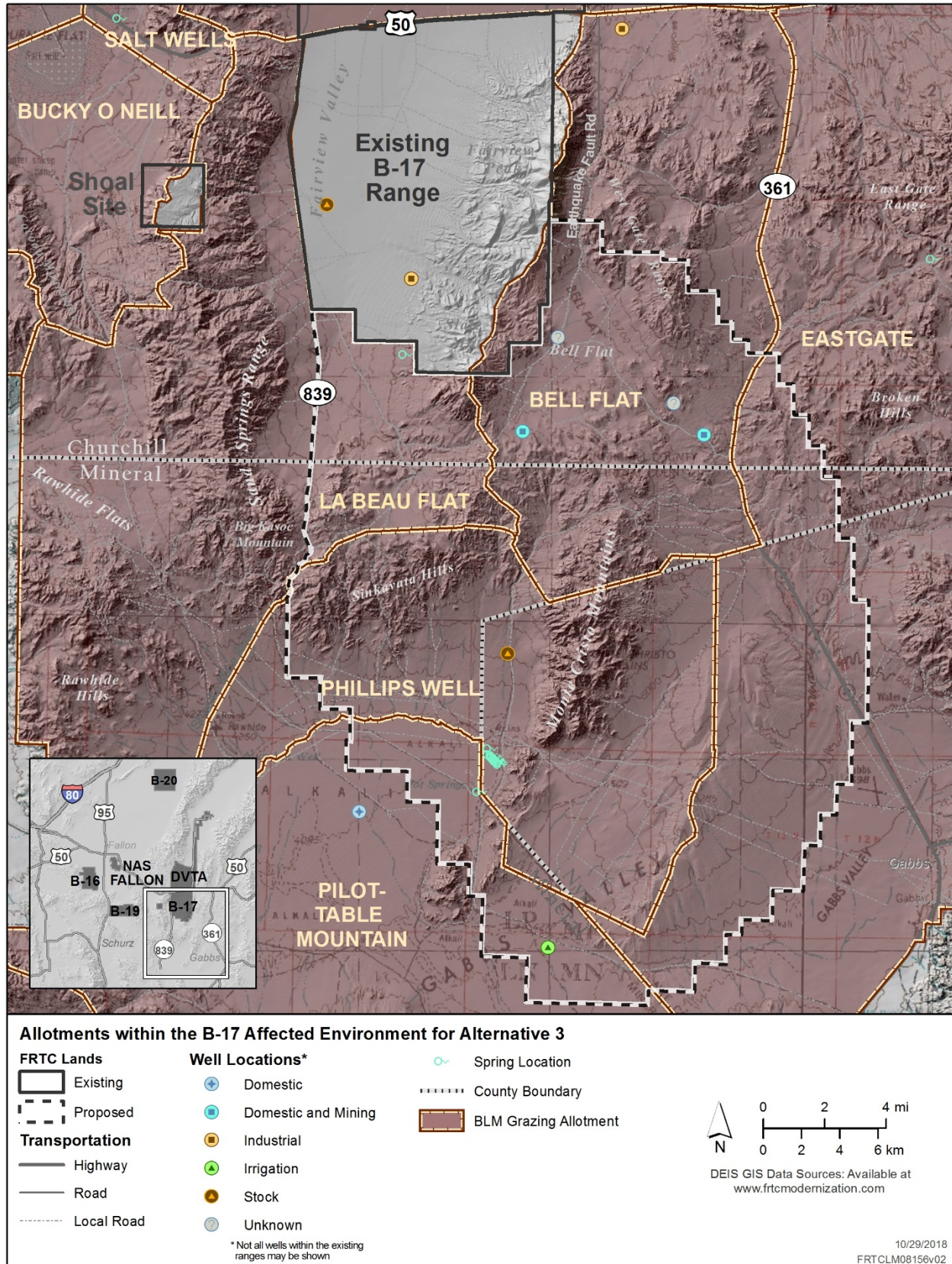


Figure 3.4-9: Allotments within the B-17 Affected Environment for Alternative 3

As described in Section 3.4.3.2.2 (Bravo-17), training noise could elicit a behavioral response from livestock outside B-17. Noise from training activities would be consistent with current noise levels but would be dispersed over a larger area. Modeled training noise associated with Navy activities would not be experienced beyond the range at levels that would significantly affect livestock grazing.

Public Accessibility

Under Alternative 3, the public would be able to access portions of the proposed B-17 for bighorn sheep hunting, racing events, ceremonial or cultural site visits, and land management activities. Areas previously used for livestock grazing would no longer be used for these purposes. B-17 would be fenced and closed for public safety. No one is allowed within a WDZ when a range is actively being used. B-17 would also include signage warning the public to not enter this area.

Alternative 3 would close 58 percent of the Bell Flat, 19 percent of the La Beau Flat, 88 percent of the Phillips Well, and 4 percent of the Pilot Table Allotments. 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 (an increase of 16 percent). This alternative would also close a larger portion of the Eastgate Allotment (16 percent) compared to Alternatives 1 and 2. This alternative would also close off an area of Pilot-Table Mountain Allotment where water ponds and rangeland improvements have been made; however, this alternative does not close as much of this land as Alternatives 1 and 2.

Construction

Construction would occur within the proposed B-17 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

Road and Infrastructure Improvements to Support Alternative 3

State Route 361 and the Paiute Pipeline

This alternative would include the potential relocation of 12 miles of State Route 361 outside the proposed expansion of the B-17 WDZ, likely within the Eastgate Allotment. Relocating this portion of State Route 361 could fragment the Eastgate Allotment depending on the placement of any route ultimately proposed for its relocation, which could also result in further reductions of AUMs and the loss or need to replace or relocate rangeland improvements. Likewise, the potential relocation of the Paiute Pipeline could temporarily (from construction) or permanently prevent access to grazing lands outside the proposed B-17 boundary. Final routing and site-specific environmental analysis for the potential relocation of 12 miles of State Route 361 and/or approximately 18 miles of the Paiute Pipeline would be completed prior to implementation of any of the alternatives assessed in this EIS. Follow-on, site-specific NEPA analysis would be required to analyze the impacts of any potential relocations of State Route 361 and the Paiute Pipeline, which would include analyzing potential impacts on livestock grazing.

3.4.3.4.3 Bravo-20

Land Withdrawal and Acquisition

Under Alternative 3, B-20 would have a similar land configuration as under Alternatives 1 and 2 (Figure 3.4-10). The proposed expansion areas for B-20 would be slightly less than under Alternatives 1 and 2, as East County Road and lands east of the road would not be proposed for withdrawal under Alternative 3. B-20 would be closed from livestock grazing.

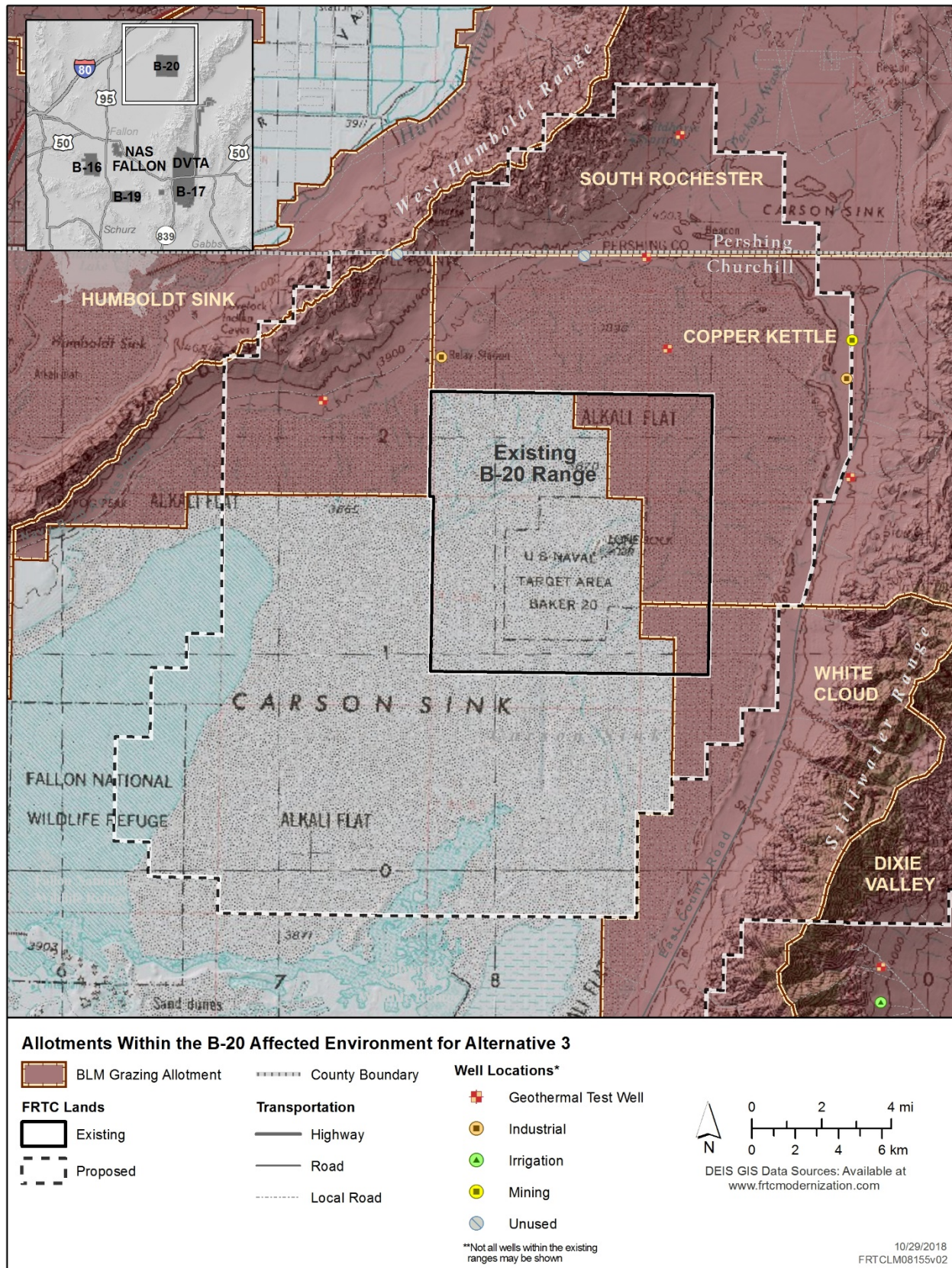


Figure 3.4-10: Allotments Within the B-20 Affected Environment for Alternative 3

Training Activities

Under Alternative 3, the types of training activities conducted at B-20 would be the same as under Alternatives 1 and 2, and neither the public nor livestock would be able to access B-20 during training events.

Public Accessibility

Under Alternative 3, B-20 would be closed to public access as described under Alternatives 1 and 2, with the exception of special events (racing events). Impacts to grazing would be the similar to that of Alternatives 1 and 2.

Construction

Under Alternative 3, the proposed construction areas for B-20 would be the same as under Alternatives 1 and 2. Construction would occur within the proposed B-20 boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.4.4 Dixie Valley Training Area

Land Withdrawal and Acquisition

Under Alternative 3, the DVTa would expand to approximately 325,277 acres, which would be an increase of approximately 247,718 acres from existing conditions (see Table 2-6). Unlike Alternatives 1 and 2, the DVTa would not extend south of U.S. Route 50 (Figure 3.4-11). Rather, the Navy proposes that Congress categorizes this area as a Special Land Management Overlay. This Special Land Management Overlay will define two areas (one east and one west of the B-17 range) as Military Electromagnetic Spectrum Special Use Zones. These two areas, which are public lands under the jurisdiction of BLM, would not be withdrawn by the Navy and would not directly be used for land-based military training or managed by the Navy. Expanding the DVTa would entail the withdrawal of additional public land (i.e., BLM land) and would include the acquisition of non-federal land. Grazing on federal allotments would continue within the DVTa under this alternative. Therefore, expanding the DVTa would not result in a loss of permitted AUMs under this alternative.

Training Activities

Under Alternative 3, the types of training activities conducted at the DVTa would be the same as under Alternatives 1 and 2. Training activities would expand within the proposed DVTa boundary into areas where they have not previously occurred. The public and livestock may see and hear aircraft and support vehicles during training activities within this area. As described in Section 3.4.3.2.4 (Dixie Valley Training Area), training noise could elicit a behavioral response from livestock. The military has no authority to ask civilians to exit or leave open land areas within the DVTa.

If the public enters a training area within the DVTa while a training event is underway, the training would temporarily cease or move elsewhere while the public uses the training area.

Public Access

The public would be able to continue to access the DVTa for livestock grazing under this alternative. The BLM would continue managing these allotments in accordance with the Federal Land Policy Management Act, applicable Resource Management Plans, and as outlined in the MOU between the Navy and BLM, which would be updated accordingly (see Section 3.4.3.4.4, Dixie Valley Training Area).

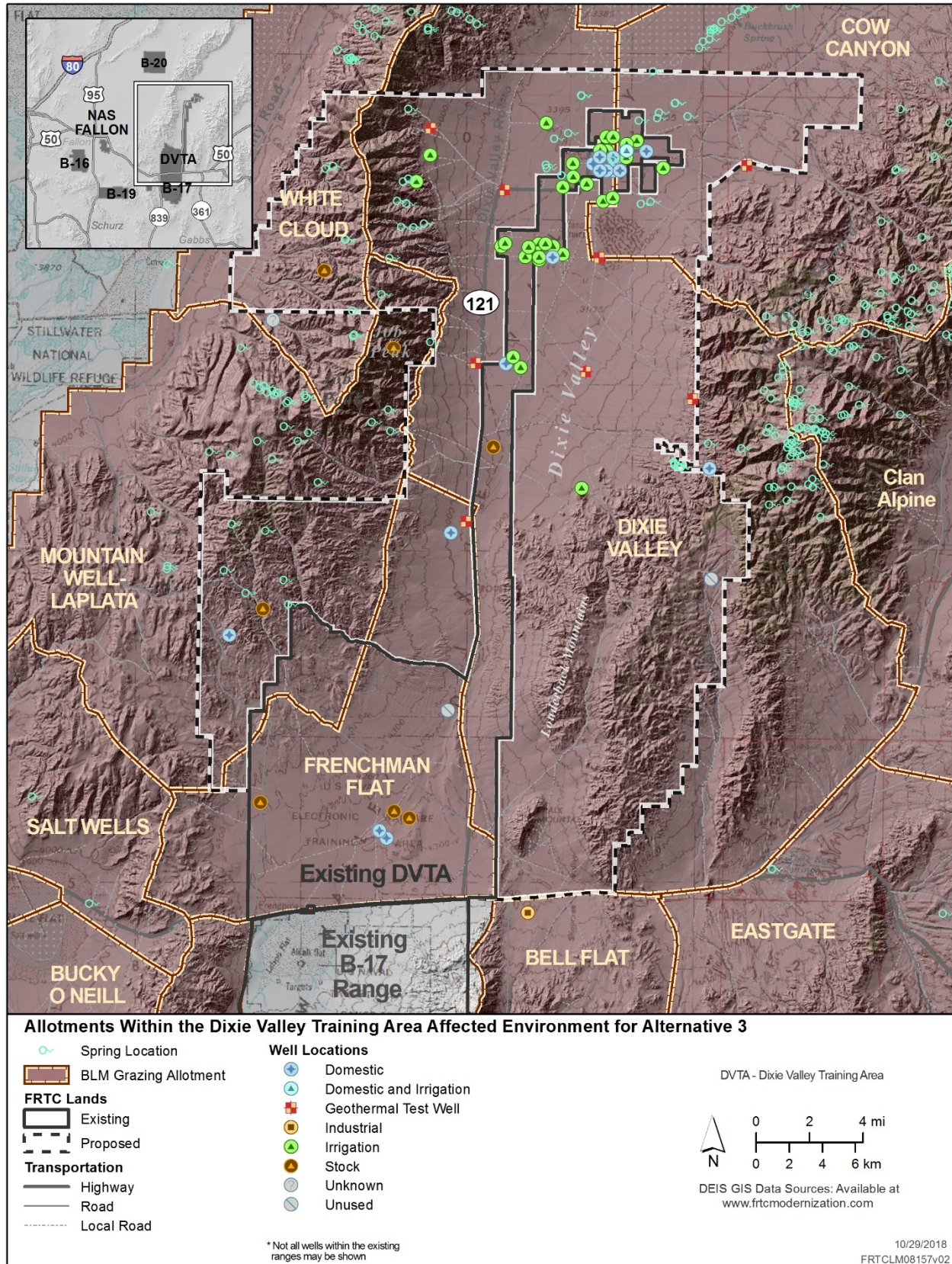


Figure 3.4-11: Allotments Within the Dixie Valley Training Area Affected Environment for Alternative 3

Construction

Construction would occur within the proposed DVTA boundary, which would be closed from livestock grazing. Although construction could temporarily disturb livestock on adjoining lands, these impacts would be temporary and less than significant.

3.4.3.4.5 Fallon Range Training Complex Special Use Airspace

The modification and reconfiguration of SUA under Alternative 3 would be similar to that described for Alternatives 1 and 2 and would be expected to generate the same relatively minimal impacts with respect to livestock. As described in Section 3.4.3.2.5 (Fallon Range Training Complex Special Use Airspace), livestock grazing has been conducted beneath FRTC SUA for over 70 years. Although some studies find the data to be inconclusive, most of the scientific literature indicates that livestock exhibit some form of behavioral response to aircraft noise (Wyle, 2014). The type of behavioral response depends on many variables (e.g., aircraft's size, speed, altitude, distance, color, and type of engine), but it is typically a startle, freezing, or fleeing response.

Alternative 3 proposes to change the configuration of existing SUA. Following the EIS process, the Navy would update relevant documents to formalize the recommendation for new safety and noise zones and confirm existing safety and noise zones. The Navy would continue to work with the local counties and municipalities as well as federal property land managers to plan for compatible land use development, which would include the BLM, USFWS, U.S. Forest Service, Bureau of Reclamation, and Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe Counties.

3.4.3.4.6 Summary of Effects and Conclusions

Under Alternative 3, the Navy would close public access to approximately 356,400 acres of BLM allotments and 4,187 acres of Bureau of Reclamation pastureland in western and central Nevada. Although most of this land has low forage production, the southern portion of the proposed B-17 range includes areas with higher forage potential and rangeland improvements. The Navy estimates that Alternative 3 would result in a loss of between 7,920 and 10,965 AUMs for all livestock (approximately 14 to 20 percent from affected allotments). This would result in a loss of up to approximately 6.93 percent of AUMs within the BLM Carson City District, 0.04 percent of AUMs within the BLM Winnemucca District, and 0.53 percent of all AUMs in Nevada. Therefore, implementing Alternative 3 would significantly impact livestock grazing.

3.4.3.5 Proposed Management Practices, Monitoring, and Mitigation

Policies and procedures in the NAS Fallon Integrated Natural resources Management Plan (INRMP) would continue to be implemented to avoid conflicts with livestock grazing. One of these procedures included routine monitoring of the fence lines surrounding potentially hazardous areas to ensure that the fence is secure and cannot be crossed by people or animals.

3.4.3.5.1 Proposed Management Practices

The following management practices are proposed to avoid or minimize potential impacts on livestock grazing for Alternatives 1, 2, and 3:

- The Standard Operating Procedures for handling cattle on the FRTC training ranges would be revised and implemented.
- Livestock friendly erosion controls (e.g., aspen or synthetic wattles) should be used when performing construction activities on or adjacent to grazing land that is actively being used.

- The Navy would continue to work with the local counties and municipalities as well as federal property land managers to plan for compatible grazing beneath FRTC SUA, which would include the BLM, USFWS, U.S. Forest Service, Bureau of Reclamation, and Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe Counties.

3.4.3.5.2 Proposed Monitoring

The Navy would expand their fence line monitoring and maintenance procedures to include fences that are on withdrawn lands. The Navy would propose to hire two Conservation Law Enforcement Officers at NAS Fallon to accommodate monitoring of the added fence line.

3.4.3.5.3 Proposed Mitigation

No mitigation measures are proposed for livestock grazing based on the analysis presented in Section 3.4.3 (Environmental Consequences). Though not a National Environmental Policy Act mitigation measure, the Navy acknowledges that it has the authority under 43 U.S.C. section 315q of the Taylor Grazing Act of 1934, as amended, to make payments to federal grazing permit holders for losses suffered by the permit holders as a result of the withdrawal or other use of former federal grazing lands for war or national defense purposes.

3.4.3.6 Summary of Effects and Conclusions

Table 3.4-7 summarizes the effects of the alternatives on livestock grazing.

Table 3.4-7: Summary of Effects and Conclusions for Livestock Grazing

Stressor	Summary of Effects and National Environmental Policy Act Determinations
No Action Alternative	
Summary	<ul style="list-style-type: none"> • Livestock grazing would be anticipated to continue where permitted under the No Action Alternative. • Existing land uses at FRTC could be converted to livestock grazing following range closure activities. • Areas that cannot be rendered safe for public access would remain closed to livestock grazing.
Impact Conclusion	The No Action Alternative could result in limited beneficial impacts on livestock grazing depending on conversion success of the Bravo ranges and on habitat suitability, but would not result in significant impacts on livestock grazing.
Alternative 1	
Summary	<ul style="list-style-type: none"> • Alternative 1 would close approximately 319,653 acres of BLM allotments. • It would close approximately 4,187 acres of Bureau of Reclamation pastureland. • It would lead to the loss of between 6,394 and 8,557 AUMs.
Impact Conclusion	Alternative 1 would result in significant impacts on livestock grazing.

Table 3.4-7: Summary of Effects and Conclusions for Livestock Grazing (continued)

Stressor	Summary of Effects and National Environmental Policy Act Determinations
Alternative 2	
Summary	<ul style="list-style-type: none"> • Alternative 2 would close approximately 319,653 acres of BLM allotments. • It would close approximately 4,187 acres of Bureau of Reclamation pastureland. • It would lead to the loss of between 6,394 and 8,557 AUMs.
Impact Conclusion	Alternative 2 would result in significant impacts on livestock grazing.
Alternative 3	
Summary	<ul style="list-style-type: none"> • Alternative 3 would close approximately 356,400 acres of BLM allotments. • It would close approximately 4,187 acres of Bureau of Reclamation livestock grazing areas. • It would lead to the loss of between 7,920 and 10,965 AUMs.
Impact Conclusion	Alternative 3 would result in significant impacts on livestock grazing.

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