

## 3.7 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND PROTECTION OF CHILDREN

### 3.7.1 INTRODUCTION

#### 3.7.1.1 Overview

This section evaluates effects related to socioeconomics, environmental justice (as required under Executive Order [EO] 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), and the protection of children (as required under EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*). Socioeconomics includes an evaluation of the basic attributes and resources associated with the human environment, particularly population and economic activity. Economic activity encompasses employment, personal income, and industrial growth. Impacts on these fundamental socioeconomic components influence other issues, such as housing availability and provision of public services. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (U.S. Environmental Protection Agency 1998). EO 13045 defines environmental health risks and safety risks to children as “risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to).”

#### 3.7.1.2 Regulatory Framework and Management Practices

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, provides that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” The Council on Environmental Quality Guidance on Environmental Justice (December 10, 1997) provides direction on the type of information generally used; it requires that the analysis determine whether the proposed action has adverse human health effects on minority populations, low-income populations, or Indian tribes, and whether the proposed action has other adverse environmental effects or impacts on minority populations, low-income populations, and American Indian tribes.<sup>1</sup>

Section 1-101 of EO 12898 provides specific guidance to federal agencies for determining whether disproportionately high and adverse human health or environmental effects are caused by programs, policies, and activities. For this Proposed Action, analysis for EO 12898 requires assessment of readily available demographic data on the local, regional, and national populations, including race and ethnicity, age, income, and poverty metrics. Information to support this analysis is derived from the United States (U.S.) Census Bureau readily accessible documents and Internet sites. The U.S. Decennial Census forms the basis of the data for 2000 and 2010; the most recent census occurred in 2010. The U.S. Census Bureau 2010 Demographic Profile and the U.S. Census American Community Survey for 2007–2011 data are used to document the most recent conditions. Demographic analysis is the first step in determining disproportionately high and adverse human health or environmental effects on low-income and minority populations. This analysis sets the stage for the impacts analysis presented in Section 3.7.3 (Environmental Consequences). Demographic analysis includes defining the region of influence, low-income populations, and minority communities.

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<sup>1</sup> The definitions for “low-income population,” “minority,” and “minority population” are found in Section 1-101 of EO 12898.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires federal agencies to identify and assess environmental health risks and safety risks that may disproportionately affect children. This EO was prompted by the recognition that children are more sensitive than adults to adverse environmental health and safety risks because they are still undergoing physiological growth and development. Analysis for EO 13045 requires assessment of readily available information regarding demographic data on the local, regional, and national populations, in particular children less than 18 years old, to evaluate the number and distribution of children in the region and whether these children are exposed to environmental health and safety risks from the Proposed Action. Information to support this analysis is derived from the U.S. Census and is used to identify locations with potentially high concentrations of children, such as schools.

This Environmental Impact Statement (EIS) provides the Navy's analysis of potential environmental effects of the Proposed Action on children and minority and low income populations in compliance with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* and EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*.

### **3.7.1.3 Approach to Analysis**

Factors used to assess the significance of impacts on socioeconomic and environmental justice include the extent or degree to which an alternative would have a negative impact on regional and community economics, employment, housing, and population growth, as well as disproportionately high and adverse human health or environmental effects on minority populations or low-income populations.

Further information is provided in EO 12898 for determining disproportionate environmental effects in the guidance:

“When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:

(a) Whether there is or will be an impact on the natural or physical environment that significantly (as employed by the National Environmental Policy Act [NEPA]) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and

(b) Whether environmental effects are significant (as employed by NEPA) and are or may be having an adverse impact on minority populations, low-income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate communities of comparison (for purposes of this EIS, these are the nine counties<sup>2</sup> and the overall State of Nevada as shown in Table 3.7-1); and

(c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.”

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<sup>2</sup> These nine counties were selected to be communities of comparison because portions of these counties underlie the Special Use Airspace (SUA) in the Fallon Range Training Complex (FRTC) Study Area.

A two-step screening process is used to identify environmental justice concerns. It defines the significance criteria for this issue; if either criterion is unmet, there is little likelihood of environmental justice effects occurring. The process is as follows:

1. Does the potentially affected community include minority or low-income populations?
2. Are the environmental impacts likely to fall disproportionately on minority or low-income members of the community or tribal resource?

If the two-step process for environmental justice concerns indicates that potential exists for effects to occur, analyses are conducted to consider the following:

- Whether there exists a potential for disproportionate risk of high and adverse human health or environmental effects
- Whether communities have been sufficiently involved in the decision-making process
- Whether communities currently suffer, or have historically suffered, from environmental and health risks and hazards

Finally, for EO 13045 analysis, factors used to assess the significance of potential impacts from military readiness activities at the Fallon Range Training Complex (FRTC) include the extent or degree to which an alternative would have a serious negative impact or disproportionate environmental health and safety risk specific to children. EO 13045 requires assessment of readily available information regarding demographic data on the local, regional, and national populations of children. For this assessment, children are defined as individuals less than 18 years of age. Demographic data is derived from the 2000 and 2010 U.S. Decennial Census (U.S. Census Bureau 2011) and is used to identify locations with potentially high concentrations of children, such as schools.

### **3.7.2 AFFECTED ENVIRONMENT**

#### **3.7.2.1 Regional Setting**

As stated in Section 2.2.1 (Special Use Airspace), the FRTC Study Area (see Figure 1-1) includes 9 restricted areas, 15 military operations areas (MOAs), 14 Air Traffic Control Assigned Airspaces (ATCAAs), 2 supersonic operating areas, and a Civilian Visual Flight Rules corridor. The majority of land beneath the FRTC airspace is managed by the Bureau of Land Management (BLM), but it includes land managed by the U.S. Forest Service (USFS), the Bureau of Reclamation (BOR), the U.S. Fish and Wildlife Service (USFWS), Native American Tribes<sup>3</sup>, and private land owners. The FRTC spans multiple county jurisdictions in northern Nevada, from Elko County in the east to Washoe County in the west (see Figure 1-1). There are nine counties underlying the FRTC Special Use Airspace (SUA): Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe. FRTC land assets are primarily in Churchill County.

As presented in Section 3.6 (Land Use and Recreation), land use in the surrounding areas consists of livestock grazing lands, mining/industrial, forest lands, and desert. Recreational land use, among others, consists of hunting, fishing, camping, and off-highway vehicle use. Beneath the FRTC airspace, unincorporated areas exist that provide public facilities (e.g., bars and restaurants) and represent concentrations of people. These areas include Middlegate, Eastgate, and Kingston. The Navy avoids overflight of these areas to minimize impacts from military training.

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<sup>3</sup> Because both "American Indian" and "Native American" are used by the U.S. government in laws and regulations they are both used within this section and have the same meaning.

### **3.7.2.2 Region of Influence**

The socioeconomic region of influence includes all those portions of the Nevada counties underlying the FRTC SUA, which defines the FRTC Study Area boundary. The summary of socioeconomic activity in the region of influence is compiled from regional and federal government sources. In addition, data regarding minority populations and low-income populations is presented for the region of influence and, for comparison purposes, on a state and national level.

### **3.7.2.3 Regional and Local Economy**

#### **3.7.2.3.1 Regional Employment**

Naval Air Station (NAS) Fallon is the largest employer in Fallon, Nevada, and in Churchill County. Up to 3,000 people work at NAS Fallon or in a business or industry benefitting from the air station's presence (U.S. Department of the Navy 2012).

Aside from the air station, the area's economy and employment have been traditionally influenced by the agriculture industry sector. Most land in the area is used to grow alfalfa for livestock feed and pastureland, and a powdered milk facility is being constructed in the area due to the growing dairy industry. For example, in Churchill County, according to the 2007 Census of Agriculture, there were 529 farms with total agricultural sales of \$69.6 million, an increase of nearly \$20 million from 2002 (Churchill County 2010). Realized net income paid to Churchill County farmers was \$16.7 million. In 2007, total value of output generated by Churchill County's agricultural sector was \$122.6 million. Applying multipliers, the total economic activity generated by Churchill County agricultural sectors was \$175.43 million. However, in addition to agriculture, other industry sectors contribute significantly to the diverse area economy, including: construction, transportation, mining, manufacturing, professional/technical services, food services, health care, utilities, finance, government and entertainment.

The estimated total employment for the state of Nevada and the counties within the Study Area are provided in Table 3.7-1. The figures are for the years 2000 and 2010 as compiled by the Nevada Department of Employment, Training and Rehabilitation. In general (with the exception of Pershing County), total employment rose across the board in FRTC Study Area counties between 2000 and 2010. Most employment growth in Nevada occurred outside of the Study Area in the Las Vegas metropolitan area. Overall, 18.15 percent more people were employed in Nevada in 2010 versus 2000. Two FRTC Study Area counties (Eureka and Lander counties) grew employment at a faster rate than the state. Most FRTC Study Area counties saw job creation grow slower than the state, with Mineral County nearly flat and Pershing County losing jobs. Despite the seemingly impressive employment growth rates in many counties, the number of jobs created did not keep up with the population growth. This phenomenon is illustrated by the growth in the unemployment rates shown in Table 3.7-1. By 2010, the effects of the recession were being felt across Nevada. As shown in Table 3.7-1, no county was left untouched by the economic downturn. Unemployment rates rose dramatically in 2010 in comparison to 2000 data (some over 200 percent). While unemployment rates have not recovered to 2000 rates, by 2013, the unemployment rates for Nevada and FRTC Study Area counties had fallen by a few percentage points.

**Table 3.7-1: Estimated Total Employment and Unemployment Rates**

Jurisdiction	Employment (2000)	Employment (2010)	Percent Change	Unemployment Rate (2000)	Unemployment Rate (2010)	Percent Change
Nevada	1,015,221	1,199,517	18.15	4.5	13.8	206.67
Churchill County	11,237	12,159	8.21	6.2	10.7	72.58
Elko County	23,257	26,973	15.98	3.9	7.4	89.74
Eureka County	767	1,004	30.90	3.3	7.6	130.30
Lander County	2,685	3,987	48.49	5.8	7.1	22.41
Lyon County	16,876	19,240	14.01	5.8	17.9	208.62
Mineral County	2,159	2,160	0.05	8.3	14.0	68.67
Nye County	13,104	15,185	15.88	6.8	16.5	142.65
Pershing County	2,440	2,431	-0.37	4.4	11.0	150.00
Washoe County	187,469	197,219	5.20	3.7	13.1	254.05

Source: Nevada Department of Employment, Training, and Rehabilitation 2013

### 3.7.2.4 Housing

According to the 2010 U.S. Census data, housing stock in Churchill County was 10,826 (Table 3.7-2). In general, all counties and the state of Nevada have shown a positive increase in housing stock over the decade. Lander County was the only county to post a minor decrease. The percentage of units occupied is high for all counties (U.S. Census Bureau 2010), and all counties are near the range shown for Nevada (85.7 percent).

**Table 3.7-2: Estimated Total Housing Units**

Jurisdiction	2000 <sup>1</sup>	2010 <sup>2</sup>	Percent Change	Percent of Units Occupied 2010
Nevada	827,457	1,173,814	+0.42	85.7
Churchill County	9,732	10,826	+0.11	89.3
Elko County	18,456	19,566	+0.06	89.1
Eureka County	1,025	1,076	+0.05	77.7
Lander County	2,780	2,575	-0.07	85.9
Lyon County	14,279	22,547	+0.58	87.9
Mineral County	2,866	2,830	-0.01	79.2
Nye County	15,934	22,350	+0.40	80.7
Pershing County	2,389	2,464	+0.03	81.9
Washoe County	143,908	184,841	+0.28	88.4

<sup>1</sup> U.S. Census Bureau 2000

<sup>2</sup> U.S. Census Bureau 2010

Housing is provided in two main areas at NAS Fallon: west of Pasture Road and southwest of the airfield. There are 360 military family housing units in addition to barracks capacity for 517 permanent unaccompanied personnel and 1,817 transient personnel (U.S. Department of the Navy 2013).

Underlying the FRTC airspace are the towns of Austin (population of 192 according to the 2010 Census), Crescent Valley (392), Fallon (8,606), and Gabbs (269). Beyond the boundaries of NAS Fallon (i.e., beyond the city of Fallon), population numbers are very low under the FRTC airspace.

### 3.7.2.5 Population Demographics

Table 3.7-3 presents population characteristics, including the population in 2000 and 2010, and the percent change in population between 2000 and 2010. As shown in Table 3.7-3, when compared to the national rate (+9.7 percent), Nevada's population grew impressively (+35.15 percent) over the first decade of this century, with most of that increase occurring in counties not in the FRTC Study Area. That growth was primarily in Clark County (surrounding the Las Vegas metropolitan area), where the county population grew by 575,504 persons to a total of 1,951,269 persons (or 72 percent of the state population). In sparsely populated north-central Nevada (where the FRTC Study Area is located), population change between 2000 and 2010 was typically low growth (Churchill County, Elko County, and Pershing County) or declining population (Lander County and Mineral County). Each of these five counties grew less than the national average. The heart of the FRTC SUA overlies Churchill County and Lander County, where the population changed +3.73 percent and -0.33 percent, respectively. Lyon County (+50.66 percent), Nye County (+35.28 percent), and Washoe County (+24.13 percent) populations grew faster than the rate of state population growth (+35.15 percent). Southern Washoe County (outside the FRTC Study Area) and western Lyon County (outside the FRTC Study Area) are experiencing the higher growth around the urbanized areas of Carson City, Reno, and Sparks. Southern Nye County (outside the FRTC Study Area) is experiencing high growth in Pahrump, a bedroom community for Las Vegas.

**Table 3.7-3: Total Population Growth and Percent Change from 2000 to 2010**

Jurisdiction	2000	2010	Percent Change from 2000 to 2010
United States	281,400,000	308,700,000	+9.70
Nevada	1,998,257	2,700,551	+35.15
Churchill County	23,982	24,877	+3.73
Elko County	45,291	48,818	+7.79
Eureka County	1,651	1,987	+20.35
Lander County	5,794	5,775	-0.33
Lyon County	34,501	51,980	+50.66
Mineral County	5,071	4,772	-5.90
Nye County	32,485	43,946	+35.28
Pershing County	6,693	6,753	+0.90
Washoe County	339,486	421,407	+24.13

Sources: U.S. Census Bureau 2011, U.S. Census Bureau 2013a

### 3.7.2.5.1 Minority Populations

The Council on Environmental Quality defines a minority as “individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.” A minority population exists where either (1) the minority population of the affected area exceeds 50 percent, or (2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

The Nevada statewide total percentage of all minority populations is 47.1 percent (Table 3.7-4). The percent minority population includes all races except non-Hispanic white persons. For this analysis, the Navy determined the total minority population of each of the nine counties within the FRTC Study Area and evaluated whether the total minority population was meaningfully greater than the corresponding percentage in the general population (47.1 percent). As shown in Table 3.7-4, in all FRTC Study Area counties, the total minority population was substantially lower than the total minority population of the state of Nevada. Additionally, and more importantly, a similar calculation was performed for each individual minority population. Through this detailed analysis, the Navy identified whether the FRTC Study Area contained any discrete minority populations.

**Table 3.7-4: Estimated Population Racial Characteristics by County (2012)**

Race	Churchill	Elko	Eureka	Lander	Lyon	Mineral	Nye	Pershing	Washoe	Nevada	United States
<b>Total Population</b>	24,375	51,216	2,001	5,941	51,327	4,653	42,963	6,749	429,908	2,758,931	313,914,040
<b>White</b>	20,889	45,685	1,859	5,430	46,400	3,411	38,753	5,946	369,291	2,127,136	244,539,037
Percentage	85.7%	89.2%	92.9%	91.4%	90.4%	73.3%	90.2%	88.1%	85.9%	77.1%	77.9%
<b>Black or African American</b>	512	666	16	59	719	209	1,117	277	11,178	245,545	41,122,739
Percentage	2.1%	1.3%	0.8%	1.0%	1.4%	4.5%	2.6%	4.1%	2.6%	8.9%	13.1%
<b>American Indian and Alaska Native</b>	1,219	3,073	60	315	1,591	763	816	277	9,028	44,143	3,766,968
Percentage	5.0%	6.0%	3.0%	5.3%	3.1%	16.4%	1.9%	4.1%	2.1%	1.6%	1.2%
<b>Asian</b>	731	512	20	30	770	84	687	88	23,645	217,956	16,009,616
Percentage	3.0%	1.0%	1.0%	0.5%	1.5%	1.8%	1.6%	1.3%	5.5%	7.9%	5.1%
<b>Native Hawaiian or Other Pacific Islander</b>	73	102	0	0	154	5	258	13	3,009	19,313	62,782.81
Percentage	0.3%	0.2%	0.0%	0.0%	0.3%	0.1%	0.6%	0.2%	0.7%	0.7%	0.20%
<b>Two or More Races</b>	975	1,127	44	113	1,694	186	1,332	155	13,757	104,839	7,533,937
Percentage	4.0%	2.2%	2.2%	1.9%	3.3%	4.0%	3.1%	2.3%	3.2%	3.8%	2.4%
<b>Hispanic or Latino</b>	3,120	12,036	252	1,319	7,904	456	6,015	1,539	98,879	753,188	53,051,473
Percentage	12.8%	23.5%	12.6%	22.2%	15.4%	9.8%	14.0%	22.8%	23.0%	27.3%	16.9%
<b>White Alone, not Hispanic or Latino</b>	18,330	34,929	1,639	4,266	39,522	3,127	33,425	4,542	279,870	1,459,474	197,765,845
Percentage	75.2%	68.2%	81.9%	71.8%	77.0%	67.2%	77.8%	67.3%	65.1%	52.9%	63.0%
<b>Total Minority Population</b>	6,045	16,287	362	1,675	11,805	1,526	9,538	2,207	150,038	1,299,457	116,148,195
Percentage	24.8%	31.8%	18.1%	28.2%	23.0%	32.8%	22.2%	32.7%	34.9%	47.1%	37.0%

Source: U.S. Census Bureau 2013c



While not the focus of environmental justice analysis, the non-minority population statistics can enable certain inferences. For example, all nine Study Area counties have notably higher percentages of white, non-Hispanic residents than the state as a whole. Eureka County, in particular, is greater than 81.9 percent white, non-Hispanic, compared with approximately 52.9 percent for Nevada. Churchill County (75.2 percent) and Lander County (71.8 percent) also had notably higher percentages of white, non-Hispanic residents than the state as a whole (52.9 percent). These three counties comprise most of the FRTC Study Area. All nine counties have less than 5 percent black or African Americans, compared with nearly 9 percent for this group statewide. All nine counties have 5.5 percent or less Asians, compared with nearly 8 percent for the Asian group statewide. All nine counties have 23.5 percent or less Hispanic or Latinos, compared with over 27 percent statewide.

On the other hand, the one minority category with a higher percentage than the state in all region-of-influence counties is American Indian or Alaska Native. Statewide, the American Indian category represents 1.6 percent of the population. Within the nine counties touching the FRTC Study Area, the percentage of persons identifying themselves as American Indians ranges from 1.9 percent in Nye County to 16.4 percent in Mineral County. While the percentage of American Indians is higher than the corresponding state percentage when considering all county data (including those portions of the counties outside of the FRTC Study Area), the Navy reviewed the data closely to determine whether these minority populations were actually located within the FRTC Study Area.

Four Indian reservations are within the region of influence: the Yomba Indian Reservation in Nye County; Fallon Paiute-Shoshone Reservation in Churchill County and Lyon County; the Walker River Paiute Indian Reservation in Mineral County, Churchill County, and Lyon County; and the Pyramid Lake Reservation in Washoe County. The Walker River Indian Reservation contains 529,970 acres (ac.) (214,471 hectares [ha]) and underlies Restricted Airspaces R-4810 and R-4812, Gabbs Central MOA/ATCAA, Ranch High and Ranch MOA, and Bandit ATCAA airspace assets. The total population on the Walker River Indian Reservation is 746 (U.S. Census Bureau 2010). Schurz, the town on the Walker River Reservation, accounts for the high percentage (16.4 percent) of American Indians in Mineral County. However, the minority population in Schurz is outside the FRTC Study Area. Additionally, Schurz (given its proximity to the FRTC SUA) is identified as a community noise disclosure area (a noise-sensitive area or community) in the FRTC range user's manual.

The Yomba Indian Reservation has a population of 114 persons (Yomba Shoshone Tribal Council 2013). In 2010, the population of the Yomba Indian Reservation was 95 individuals (U.S. Census Bureau 2010). The Yomba Indian Reservation underlies the Gabbs South and Austin 2 MOA/ATCAA and the Smokie ATCAA. The Yomba Indian Reservation is also identified in the FRTC range user's manual as a community noise disclosure area.

The Fallon Paiute-Shoshone Tribe's federal reservation (the Fallon Paiute-Shoshone Reservation) is northeast of NAS Fallon on 5,540 ac. (2,242 ha). Two geographically detached colonies are on sections between downtown Fallon and the airport northeast of the city of Fallon. The total population on the Fallon Paiute-Shoshone Reservation is 581, and the total population on the Fallon Paiute-Shoshone Colony is 130 (U.S. Census Bureau 2010). The reservation and colony lands are all within the Study Area/region of influence underlying the Bandit ATCAA. The southern portion of the Reno MOA/ATCAA overlies the northern portion of the Pyramid Lake Paiute Tribe's Pyramid Lake Indian Reservation. The population on the Pyramid Lake Paiute Reservation is 1,660 (U.S. Census Bureau 2010). However, residential areas in the southern portion of the reservation in the settlements of Sutcliffe, Nixon, and Wadsworth are located outside the FRTC Study Area and region of influence.

### 3.7.2.5.2 Low-Income Populations

The Navy used the Council on Environmental Quality definition of low-income and the annual statistical poverty thresholds from the U.S. Census Bureau. A low-income community exists when the percentage of low-income people in the area of interest is meaningfully greater than the corresponding percentage in the general population. For purposes of the analysis, the Navy used the statewide average of 12.9 percent to define the percentage of low-income people in the general population. To identify low-income populations, the Navy used Census Bureau data for each of the nine counties within the FRTC Study Area where the percentage of low-income people exceeded the state average.

Poverty thresholds are dollar amounts the Census Bureau uses to determine poverty status. In 2012, the preliminary estimate of weighted average poverty threshold for households with two people was \$14,960; that for households with three people was \$18,287 (U.S. Census Bureau 2013c). For the years 2007–2011, the average household size for Churchill County was 2.77; for Elko County it was 2.76; for Eureka County it was 2.42; for Lander County was 2.77; for Lyon County was 2.79; for Mineral County was 2.08; for Nye County was 2.38; for Pershing County was 2.38; and for Washoe County was 2.55. For this analysis, the Navy rounded the average household size for the counties within the region of influence to 3. Census data were available for the number of households with an income less than \$10,000, those with an income between \$10,000 and \$14,999, and those with an income between \$15,000 and \$24,999. The Navy used the combined number of households with incomes less than \$24,999 as the poverty threshold for the nine counties within the FRTC Study Area. The Navy compared this number of households within the FRTC Study Area to the number of households within the general state population below the poverty threshold to determine any disproportionate impact. These data are displayed in Table 3.7-5.

Analysis of the data illustrates that several counties have low-income households (i.e., at or above the statewide average [20.0 percent]) distributed throughout the region of influence, including Lander, Lyon, Mineral, Nye, Pershing, and Washoe Counties. However, only Mineral County (43.1 percent) and Nye County (30.8 percent) have a noticeably greater percentage of low-income households than the state percentage. Nye County is primarily populated in the south (outside of the FRTC Study Area and region of influence) in communities such as Pahrump (83 percent of the county population lives in Pahrump), Amargosa Valley, and Beatty. Tonopah in Nye County is also beyond the region of influence. Like Nye County, a small northerly portion of Mineral County underlies the FRTC SUA and Study Area. Also, like Nye County, the population of Mineral County is primarily outside of the region of influence. Most residents of Mineral County live in Hawthorne, near the Hawthorne Army Depot. In 2010, Mineral County had an estimated population of 4,772. Hawthorne's population in 2010 was 3,269 (68.5 percent of the county population). Other Mineral County communities such as those in Luning, Mina, and Schurz are outside of the region of influence. As shown in Table 3.7-5, the Nevada counties that make up most of the FRTC Study Area (i.e., Churchill, Lander, and Eureka) have roughly equal or lower percentages of households below the poverty threshold.

Table 3.7-5 also depicts median household income and poverty levels (for all families and all people) for Nevada, its counties, and the nation, using the U.S. Census Bureau's 2007–2011 American Community Survey data. The data illustrate findings similar to the household low-income poverty threshold data, with Mineral County (\$31,108) and Nye County (\$39,740) both exhibiting noticeably lower median household incomes than the state median household income (\$55,553). Lyon County (\$46,598) and Churchill County (\$52,589) also had lower median household incomes than the state median household income, but Churchill County's median household income was nearly equal to the U.S. median household income figure. The percentages of the population in poverty for all families and all people in

Table 3.7-5 also show similar county to county differences. Viewed at the county level (considering only those county portions within the FRTC Study Area), the rates of poverty are not meaningfully higher than the statewide averages. Consequently, there are no environmental justice populations in the FRTC Study Area who are likely to be disproportionately affected by the Proposed Action.

Within Churchill County, the Navy considered income statistics for the City of Fallon (population 8,606) (U.S. Census Bureau 2010). The percentage of low-income families in the City of Fallon (6.8 percent) with incomes below poverty level (based on family size and composition) is lower than for Churchill County (7.5 percent) and Nevada (9.5 percent) (U.S. Department of the Navy 2013). However, the percentage of individuals with incomes below the poverty level in the City of Fallon (11.9 percent) is greater than for Churchill County (10.5 percent). Both the City of Fallon and Churchill County have percentages of low-income families and individuals below that for the state (12.9 percent). The rates of poverty in Fallon are not meaningfully higher than the county or statewide averages. Consequently, there are no environmental justice populations in the City of Fallon or Churchill County who are likely to be disproportionately affected by the Proposed Action.

**Table 3.7-5: Estimated Median Income and Poverty Level Census Data by County (2012)**

	Churchill	Elko	Eureka	Lander	Lyon	Mineral	Nye	Pershing	Washoe	Nevada	United States
<b>Low-Income Households</b>											
Total Households	8,849	17,244	719	2,006	18,373	2,209	18,348	2,062	160,889	966,741	114,761,359
Income less than \$10,000	533	733	26	71	1,169	288	1,531	88	9,094	57,736	8,176,081
Income \$10,000 to \$14,999	378	465	28	72	906	229	1,600	96	7,277	40,750	6,248,397
Income \$15,000 to \$24,999	783	1,607	80	266	1,987	435	2,526	308	16,088	95,157	12,217,054
Total Low-Income Households	1,694	2,805	134	409	4,062	952	5,657	492	32,459	193,643	26,641,532
Percent Households below Poverty Threshold	19.1%	16.3%	18.6%	20.4%	22.1%	43.1%	30.8%	23.9%	20.2%	20.0%	23.2%
Amount above or below State Percentage	-0.9%	-3.8%	-1.4%	0.4%	2.1%	23.1%	10.8%	3.8%	0.1%	0.0%	3.2%
<b>Income and Benefits (in 2011 inflation-adjusted dollars)</b>											
<b>Median Household Income</b>	\$52,589	\$69,459	\$61,908	\$69,814	\$46,598	\$31,108	\$39,740	\$56,473	\$55,813	\$55,553	\$52,762
Amount above or below State Median Income	(\$2,964)	\$13,906	\$6,355	\$14,261	(\$8,955)	(\$24,445)	(\$15,813)	\$920	\$260	\$0	(\$2,791)
<b>Percentage of Families and People Below the Poverty Level</b>											
<b>All Families</b>	7.5%	6.5%	10.8%	8.7%	9.0%	10.9%	15.7%	8.3%	9.0%	9.5%	10.5%
Comparison to State Poverty Level	-2.0%	-3.0%	1.3%	-0.8%	-0.5%	1.4%	6.2%	-1.2%	-0.5%	0.0%	1.0%
<b>All People</b>	10.5%	8.6%	15.3%	12.3%	13.6%	21.9%	20.5%	11.9%	12.9%	12.9%	14.3%
Comparison to State Poverty Level	-2.4%	-4.3%	2.4%	-0.6%	0.7%	9.0%	7.6%	-1.0%	0.0%	0.0%	1.4%

Sources: U.S. Census Bureau 2013b (2007–2011 American Community Survey 5-Year Estimates)

### 3.7.2.6 Protection of Children

Children are not expected to wander onto NAS Fallon, the bombing ranges, or other areas of the FRTC from the surrounding areas via roads or trails due to fences and posted signs installed on the boundaries and the extreme distance children would have to walk or drive to the proposed training ranges from populated areas. During operation of the training ranges, Range Control safety personnel ensure that there are no people forward of the firing line or in the target areas. As discussed in Section 3.10 (Public Health and Safety), procedures are in place in the training areas to protect the public, including children, from training activities.

Table 3.7-6 depicts the region setting for the percentage of the population less than 18 years of age and the average family size for the counties that underlie the FRTC, as well as for Nevada and the nation. The population of children in Churchill County, where NAS Fallon is located, is only slightly higher than for state or national populations.

Underlying the FRTC airspace are the towns of Austin (population of 192 according to the 2010 census), Crescent Valley (392), Fallon (8,606), and Gabbs (269). Beyond the boundaries of NAS Fallon (i.e., beyond the city of Fallon), population numbers are very low under the FRTC airspace.

**Table 3.7-6: Population of Children in the Fallon Range Training Complex Region of Influence**

U.S., State, or Selected Counties within the FRTC Study Area	Population		Percentage of the Population Less than 18 Years of age		Average Family Size	
	2000	2010	2000	2010	2000	2010
United States	281,400,000	308,700,000	26%	24%	3.14	3.14
Nevada	1,998,257	2,700,551	26%	24%	3.14	3.22
Churchill County	23,982	24,877	29%	25%	3.09	3.60
Elko County	45,291	48,818	32%	29%	3.33	3.28
Eureka County	1,651	1,987	28%	24%	3.08	3.17
Lander County	5,794	5,775	28%	32%	3.23	3.05
Lyon County	34,501	51,980	27%	25%	3.02	3.42
Mineral County	5,071	4,772	24%	18%	2.78	2.53
Nye County	32,485	43,946	24%	21%	2.90	2.92
Pershing County	6,693	6,753	26%	20%	3.22	2.75
Washoe County	339,486	421,407	25%	24%	3.09	3.10

Notes: FRTC = Fallon Range Training Complex, U.S. = United States  
Sources: U.S. Census Bureau 2011, U.S. Census Bureau 2013a

Nine counties underlie the FRTC SUA that defines the FRTC Study Area boundary: Churchill, Elko, Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe. The Churchill County School District, where NAS Fallon is located, enrolls about 4,400 students in a combined five elementary and secondary schools in the City of Fallon. The Elko County School District has about 9,400 students enrolled in 16 elementary schools and 10 secondary schools. The Eureka County School District is made up of about 247 students enrolled in one elementary and one secondary school in the unincorporated town of Eureka and one elementary school in Crescent Valley (Nevada Department of Education 2015). The Lander County

School District has about 1,300 students enrolled in a combined five elementary schools and secondary schools. The Lyon County School District is made up of about 8,200 students enrolled in a combined 18 elementary schools and secondary schools. The Mineral County School District is made up of about 570 students enrolled in a combined four elementary schools and secondary schools. The Nye County School District is made up of about 6,400 students enrolled in 11 elementary schools, 2 middle schools, and 5 high schools. The Pershing County School District is made up of about 720 students enrolled in a combined four elementary schools and secondary schools. The Washoe County School District is made up of about 64,800 students enrolled in 63 elementary schools, a special education school, 14 middle schools, and 13 comprehensive high schools. Public schools within the region of influence (as defined by the maximum extent of noise impacts) are identified in Section 3.4 (Noise [Airborne]).

### **3.7.3 ENVIRONMENTAL CONSEQUENCES**

This section evaluates how and to what degree the activities described in Chapter 2 (Description of Proposed Action and Alternatives) could impact socioeconomic resources and environmental justice within the Study Area. The analysis focuses on potential impacts and overall changes as they relate to employment, housing, and minority populations and low-income populations associated with implementation of all current and proposed military readiness activities at the FRTC. Table 2-4 presents the baseline and proposed training activities for each alternative. Each socioeconomic resource and environmental justice stressor is introduced and analyzed by alternative. Table 3.0-1 shows the warfare areas and associated stressors that were considered for analysis. The stressors vary in intensity, frequency, duration, and location within the Study Area. The primary stressors applicable to socioeconomic resources in the Study Area and that are analyzed include the following:

- Noise
- Physical disturbance
- Economics and usability (air/land training activities, access/usability)

The primary stressors applicable to environmental justice in the Study Area and that are analyzed include the following:

- Noise
- Secondary stressors (water quality and air quality)

An assessment of environmental justice is based on potential impacts associated with air quality and water quality from the Proposed Action. Air emissions and pollutants are addressed in Section 3.2 (Air Quality), in accordance with the Clean Air Act. Effects on water quality are addressed in Section 3.3 (Water Quality).

The primary stressors applicable to the protection of children in the Study Area and that are analyzed are the following:

- Noise
- Secondary stressors (water quality and air quality)

#### **3.7.3.1 No Action Alternative**

Under the No Action Alternative, the frequency of FRTC training activities would remain unchanged.

### **3.7.3.1.1 Socioeconomics**

#### **Noise**

Noise generated from Navy activities such as weapons firing, in-air explosions, and aircraft transiting have the potential to disrupt noise-sensitive economic sectors such as recreation and leisure, leading to potential losses in economic activity in the FRTC Study Area. The public will hear noise from aircraft overflights and other training activities if they are near a training event, but there would likely be no impact on public enjoyment of recreational activities leading to a loss of economic activity because of the infrequency and short duration of events. In particular, munitions impact ranges are located in remote areas with limited to no surrounding populations to be affected by detonation noise. Potential noise effects would occur on a temporary basis, only during weapons firing, in-air explosions, and aircraft transiting. Under the No Action Alternative, training activities would continue at current levels and within established ranges and training locations. There would be no additional impacts on socioeconomic resources. Navy operational procedures and practices are already in place to avoid impacts on ongoing activities adjacent to training areas. Therefore, airborne noise impacts on socioeconomic resources would be negligible.

#### **Physical Disturbance**

There would be no anticipated impacts on socioeconomic resources in the FRTC Study Area from physical disturbances because the Navy clears an area before training activities take place, and the Navy does not train in areas close to civilian infrastructure or civilian activities. Further, weapons safety zones have been developed around the impact areas in the FRTC. Based on the Navy's standard operating procedures and the large expanse of the training ranges, the likelihood of a physical interaction and disturbance of civilian property (i.e., equipment or infrastructure) in the FRTC Study Area would be negligible. Therefore, loss of revenue or employment changes in the FRTC Study Area would not be expected under the No Action Alternative.

#### **Economics and Usability**

No changes to the current socioeconomic conditions (employment, housing, and population growth) within the Study Area are expected under the No Action Alternative because the Navy would maintain baseline levels of personnel already employed at NAS Fallon and no changes in training would occur. Therefore, regional and community economics, employment, housing, and population growth are not affected as a result of the No Action Alternative from training activities.

There would be no anticipated impacts on socioeconomic resources in the FRTC Study Area from access/usability of the training area because the Navy is not proposing to add any new restricted areas and proposes to continue the same type of temporary area closures that have occurred for decades. It is not anticipated that the No Action Alternative would affect local aviation traffic. Local aviators may coordinate activities that require entrance into restricted airspace during active hours, and Notices to Airmen allow aviators the opportunity to plan around military readiness activities and coordinate flight times with the Air Route Traffic Control Center. Therefore, while local activities will need to schedule for use of airspace, economic activity, such as local employment, farming, or ranching operations, would not be significantly impacted.

### 3.7.3.1.2 Environmental Justice

#### **Noise**

Major sources of sound within the FRTC include aircraft (fixed-wing and helicopters) and weapons firing. Concerns related to noise from the No Action Alternative on the surrounding communities include hearing loss, nonauditory health effects, and speech interference/temporary attention. Sound impacts on community noise levels from military readiness activities under the No Action Alternative are negligible on lands outside of the Target Areas and are partially mitigated by the training schedule. Military aircraft readiness activities in the FRTC occur primarily during the day (e.g., 75–80 percent of NAS Fallon activities occur during the day), whereas individuals are most sensitive to sound at night (only 20–25 percent of the activities occur at night). The areas underlying FRTC SUA are primarily agricultural or federally owned land (e.g., BLM, Department of Energy, USFWS, USFS, and BOR) and, thus, very few members of the public are exposed to sound from military readiness activities within the FRTC Study Area. Minority populations of Native Americans at the Walker River Reservation (near Bravo [B]-19) would not be disproportionately impacted. At B-19, the majority of elevated community day-night average sound levels (DNL) are contained within the range boundary. However, a small portion of reservation lands south of the southern B-19 range boundary fall under contours that indicate C-weighted day-night levels (CDNL) above 62 C-weighted decibels (dBC). This area, approximately 260 ac. (105 ha), is located on lands belonging to the Walker River Reservation. Visual inspection of these lands utilizing aerial imagery indicates no sensitive receptors that would be incompatible with Noise Zone II. Therefore, in these areas, during busy months of activities at FRTC, noise would not interfere with normal activities associated with its use, and noise from aircraft activities would not represent degradation in the noise environment at these locations. The main noise contributors to the contours at B-19 are H-60 operations in the easternmost holding area south of B-19 and the air-to-ground pattern. These missions are flown at approximately 200–300 feet (ft.) (61–91.4 meters [m]) above ground level (AGL). Although there are fixed-wing operations within B-19, they do not contribute to the noise environment because of the few sorties that occur, mostly between 7,000 and 15,000 ft. (2,133.6 and 4,572 m) AGL. No noise contours (60 monthly average day-night average sound level [ $L_{dnmr}$ ] contours or higher) are found in the vicinity of the Fallon Paiute-Shoshone Reservation. Therefore, there are currently no disproportionately high and adverse human health or environmental effects on any minority populations or low-income populations.

#### **Secondary Stressors (Water Quality and Air Quality)**

Secondary stressors of air quality and water quality were addressed in previous chapters of the EIS. Air Quality (Section 3.2) determined air emissions occur under the No Action Alternative but are within or below historical or desired air quality conditions, and therefore they do not pose disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. The results of the water quality analysis (Section 3.3) determined there is little chance for an incidental spill to reach groundwater, if one were to occur, based on the response procedures in place and the small quantities of materials and wastes used and generated within the FRTC Study Area. Nonexplosive practice munitions would have negligible effects on groundwater under the No Action Alternative because potential contaminants are not expected to migrate to groundwater. Based on predictive modeling and sampling studies, munitions expenditure at B-17, B-19, and B-20 ranges does not appear to result in off-range migration of munitions constituents (U.S. Department of the Navy 2008). The potential for perchlorate and other munitions constituents of concern would continue to be evaluated through the Range Sustainability Environmental Program assessment process and during 5-year range condition assessment updates. Continued implementation of the operational range clearance plan would also substantially reduce potential impacts on water quality. Because water



discharges do not have significant impacts on the local water resources within the FRTC, they do not pose health or environmental risks to the surrounding communities. Therefore, there are no disproportionately high and adverse human health or environmental effects on any minority populations or low-income populations.

### **3.7.3.1.3 Protection of Children**

#### **Noise**

Major sources of sound within the FRTC include aircraft (fixed-wing and helicopters), sonic booms, and weapons firing. Concerns related to noise from the No Action Alternative on the surrounding communities include hearing loss, nonauditory health effects, and speech interference/temporary attention. Sound impacts on community noise levels from military readiness activities under the No Action Alternative are negligible on lands outside of the target areas and are partially mitigated by the training schedule. Military aircraft readiness activities in the FRTC occur primarily during the day (75–80 percent of NAS Fallon activities occur during the day), whereas individuals are most sensitive to sound at night (only 20–25 percent of the activities occur at night). The areas underlying FRTC SUA are primarily agricultural or federally owned land (e.g., BLM, Department of Energy, USFWS, USFS, and BOR) and, thus, very few members of the public are exposed to sound from military readiness activities within the FRTC Study Area.

#### **Secondary Stressors (Water Quality and Air Quality)**

Secondary stressors of air quality and water quality were addressed in previous chapters of the EIS. The results of the air quality analysis (Section 3.2) determined air emissions occur under the No Action Alternative but are within or below historical or desired air quality conditions, and therefore they do not pose disproportionately high and adverse human health or environmental effects on children. Water Quality (Section 3.3) determined there is little chance for an incidental spill to reach groundwater, if one were to occur, based on the response procedures in place and the small quantities of materials and wastes used and generated within the FRTC Study Area. Nonexplosive practice munitions would have negligible effects on groundwater under the No Action Alternative because potential contaminants are not expected to migrate to groundwater. Based on predictive modeling and sampling studies, munitions expenditure at B-17, B-19, and B-20 ranges does not appear to result in off-range migration of munitions constituents (U.S. Department of the Navy 2008). The potential for perchlorate and other munitions constituents of concern would continue to be evaluated through the Range Sustainability Environmental Program assessment process and during 5-year range condition assessment updates. Continued implementation of the operational range clearance plan would also substantially reduce potential impacts on water quality. Because water discharges do not have significant impacts on the local water resources within the FRTC, they do not pose health or environmental risks to the surrounding communities. Therefore, there are no disproportionately high and adverse human health or environmental effects on children.

### **3.7.3.2 Alternative 1**

Implementation of Alternative 1 would include an increase in existing military readiness activities and new military readiness activities.

#### **3.7.3.2.1 Socioeconomics**

##### **Noise**

Noise generated from Navy activities such as weapons firing, in-air explosions, and aircraft transiting have the potential to disrupt enjoyment of recreational activities, leading to a loss of revenue in the

FRTC Study Area under Alternative 1. No additional impacts are expected beyond those described in the No Action Alternative because Navy operational procedures and practices are already in place to avoid impacts on ongoing activities adjacent to training areas. Navy training activities producing airborne noise are normally short term and temporary. Therefore, airborne noise impacts on socioeconomic resources would be negligible.

### **Physical Disturbance**

Physical interactions and disturbances have the potential to impact industry revenue or operating costs under Alternative 1; however, no additional impacts are expected beyond those described in the No Action Alternative because the Navy clears the area before training activities take place, and the Navy does not train in areas close to civilian infrastructure or civilian activities. Based on the Navy's standard operating procedures and the large expanse of the training ranges, the likelihood of a physical interaction and disturbance on civilian property (e.g., equipment or infrastructure) in the FRTC Study Area would be negligible. Therefore, loss of revenue or employment changes to human activities in the FRTC Study Area would not be expected under Alternative 1.

### **Economics and Usability**

Under Alternative 1, total annual training activities would increase by approximately 6 percent, specifically in strike warfare and other range activities, as described in Table 2-2. No changes to the current socioeconomic conditions (employment, housing, and population growth) within the Study Area are expected under Alternative 1 because the Navy would maintain baseline levels of personnel already employed at NAS Fallon attributed to military readiness activities. There is potential for a positive effect on local businesses from an increase in personnel traveling to NAS Fallon as a result of the increase in training activities; however, regional and community economics, employment, housing, and population growth would not change due to this factor.

Navy training activities have the potential to impact the access/usability of the Study Area by temporarily changing access to airspace in the FRTC Study Area, however, it is not anticipated that the increase under Alternative 1 would affect local aviation traffic. There would be no adverse impacts to general aviation regarding access or usability of the area because the Navy is not proposing to add or change any of the boundaries or operating hours of the current Military Operating Areas or Restricted Areas that comprise the FRTC Study Area. Local aviators may coordinate activities that require entrance into Restricted Airspace during active hours with air traffic control, and general flight publications and Notices to Airmen allow aviators to plan around military readiness activities and coordinate flight times with the Air Route Traffic Control Centers. Therefore, while local activities will continue to need to schedule use of airspace, economic activity such as local employment, farming, or ranching operations would not be significantly impacted.

#### **3.7.3.2.2 Environmental Justice**

##### **Noise**

Major sources of sound include aircraft (fixed-wing and helicopters) and weapons firing. Concerns related to noise from Alternative 1 on the surrounding communities would include hearing loss; nonauditory health effects; speech interference; and cognitive effects to attention, reading, problem solving, and memory. Based on the distribution and magnitude of noise impacts under Alternative 1, communities surrounding and underlying FRTC SUA would continue to be slightly affected by training noise. No surrounding land areas have a community day-night noise level in excess of 65 A-weighted decibels (dBA). Community sound levels up to 65 dBA are compatible with land uses such as residences, transient lodging, and medical facilities. Additionally, sounds that propagate beyond the FRTC Study

Area are partially mitigated by the training schedule. Military aircraft readiness activities in the FRTC occur primarily during the day (e.g., 75–80 percent of NAS Fallon activities occur during the day); whereas individuals are most sensitive to sound at night (only 20–25 percent of the activities occur at night). The areas underlying FRTC SUA are primarily agricultural or federally owned land (e.g., BLM, Department of Energy, USFWS, USFS, and BOR) and, thus, very few members of the public are exposed to sound from military readiness activities within the FRTC Study Area. Minority populations of Native Americans at the Walker River Reservation (near B-19) would not be disproportionately impacted because B-19 flight operations do not exceed 54 dBA in any location. The main noise contributors to the contours at B-19 are H-60 operations in the easternmost holding area south of B-19 and the air-to-ground pattern. These missions are flown at approximately 200–300 ft. (61–91.4 m) AGL. Although there are fixed-wing operations within B-19, they would not contribute to the noise environment because of the few sorties, which occur mostly between 7,000 and 15,000 ft. (2,133.6 and 4,572 m) AGL. Although the 57 dBC day-night noise level contours from munitions-related noise would extend up to 3 miles (mi.) (4.8 kilometers [km]) beyond the range boundary at B-19 (into the Walker River Reservation), they would not affect any populated area because none exist in the vicinity. No noise contours (60  $L_{dnmr}$  contours or higher) would be found in the vicinity of the Fallon Paiute-Shoshone Reservation. Therefore, acoustic emissions with implementation of Alternative 1 would not result in disproportionately high and adverse human health or environmental effects on any minority populations or low-income populations compared to communities of comparison, the state of Nevada, and the United States.

### **Secondary Stressors (Water Quality and Air Quality)**

Secondary stressors of air quality and water quality were addressed in previous chapters of the EIS. Air Quality (Section 3.2) determined air emissions occur from Alternative 1 but do not pose human health or environmental risks to surrounding communities because the status of the air quality in the Nevada counties (including Washoe) underlying the FRTC SUA would not be affected. Therefore, air quality emissions with implementation of Alternative 1 would not result in disproportionately high and adverse human health or environmental effects on minority populations and low-income populations compared to communities of comparison, the state of Nevada, and the United States. Water Quality (Section 3.3) determined there is little chance for an incidental spill to reach groundwater, if one were to occur, based on the response procedures in place and the small quantities of materials and wastes used and generated within the FRTC. Nonexplosive practice munitions would have negligible effects on groundwater under Alternative 1 because potential contaminants are not expected to migrate to groundwater. Based on predictive modeling and sampling studies, munitions expenditure at B-17, B-19, and B-20 ranges does not appear to result in off-range migration of munitions constituents (U.S. Department of the Navy 2008). The potential for perchlorate and other munitions constituents of concern would continue to be evaluated through the Range Sustainability Environmental Program assessment process and during 5-year range condition assessment updates. Continued implementation of the operational range clearance plan would also substantially reduce potential impacts on water quality. Domestic wastewater would continue to be treated by septic systems serving the installation assets. Based on the personnel presence within the FRTC, loadings to the septic systems would be low, and the effects on groundwater under Alternative 1 would be negligible. While current groundwater usage data are not available for the FRTC, use is limited based on the limited number of personnel and the limited needs to support training. Because water discharges do not have significant impacts on the local water resources within the FRTC Study Area, they do not pose health or environmental risks to the surrounding communities. Therefore, water quality with implementation of Alternative 1 would not result in disproportionately high and adverse human health or environmental effects on any minority populations and low-income populations compared to communities of comparison, the state of Nevada, and the United States.

### 3.7.3.2.3 Protection of Children

#### **Noise**

Major sources of sound include aircraft (fixed-wing and helicopters) and weapons firing. Concerns related to noise from Alternative 1 on the surrounding communities would include hearing loss, nonauditory health effects, and speech interference/temporary attention. Based on the distribution and magnitude of noise impacts under Alternative 1, communities surrounding and underlying FRTC SUA would continue to be slightly affected by training noise. No surrounding land areas have a community day-night noise level in excess of 65 A-weighted decibels (dBA). Community sound levels up to 65 dBA are compatible with land uses such as residences, transient lodging, and medical facilities. Additionally, sounds that propagate beyond the FRTC Study Area are partially mitigated by the training schedule. Military aircraft readiness activities in the FRTC occur primarily during the day (e.g., 75–80 percent of NAS Fallon activities occur during the day), whereas individuals are most sensitive to sound at night (only 20–25 percent of the activities occur at night). The areas underlying FRTC SUA are primarily agricultural or federally owned land (e.g., BLM, Department of Energy, USFWS, USFS, and Bureau of Reclamation) and, thus, very few members of the public are exposed to sound from military readiness activities within the FRTC Study Area. Children at the Walker River Reservation (near B-19) would not be disproportionately impacted because B-19 flight operations do not exceed 54 dBA. The main noise contributors to the contours at B-19 are H-60 operations in the easternmost holding area south of B-19 and the air-to-ground pattern. These missions are flown at approximately 200–300 ft. (61–91.4 m) above ground level. While there are fixed-wing operations within B-19, they would not contribute to the noise environment because few sorties occur, and those that do are mostly between 7,000 and 15,000 ft. (2,133.6 and 4,572 m) above ground level. Although the 57 dBC day-night noise level contours for munitions-related noise would extend up to 3 mi. (4.8 km) beyond the range boundary at B-19 (into the Walker River Reservation), they would not affect any populated area because none exist in the vicinity. No noise contours (60  $L_{dnmr}$  contours or higher) would be found in the vicinity of the Fallon Paiute-Shoshone Reservation.

#### **Secondary Stressors (Water Quality and Air Quality)**

Secondary stressors of air quality and water quality were addressed in previous chapters of the EIS. Air Quality (Section 3.2) determined air emissions occur from Alternative 1 but do not pose human health or environmental risks to surrounding communities because the status of the air quality in the Nevada counties (including Washoe) underlying the FRTC SUA would not be affected. Therefore, air quality emissions with implementation of Alternative 1 would not result in disproportionately high and adverse human health or environmental effects on children. Water Quality (Section 3.3) determined there is little chance for an incidental spill to reach groundwater, if one were to occur, based on the response procedures in place and the small quantities of materials and wastes used and generated within the FRTC. Nonexplosive practice munitions would have negligible effects on groundwater under Alternative 1 because potential contaminants are not expected to migrate to groundwater. Based on predictive modeling and sampling studies, munitions expenditure at B-17, B-19, and B-20 ranges does not appear to result in off-range migration of munitions constituents (U.S. Department of the Navy 2008). The potential for perchlorate and other munitions constituents of concern would continue to be evaluated through the Range Sustainability Environmental Program assessment process and during 5-year range condition assessment updates. Continued implementation of the operational range clearance plan would also substantially reduce potential impacts on water quality. Domestic wastewater would continue to be treated by septic systems serving the installation assets. Based on the personnel presence within the FRTC, loadings to the septic systems would be low, and the effects on groundwater under Alternative 1 would be negligible. While current groundwater usage data are not available for the

FRTC, use is limited based on the limited number of personnel and the limited needs to support training. Because water discharges do not have significant impacts on the local water resources within the FRTC Study Area, they do not pose health or environmental risks to the surrounding communities. Therefore, water quality with implementation of Alternative 1 would not result in disproportionately high and adverse human health or environmental effects on children.

### **3.7.3.3 Alternative 2**

Alternative 2, the Preferred Alternative, would include all elements of Alternative 1. In addition, Alternative 2 training activities of the types currently conducted would increase by 10 percent over the levels identified in Alternative 1.

#### **3.7.3.3.1 Socioeconomics**

##### **Noise**

Noise generated from Navy activities such as weapons firing, in-air explosions, and aircraft transiting have the potential to disrupt enjoyment of recreational activities, leading to a loss of revenue in the FRTC Study Area under Alternative 2. No additional impacts are expected beyond those described in the No Action Alternative because Navy operational procedures and practices are already in place to avoid impacts on ongoing activities adjacent to training areas. Navy training activities producing airborne noise are normally short term and temporary. Therefore, airborne noise impacts on socioeconomic resources would be negligible.

##### **Physical Disturbance**

Physical interactions and disturbances may impact industry revenue or operating costs under Alternative 2. No additional impacts are expected beyond those described in the No Action Alternative because the Navy clears the area before training activities take place, and the Navy does not train in areas close to civilian infrastructure or civilian activities. Based on the Navy's standard operating procedures and the large expanse of the training ranges, the likelihood of a physical interaction and disturbance on civilian property (e.g., equipment or infrastructure) in the FRTC Study Area would be negligible. Therefore, loss of revenue or employment changes to human activities in the FRTC Study Area would not be expected under Alternative 2.

##### **Economics and Usability**

Under Alternative 2, training activities would increase overall by 10 percent as shown in Table 2-3. No changes to the current socioeconomic conditions (employment, housing, and population growth) within the Study Area are expected under Alternative 2 because the Navy would maintain baseline levels of personnel already employed at NAS Fallon attributed to military readiness activities. There is potential for a positive effect on local businesses from an increase in personnel traveling to NAS Fallon as a result of the increase in training activities; however, regional and community economics, employment, housing, and population growth would not change due to this factor.

Navy training activities have the potential to impact access/usability of the Study Area by temporarily changing access to airspace in the FRTC Study Area, however, it is not anticipated that increase under Alternative 2 would affect local aviation traffic. There would be no adverse impacts to general aviation regarding access or usability of the area because the Navy is not proposing to add or change any of the boundaries or operating hours of the current Military Operating Areas or Restricted Areas that comprise the FRTC Study Area. Local aviators may coordinate activities that require entrance into Restricted Airspace during active hours with air traffic control, and general flight publications and Notices to

Airmen allow aviators to plan around military readiness activities and coordinate flight times with the Air Route Traffic Control Center. Therefore, while local activities will continue to need to schedule use of airspace, economic activity such as local employment, farming, or ranching operations would not be significantly impacted.

### **3.7.3.3.2 Environmental Justice**

Under Alternative 2, noise and secondary stressors (air quality and water quality) would be similar to those described under Alternative 1, under which minority populations and low-income populations would not be affected as a result of associated activities compared to communities of comparison, the state of Nevada, and the United States. Minority populations of Native Americans at the Walker River Reservation (near B-19) would not be disproportionately impacted because B-19 flight operations would not exceed 54 dBA. Although the 57 dBC day-night noise level contours for munitions-related noise would extend up to 3 mi. (4.8 km) beyond the range boundary at B-19 (into the Walker River Reservation), they would not affect any populated area because none exist in the vicinity. No noise contours (60  $L_{dnmr}$  contours or higher) would be found in the vicinity of the Fallon Paiute-Shoshone Reservation or other Indian reservations. Therefore, no disproportionately high and adverse human health or environmental effects as a result of implementation of Alternative 2 are anticipated on minority populations and low-income populations compared to communities of comparison, the state of Nevada, and the United States.

### **3.7.3.3.3 Protection of Children**

Under Alternative 2, noise and secondary stressors (air quality and water quality) would be similar to those described under Alternative 1. No disproportionately high and adverse human health or environmental effects are anticipated on children from implementation of Alternative 2.

### **3.7.3.4 Proposed Management Practices, Monitoring, and Mitigation Measures**

#### **3.7.3.4.1 Proposed Management Practices**

No adverse socioeconomic effects were identified; therefore, no proposed management practices (MPs) for socioeconomics and environmental justice are warranted. However, MPs for other resources that affect environmental justice (e.g., air quality, water quality, and noise) would be implemented.

#### **3.7.3.4.2 Proposed Monitoring**

No specific monitoring measures are warranted for socioeconomics and environmental justice based on the analysis presented in Section 3.7.3.

#### **3.7.3.4.3 Proposed Mitigation Measures**

No mitigation measures are warranted for socioeconomics and environmental justice based on the analysis presented in Section 3.7.3.

### **3.7.3.5 Summary of Effects and Conclusions**

Table 3.7-7 summarizes the effects of and mitigation measures under the No Action Alternative, Alternative 1, and Alternative 2 for socioeconomics and environmental justice.

**Table 3.7-7: Summary of Effects for Socioeconomics and Environmental Justice**

Resource	Stressor	Summary of Effects and National Environmental Policy Act Impact Determination
<b>No Action Alternative</b>		
Socioeconomics	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Physical disturbance</li> <li>• Economics and usability</li> </ul>	<ul style="list-style-type: none"> <li>• Regional and community economics, employment, housing, and population growth are not affected as a result of the No Action Alternative stressors (i.e., noise, physical disturbance, or economics and usability).</li> </ul>
Environmental Justice	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Secondary stressors (water quality and air quality)</li> </ul>	<ul style="list-style-type: none"> <li>• The No Action Alternative presents no disproportionately high and adverse human health or environmental effects (from noise or secondary stressors) on any minority populations or low-income populations compared to communities of comparison, the state of Nevada, and the United States.</li> </ul>
Protection of Children	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Secondary stressors (water quality and air quality)</li> </ul>	<ul style="list-style-type: none"> <li>• The No Action Alternative presents no disproportionate health and safety risks (from noise or secondary stressors) to children.</li> </ul>
<b>Impact Conclusion</b>	<ul style="list-style-type: none"> <li>• The No Action Alternative would result in no significant impacts on the regional and community economics, employment, housing, and population.</li> <li>• The No Action Alternative would result in no significant or disproportionately high and adverse human health or environmental impacts on any minority populations and low-income populations compared to communities of comparison, the state of Nevada, and the United States.</li> <li>• The No Action Alternative would result in no significant or disproportionate environmental health or safety risks to children.</li> </ul>	
<b>Alternative 1</b>		
Socioeconomics	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Physical disturbance</li> <li>• Economics and usability</li> </ul>	<ul style="list-style-type: none"> <li>• Beneficial effects on the local economy would result from increased spending by additional military personnel employed by NAS Fallon and the increased military personnel participating in military readiness activities while in the local area.</li> <li>• Local activities would need to schedule use of airspace, but there would be no significant impact or change in economic activity related to farming and ranching operations.</li> </ul>
Environmental Justice	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Secondary stressors (water quality and air quality)</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative 1 presents no disproportionately high and adverse human health or environmental effects (from noise or secondary stressors) on any minority populations or low-income populations compared to communities of comparison, the state of Nevada, and the United States.</li> </ul>

**Table 3.7-7: Summary of Effects for Socioeconomics and Environmental Justice (continued)**

Resource	Stressor	Summary of Effects and National Environmental Policy Act Impact Determination
Protection of Children	<ul style="list-style-type: none"> <li>Noise</li> <li>Secondary stressors (water quality and air quality)</li> </ul>	<ul style="list-style-type: none"> <li>Alternative 1 presents no disproportionate health and safety risks (from noise or secondary stressors) to children.</li> </ul>
<b>Impact Conclusion</b>	<ul style="list-style-type: none"> <li>Alternative 1 would result in no significant impacts on the socioeconomics of the FRTC Study Area.</li> <li>Alternative 1 would result in no significant or disproportionately high and adverse human health or environmental impacts any on minority populations and low-income populations compared to communities of comparison, the state of Nevada, and the United States.</li> <li>Alternative 1 would result in no significant or disproportionate environmental health or safety risks to children.</li> </ul>	
<b>Alternative 2</b>		
Socioeconomics	<ul style="list-style-type: none"> <li>Noise</li> <li>Physical disturbance</li> <li>Economics and usability</li> </ul>	<ul style="list-style-type: none"> <li>Beneficial effects on the local economy would result from increased spending by additional military personnel employed by NAS Fallon and the increased military personnel participating in military readiness activities while in the local area.</li> <li>Local activities would need to schedule use of airspace, but there would be no significant impact or change in economic activity related to farming and ranching operations.</li> </ul>
Environmental Justice	<ul style="list-style-type: none"> <li>Noise</li> <li>Secondary stressors (water quality and air quality)</li> </ul>	<ul style="list-style-type: none"> <li>Alternative 2 presents no disproportionately high and adverse human health or environmental effects (from noise or secondary stressors) on any minority populations or low-income populations compared to communities of comparison, the state of Nevada, and the United States.</li> </ul>
Protection of Children	<ul style="list-style-type: none"> <li>Noise</li> <li>Secondary stressors (water quality and air quality)</li> </ul>	<ul style="list-style-type: none"> <li>Alternative 2 presents no disproportionate health and safety risks (from noise or secondary stressors) to children.</li> </ul>
<b>Impact Conclusion</b>	<ul style="list-style-type: none"> <li>Alternative 2 would result in no significant impacts on the socioeconomics of the FRTC Study Area.</li> <li>Alternative 2 would result in no significant or disproportionately high and adverse human health or environmental impacts on any minority populations and low-income populations compared to communities of comparison, the state of Nevada, and the United States.</li> <li>Alternative 2 would result in no significant or disproportionate environmental health or safety risks to children.</li> </ul>	

Notes: FRTC = Fallon Range Training Complex, NAS = Naval Air Station