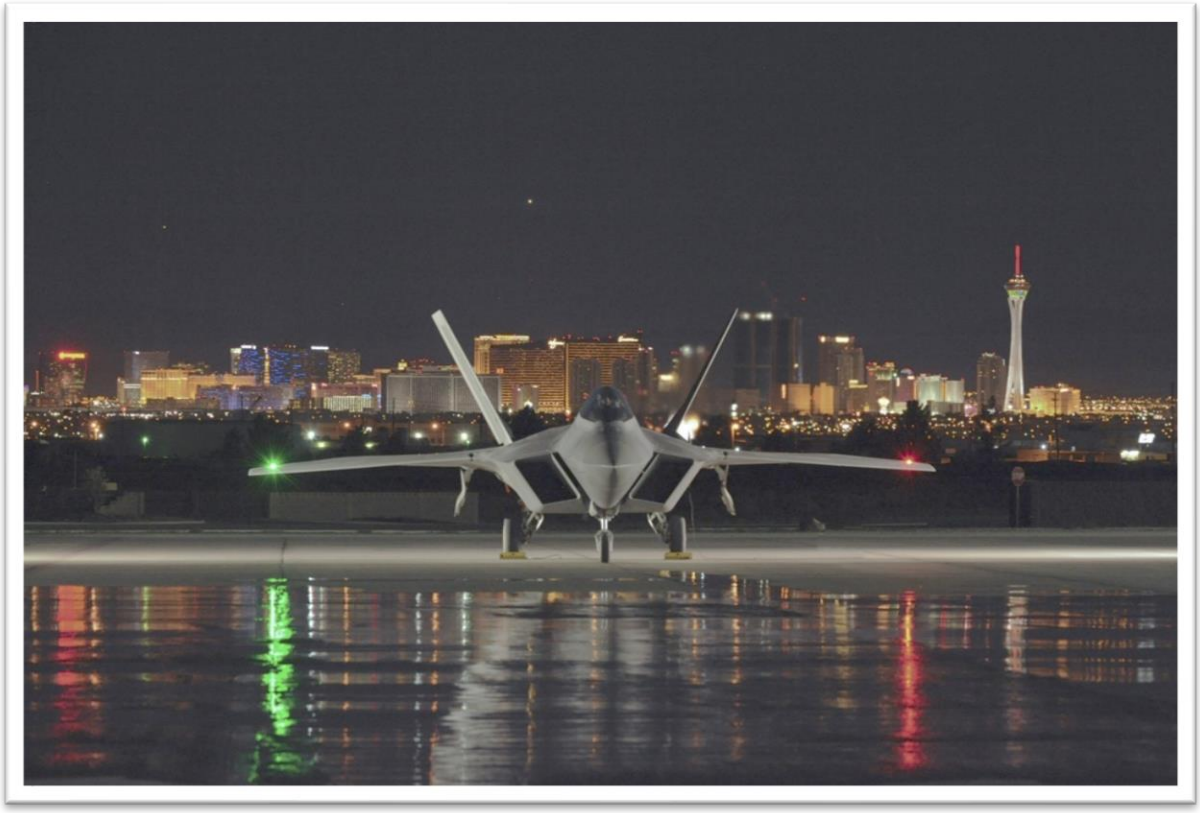
# Draft
# Programmatic Environmental Impact Statement for Master Plan and Installation Development at Nellis Air Force Base, Nevada

**May 2025**

**Prepared for:**
**United States Department of the Air Force**
**57th Wing**
**99th Air Base Wing**
**65th Aggressor Squadron**
**422nd Test and Evaluation Squadron**

**Nellis Air Force Base, Nevada**



**PRIVACY ADVISORY**

This Draft Programmatic Environmental Impact Statement (PEIS) has been provided for public comment in accordance with the *National Environmental Policy Act* (NEPA) and Title 32 *Code of Federal Regulations* Part 989, *Environmental Impact Analysis Process (EIAP)*, which provides an opportunity for public input on United States Department of the Air Force (DAF) decision-making, allows the public to offer input on alternative ways for DAF to accomplish what it is proposing, and solicits comments on DAF's analysis of environmental effects.

Public input allows DAF to make better-informed decisions. Letters or other written or verbal comments provided may be published in this PEIS. Providing personal information is voluntary. Private addresses will be compiled to develop a stakeholders inventory. However, only the names of the individuals making comments and specific comments will be disclosed. Personal information, home addresses, telephone numbers, and email addresses will not be published in this PEIS.

**SECTION 508 OF THE REHABILITATION ACT OF 1973**

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# COVER SHEET

## DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT FOR MASTER PLAN AND INSTALLATION DEVELOPMENT AT NELLIS AIR FORCE BASE, NEVADA

**May 2025**

**Lead Agency:** Nellis Air Force Base (AFB), Nevada

**Affected Location:** Nellis AFB, Nevada

**Proposed Action:** Master Plan and Installation Development at Nellis AFB, Nevada

**Report Designation:** Draft Programmatic Environmental Impact Statement

**Comments and Inquiries:** Comments may be submitted by one of the following methods: mail a written comment to Daniel Fisher, Attn: Master Plan and Installation Development at Nellis AFB, 2222 S. 4th Avenue, P.O. Box 6257, Yuma, AZ 85366 or submit a comment via email to comments@nellisafbeis.com or via the project website at https://www.nellisafbeis.com.

**Abstract:** This Programmatic Environmental Impact Statement (PEIS) analyzes the potential environmental consequences resulting from the Department of the Air Force (DAF) proposal to develop the east side of Nellis Air Force Base (AFB) to meet all current and future DAF mission requirements at the Installation. Expanding the east side of the airfield at Nellis AFB is a central undertaking to ensure the Installation's continued effectiveness in supporting a growing mission set and accommodating a rapidly growing personnel force. Failure to pursue strategic expansion would pose a significant challenge to Nellis AFB's ability to fulfill its anticipated future mission requirements. Development of the east side represents a critical investment in the operational capabilities that reinforce Nellis AFB's vital role in national defense.

By strategically developing the east side of the airfield, Nellis AFB can secure the necessary space to accommodate essential training requirements, maintenance facilities, and critical support functions. Without expansion, the Installation risks falling short of its potential to train the next generation of combat Aircrews, which could negatively impact the readiness of the DAF.

Procedurally, this PEIS was developed in compliance with the *National Environmental Policy Act of 1969* (42 United States Code [USC] § 4321 et seq.) (NEPA), as amended by the *Fiscal Responsibility Act of 2023* (FRA) (Public Law 118-5), the DAF's Environmental Impact Analysis Process implementing regulations (Title 32 *Code of Federal Regulations* [CFR] Part 989), and the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provision of NEPA (40 CFR Parts 1500–1508) of July 2024. Executive Order (EO) 14154 of January 20, 2025, *Unleashing American Energy*, revoked EO 11991, *Relating to Protection and Enhancement of Environmental Quality*, which amended EO 11514, *Protection and Enhancement of Environmental Quality*. While the CEQ has provided notice that it intends to rescind the CEQ NEPA regulations, the DAF has accepted in this instance CEQ's suggestion to voluntarily rely on the CEQ regulations to allow for timely completion of this PEIS, which will support efficiency in planning for future mission-critical requirements.

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# SUMMARY

The United States (US) Department of the Air Force (DAF), Air Combat Command (ACC), prepared this *Programmatic Environmental Impact Statement for Master Plan and Installation Development at Nellis Air Force Base, Nevada* (Master Plan PEIS or PEIS) in compliance with the *National Environmental Policy Act of 1969* (42 *United States Code* [USC] § 4321 et seq.) (NEPA) and the DAF's NEPA implementing regulations at Title 32 Code of Federal Regulations (CFR) Part 989, *Environmental Impact Analysis Process (EIAP)*. The DAF wrote this EIS programmatically to analyze the potential environmental consequences resulting from the DAF proposal to eventually develop the east side of Nellis Air Force Base (AFB). Expanding the east side of Nellis AFB is a central undertaking to ensure the Installation's continued effectiveness in supporting a growing mission set and accommodating a rapidly growing personnel force, as the west side of the Installation has reached capacity for development. Failure to pursue strategic expansion would pose a significant challenge to Nellis AFB's ability to fulfill its anticipated future mission requirements. Development of the east side represents a critical investment in the operational capabilities that reinforce Nellis AFB's vital role in national defense. The programmatic analysis in this PEIS primarily focuses on the proposed use of the area from a conceptual and qualitative perspective; site-specific NEPA analyses will be necessary in the future for specific locations of infrastructure when those plans and details have been formulated and are mature for analysis. Details regarding the actions that are currently known are outlined in **Section 2.4** of this PEIS. These conceptual details were the basis of analysis for the PEIS.

This PEIS analyzes general constraints to development of the east side of Nellis AFB; separate NEPA analysis tiering off this PEIS would be conducted as individual projects are identified in order to thoroughly document environmental impacts of future actions that are unknown at the time of development of this PEIS.

By programmatically developing the east side of the Installation, Nellis AFB can secure the necessary space to accommodate essential training requirements, maintenance facilities, and critical support functions. Without expansion, the Installation risks falling short of its potential to train the next generation of combat Aircrews, which could negatively impact the readiness of the DAF.

Procedurally, this PEIS was developed in compliance with NEPA, as amended by the *Fiscal Responsibility Act of 2023* (FRA), the DAF's Environmental Impact Analysis Process (EIAP) (32 *Code of Federal Regulations* [CFR] 989), and the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provision of NEPA* (40 CFR Parts 1500–1508) of July 2024. Executive Order (EO) 14154 of January 20, 2025*, Unleashing American Energy,* revoked EO 11991*, Relating to Protection and Enhancement of Environmental Quality,* which amended EO 11514*, Protection and Enhancement of Environmental Quality.* While the CEQ has provided notice that it intends to rescind the CEQ NEPA regulations, the DAF has accepted in this instance CEQ's suggestion to voluntarily rely on the CEQ regulations to allow for timely completion of this PEIS, which will support efficiency in planning for future mission-critical requirements.

## S.1 BACKGROUND

Nellis AFB, located in Clark County in the southeast corner of the state of Nevada, lies 5 miles northeast of the city of Las Vegas. Comprising 16,246 acres, the Installation is home to the 99th Air Base Wing (99 ABW), United States Air Force Warfare Center (USAFWC), 57th Wing, Nevada Test and Training Range (NTTR), elements of the 53rd Wing and 505th Command Control Wing, and more than 52 tenant units and agencies. The 99 ABW is the host wing for Nellis AFB and the NTTR and is responsible for two groups: the 99th Mission Support Group and the 99th Medical Group. Nellis AFB is a dynamic installation that plays a central role in DAF training and readiness. Demands on the Nellis AFB infrastructure have increased in recent years with the US Department of Defense (DoD) initiation of acquisition of additional fifth-generation (5th Gen) aircraft, such as the F-35 Lightning II strike fighter, and the continued growth of mission and civilian personnel at the Installation. The DoD plans to acquire 5th Gen F-35 aircraft for the DAF and other branches of the DoD between fiscal years (FY) 2007 and 2034. It is anticipated that a portion of these aircraft would be assigned to Nellis AFB. Nellis AFB was also selected as the beddown location for the F-35

Force Development Evaluation and the DAF Weapons School's advanced weapons training; the existing mission may require additional aircraft, which could drive new F-35s to the Installation.

## S.2 PURPOSE AND NEED FOR THE ACTION

The purpose of the Proposed Action is to optimize Nellis AFB's current operational capabilities and capacity for future warfighting training and testing. According to the *Final Installation Development Plan Nellis Air Force Base, Nevada* (IDP) (Nellis AFB, 2018a), the Proposed Action is needed because the current Nellis and USAFWC mission sets are outpacing the ability to expand resources and capacity. In addition, the DAF anticipates that facility requirements are likely to increase over time through normal attrition and the arrival of new missions; the number of active-duty and civilian personnel also would increase. The existing infrastructure does not meet current and future mission needs; mission capability at Nellis AFB is nearing physical capacity and additional space is needed for the eventual construction of flightline support facilities and infrastructure to meet the anticipated future growth. The Proposed Action is also needed to relieve stress on facility and infrastructure constraints on the west side of the Installation. Flying units are currently sharing hangar space, which is not conducive to future mission growth. Presently, the Installation's infrastructure and utilities limit operational expansion and growth; utilities and the west-side ramp are reaching full operational capacity and must be expanded to accommodate future operations. Without expansion, the existing facilities and infrastructure at Nellis AFB would be insufficient to meet DAF and DoD current and future mission requirements (Nellis AFB, 2018a).

Nellis AFB has identified areas on the east side of the Installation that would be used to eventually construct facilities and infrastructure that are adequate to meet the Installation's current and future operational needs and meet the mission requirements of the ACC and 99 ABW and its tenant units.

## S.3 PROPOSED ACTION AND ALTERNATIVES

In addition to the No Action Alternative, the DAF has identified two action alternatives (i.e., Alternative 1–Proposed Action and Alternative 2) that meet the purpose and need.

### S.3.1 No Action Alternative

No action is the absence of action and is not static. This means that an action would not take place. The resulting environmental effects from taking no action have been compared to the effects of implementing the action alternatives over time. Analysis of this alternative provides a baseline against which decision-makers can compare the environmental effects resulting from the action alternatives. Under the No Action Alternative, development of the east side of Nellis AFB would not occur. The 99 ABW would continue to utilize existing facilities and infrastructure as personnel and missions continue to grow. Demand for current facilities and infrastructure would continue to outpace capacity. Without development of the east side of Nellis AFB, existing facilities and infrastructure at Nellis AFB would be insufficient to meet DAF and DoD future mission requirements and would require current missions to continue to operate in deficient facilities.

### S.3.2 Alternative 1: Preferred Alternative (Complete Development)

Alternative 1 is complete development of the east side of Nellis AFB to accommodate current and future mission needs in accordance with proposed functional use categories. Alternative 1 would fully utilize this undeveloped area, covering 2,000 acres, and identify areas for the future construction of facilities and infrastructure required to meet current and future mission needs over the next decade. Development of the east side of the Installation would include areas designated for airfield operations and light industrial uses; administrative uses; lodging/residential uses; and community services uses to improve mission readiness. Additional areas for transportation and utility infrastructure have been identified to accommodate the eventual development. Alternative 1 would also include areas for dedicated open space used for morale, welfare, recreation, and training for use by personnel and their families.

### S.3.3 Alternative 2 (Partial Development)

Alternative 2 is partial development of the east side of Nellis AFB to accommodate current and future mission needs also in accordance with functional use categories. While Alternative 2 proposes a reduced development footprint (1,486 acres), it would still address the 99 ABW's current mission constraints. Alternative 2 would allow the Installation to meet mid-term requirements for future growth and would provide access to airfield, industrial, and administrative areas for personnel working on the east side of the Installation. This alternative does not include space for new lodging/residential uses. Under this alternative, accompanied and unaccompanied military personnel would utilize existing on-Installation living quarters or live off the Installation. Alternative 2 does not include space for outdoor recreation, training, and community services. In addition, the areas designated for transportation and utility infrastructure would be smaller than those areas under Alternative 1.

## S.4 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

**Table S-1** provides a comparison of the environmental consequences associated with Alternative 1, Alternative 2, and the No Action Alternative.

**Table S-1**
**Impact Comparison of Alternatives**

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
|---|---|---|---|
| Land Use | Under the No Action Alternative, there would be no changes to land use in the Region of Influence (ROI) beyond baseline conditions; land use within the Proposed Action area, which is currently designated as Airfield and Open Space, would remain unchanged from current conditions. No additional space would be designated for development to meet future mission requirements, including space for transportation and utility infrastructure, administrative facilities, airfield operations facilities, lodging, community support facilities, and other uses. | Alternative 1 would designate up to 2,000 acres of land on the east side of the Installation for various development purposes. This includes future facilities for administration, utilities, housing, medical services, and recreation.<br><br>Expansion of DAF operations under Alternative 1 would occur east and southeast of the current runway. The majority of the land (1,261 acres) is currently unused, designated as Open Space, and managed by the US Bureau of Land Management (BLM) but withdrawn for military use. Development under Alternative 1 would permanently change the designation of this land.<br><br>Implementation of Alternative 1 would result in long-term, adverse impacts that would not be significant to land use due to the conversion of Open Space to developed areas.<br><br>Nellis AFB would explore ways to adjust training exercises or operations to minimize their impact on sensitive areas within the BLM-withdrawn land. This could involve designating specific training zones to avoid critical habitats, implementing seasonal restrictions for construction and operational activities, or other activities to minimize impacts to the natural resources located within withdrawn land. | Alternative 2 would provide designated space for some of the same functional use categories as Alternative 1 within a total footprint of 1,486 acres. A total of 888 acres of BLM lands withdrawn for military use would be designated for permanent development with implementation of Alternative 2. Unlike Alternative 1, Alternative 2 would not designate any areas for Open Space functional use or Lodging/Residential use. Alternative 2 would also provide for a reduced total footprint for Medical/Community Services/Community Commercial/Small-Scale Retail compared to Alternative 1 (110 acres versus 33 acres).<br>Implementation of Alternative 2 would result in long-term, adverse impacts to land use at Nellis AFB that would not be significant. |
| Air Quality and Climate Change | Under the No Action Alternative, there would be no changes to air quality resources in the ROI beyond baseline conditions. | Alternative 1 would not lead to significant adverse impacts to ambient air quality or human health. However, there may be short-term, adverse impacts to air quality that would not be significant during future | Air quality impacts from implementation of Alternative 2 would be similar to those under Alternative 1 but would be reduced due to the reduced size and activity of the development footprint. |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
|---|---|---|---|
| | | construction activity due to increased emissions from construction equipment.<br><br>Emissions from Alternative 1 development activities would occur over a 7-year period, but none of the pollutants for which the area is in nonattainment would exceed General Conformity *de minimis* thresholds. Additionally, levels of sulfur dioxide and fine inhalable particulate matter ($PM_{2.5}$) would not exceed the comparative indicator thresholds. Significant exposures to ground-level pollutants by sensitive receptors due to pollutant migration would be unlikely given the characteristics of the construction activity, the distance from the activities to the receptor locations, and seasonality of wind direction. Accordingly, implementation of Alternative 1 would not be anticipated to result in significant, adverse impacts to ambient air quality or human health. Short-term, adverse impacts to air quality that would not be significant would be anticipated to occur during future construction as a result of an increase in emissions from construction equipment.<br><br>BMPs to be implemented in accordance with Clark County Air Quality Regulations include, but are not limited to:<br><br>• Stabilize soil prior to, during, and after cut and fill activities.<br>• Apply water to stabilize disturbed soil throughout the construction site.<br>• Limit vehicle traffic and disturbance on soils where possible.<br>• Limit the size of staging areas.<br>• Apply water to surface soils where support equipment and vehicles will be operated. | |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
|---|---|---|---|
| Earth Resources | Under the No Action Alternative, there would be no changes to earth resources in the ROI beyond baseline conditions. Consequently, the anticipated benefits of enhanced stormwater drainage, particularly in reducing soil erosion and sedimentation, would not be realized. | Under Alternative 1, development activities would alter the surface topography of Nellis AFB, resulting in the future creation of up to 1,480 acres of impervious surfaces and potential grading impacts on additional areas. While future grading activities could affect existing slopes, the predominantly flat nature of the Proposed Action area suggests minimal alteration to underlying geology and topography. Soil disturbance, covering up to 1,480 acres may elevate the risk of erosion and sedimentation during heavy rainfall, particularly in areas with high runoff potential. Implementing best management practices (BMPs) during and after construction, including stormwater management measures, would help mitigate these effects. Long-term, beneficial impacts to stormwater infrastructure would also occur under Alternative 1 through future stormwater drainage improvements such as the future construction of a reinforced berm designed to divert stormwater from Sunrise Mountain toward the proposed expansion of the flood control basin by the Clark County Regional Flood Control District, which would help to reduce the potential for sedimentation and erosion that would occur as a result of soil disturbance.<br><br>Implementing mitigation measures during and after future construction, including stormwater management measures, would help mitigate these effects. Mitigation measures could include the following:<br><br>• Minimize the total disturbed area during future construction and development.<br>• Cluster future construction within the functional use category thresholds (see **Section 2.4.1**).<br>• Minimize soil compaction. | Development under Alternative 2 would result in the creation of up to 1,216 acres of new impervious surfaces, with grading potentially altering existing slopes. Impacts under Alternative 2 would be anticipated to be the same as under Alternative 1, albeit on a smaller scale due to the reduced footprint. |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
|---|---|---|---|
| | | • Implement design standards to manage increases in stormwater runoff and to limit opportunities for increased sedimentation and erosion.<br><br>The Proposed Action would comply with the *Energy Independence and Security Act* (Public Law 110-140) and National Pollutant Discharge Elimination System permit requirements related to maintaining or restoring to predevelopment hydrology conditions. | |
| Water Resources | Under the No Action Alternative, stormwater issues in the ROI, such as flooding, sedimentation, and soil erosion, would persist. Groundwater and surface water would remain unchanged. | Alternative 1 would result in no impacts to surface waters. The future addition of up to 1,480 acres of impervious surfaces would be anticipated to result in a short-term increase in stormwater contamination from future construction activities. There would also be the potential for long-term impacts to stormwater as a result of increased contamination from operational uses on developed land. The future addition of up to 1,480 acres of impervious surfaces would result in increased runoff; however, under Alternative 1, the DAF would make future improvements to stormwater infrastructure that would help to manage stormwater flow and flooding.<br><br>Impacts to groundwater would include the potential for contamination during future construction and operation from stormwater runoff or chemical use. However, deep groundwater resources would be unlikely to be impacted due to depth and the implementation of BMPs.<br><br>Future construction would occur within areas that are designated as floodplains by the Colorado State University Center for Environmental Management of Military Lands but are not designated as floodplains by the Federal Emergency Management | Future development under Alternative 2 would result in up to 1,216 acres of new impervious surfaces, potentially resulting in a short-term increase in stormwater contamination and runoff and groundwater contamination. Impacts under Alternative 2 would be anticipated to be the same as under Alternative 1, albeit on a smaller scale due to the reduced footprint. |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
|---|---|---|---|
| | | Agency. Accordingly, future construction within the floodplain would adhere to applicable regulations as defined by Nellis AFB and the Clark County Regional Flood Control District.<br><br>Impacts to water resources under the Proposed Action and Alternatives would be managed, to the extent possible, through the use of mitigation measures that could include the following:<br><br>• Minimize the total disturbed area during future construction and development.<br>• Cluster future construction within the functional use category thresholds defined in **Section 2.4.1**.<br>• Minimize soil compaction.<br>• Implement design standards to manage increases in stormwater runoff and to limit opportunities for stormwater contamination.<br>• Construct structures above the base-flood elevation, dry- or wet-proof foundations, and use permanent tie-downs of non-structural equipment such as propane tanks or wash racks.<br>• Establish a proper connection between the stormwater channel to the Clark County Regional Flood Control District retention pond.<br>• Implement development designs that support the flow of stormwater runoff and containment.<br>• Conduct ongoing maintenance of existing stormwater channels. | |
| Biological Resources | Under the No Action Alternative, the current ecological state in the ROI would remain unchanged beyond baseline conditions. Species considered sensitive or of greatest | Under Alternative 1, approximately 1,580 acres of native and non-native vegetation would have the potential to be removed during future development, including | Under Alternative 2, approximately 1,071 acres of native and non-native vegetation would have the potential to be removed during future development, including |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
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| | conservation need (SGCN) would not be affected. Impacts to the Mojave desert tortoise habitat and individual desert tortoises would not occur. | construction, grading, and laydown of equipment. Approximately 715 acres, or 56 percent, of the Parry's Saltbush Wet Shrubland Alliance vegetation that occurs on Nellis AFB would have the potential to be removed during project implementation. Under Alternative 1, the DAF would remove approximately 559 acres, or about 10 percent, of the Creosotebush-Burrobush Bajada and Valley Desert Scrub Alliance vegetation association on Nellis AFB, resulting in significant, long-term, adverse impacts to native vegetation.<br><br>Populations of small mammals and reptiles in the Proposed Action area would be lost during vegetation removal as a result of mortality during land clearing. Species that are considered sensitive by the BLM and SGCN by the state of Nevada that could be affected by the loss of habitat include the desert horned lizard, desert iguana, Great Basin collared lizard, long-tailed brush lizard, and Mojave sidewinder.<br><br>Approximately 1,000 acres of Mojave desert tortoise habitat would be disturbed under Alternative 1. The estimated 982 acres of the 1,000 acres of desert tortoise habitat that would be disturbed from implementation of Alternative 1 would be covered by the Programmatic Biological Opinion (PBO), provided the DAF implements all terms and conditions and reporting requirements in the PBO. It is expected that an unknown number of small tortoises and tortoise eggs may not be found and would be killed during ground-disturbing activities, which would be allowable under the incidental take provision of the PBO. Conducting preconstruction surveys and installing tortoise-proof fencing around the project area would be expected to prevent injuries or mortality of adult | construction, grading, and laydown of equipment. Approximately 681 acres, or 53 percent, of the Parry's Saltbush Wet Shrubland Alliance vegetation that occurs on Nellis AFB would have the potential to be removed during project implementation. Under Alternative 2, the DAF would remove approximately 212 acres, or about 4 percent, of the Creosotebush-Burrobush Bajada and Valley Desert Scrub Alliance vegetation association on Nellis AFB, resulting in significant, long-term, adverse impacts to native vegetation.<br><br>Impacts to wildlife under Alternative 2 would be the same as those under Alternative 1, albeit on a smaller scale as a result of the reduced development footprint.<br><br>Approximately 487 acres of Mojave desert tortoise habitat would be disturbed under Alternative 2. The estimated 487 acres of desert tortoise habitat that would be disturbed from implementation of Alternative 2 would be covered by the PBO, provided the DAF implements all terms and conditions and reporting requirements in the PBO. It is expected that an unknown number of small tortoises and tortoise eggs may not be found and would be killed during ground-disturbing activities, which would be allowable under the incidental take provision of the PBO. Conducting preconstruction surveys and installing tortoise-proof fencing around the project area would be expected to prevent injuries or mortality of adult tortoises. The DAF has determined that the adverse effects of the Proposed Action under Alternative 2 on the desert tortoise from development of tortoise habitat and potential translocation of several adult desert tortoises was fully evaluated through Section 7 consultation with the USFWS in 2023 as documented in |

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| | | tortoises. The DAF has determined that the adverse effects of the Proposed Action under Alternative 1 on the desert tortoise from development of tortoise habitat and potential translocation of several adult desert tortoises was fully evaluated through Section 7 consultation with the US Fish and Wildlife Services (USFWS) in 2023 as documented in the PBO. Potential adverse impacts to desert tortoises would be minimized through the implementation of the conservation measures and requirements in the PBO. | the PBO. Potential adverse impacts to desert tortoises would be minimized through the implementation of the conservation measures and requirements in the PBO. |
| Cultural Resources | Under the No Action Alternative, there would be no changes to cultural resources in the ROI beyond baseline conditions. | Implementation of Alternative 1 would have the potential to result in adverse effects to cultural resources. In keeping with the programmatic nature of this Environmental Impact Statement, consultation with the Nevada State Historic Preservation Officer (SHPO) would occur in the future on a project-by-project basis prior to beginning construction. There is currently no Programmatic Agreement between Nellis AFB and the SHPO, nor is one in development. The following historic resources would have the potential to experience direct visual effects under Alternative 1:<br>• Red Flag Historic District, including Building (B-) 222, B-224, B-226, B-228, B-201, and B-220<br>• Thunderbirds Hangar (B-292)<br><br>Archaeological sites CK11269 and S1827 are awaiting SHPO eligibility determination.<br><br>Should an “Adverse Effect” determination be made by Nellis AFB, Base personnel will consult with SHPO to develop and evaluate alternatives or modifications to the undertaking that avoid, minimize, or mitigate the adverse effects. Mitigation measures would be identified on a project-by-project | Impacts to cultural resources under Alternative 2 would be anticipated to be the same as those described under Alternative 1. |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
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| | | basis should the Nevada SHPO make an adverse effect determination for any historic architectural or archaeological properties. | |
| Noise | Under the No Action Alternative, there would be no changes to the noise environment, which is dominated by aircraft-related noise, beyond baseline conditions. | Noise under Alternative 1 would not be anticipated to result in significant impacts to noise-sensitive receptors. The residential community of Sunrise Manor, as well as Sunrise Mountain High School, Dr. William H. "Bob" Bailey Middle School, and Liliam Lujan Hickey Elementary School would remain under elevated noise contours generated by ongoing aircraft operations. Operation of the future support facilities proposed under Alternative 1 would not result in significant impacts to the existing noise environment. Operations and maintenance activities associated with the proposed development would result in intermittent noise that would be indistinguishable from the noise generated by ongoing aircraft operations. There would be no change in the number or types of aircraft, flight training, or associated ground-based training currently occurring at Nellis AFB under Alternative 1. Mitigation measures to minimize noise impacts could include limiting construction activities to daylight hours (7 a.m. to 6 p.m.). | Impacts to noise under Alternative 2 would be anticipated to be the same as those described under Alternative 1. |
| Hazardous Materials and Waste, Toxic Substances, and Contaminated Sites | Under the No Action Alternative, there would be no development on the east side of Nellis AFB. While this would avoid introducing new hazardous materials, existing hazardous waste management issues, such as debris from illegal dumping and hazardous waste sites, would remain unresolved, posing a continued threat.<br><br>Increased personnel and evolving missions at Nellis AFB would further strain existing facilities. As capacity limitations become more severe, managing hazardous materials | Under Alternative 1, the eventual use of hazardous materials during future construction would be anticipated to result in short-term, adverse impacts that would not be significant. Hazardous wastes encountered during future excavation or grading activities during development could potentially expose construction and maintenance workers to potential hazards associated with contaminants.<br><br>The use of certain petroleum products would be required during proposed development associated with Alternative 1. Short-term, adverse impacts that would not be significant | Impacts to hazardous materials and waste, toxic substances, and contaminated sites would be anticipated to be the same under Alternative 2 as Alternative 1. |

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|---|---|---|---|
| | and wastes could become a challenge. This could lead to:<br><br>• improper disposal – Strained resources could increase the risk of improper disposal of hazardous materials, posing environmental and health risks; and<br><br>• accidental releases – Inadequate storage facilities and crowded conditions could increase the likelihood of accidents or spills involving hazardous materials.<br><br>Overall, while the No Action Alternative would avoid immediate disruption, it could exacerbate existing problems related to hazardous materials and waste management, potentially leading to future environmental and health risks. | would be anticipated to result from the use of petroleum products with implementation of Alternative 1.<br><br>Asbestos-containing material, lead-based paint, or polychlorinated biphenyls (PCBs) encountered during future excavation or grading activities during development under Alternative 1 could potentially expose construction and maintenance workers to potential hazards associated with these materials.<br><br>Per- and polyfluoroalkyl substances (PFAS) and perfluorooctane sulfonate are known to occur within the soils and groundwater in the northwest corner of the Proposed Action area. Eleven total aqueous film forming foam (AFFF) sites are known to occur within the flightline area, three of which occur within the Proposed Action area. Soil disturbance and excavation within these areas have the potential to expose construction workers to PFAS in a way that could lead to adverse human health impacts.<br><br>Three Environmental Restoration Program (ERP) sites, SS028, SS046, and L-13, are located within the Proposed Action area. Soil excavation occurring within the boundaries of these ERP sites under Alternative 1 would not be anticipated to result in any adverse impacts because no known soil contamination is associated with these sites. Short-term, adverse impacts to these sites that would not be significant would be anticipated to occur with implementation of Alternative 1.<br><br>Impacts to this resource area resulting from the Proposed Action would be managed, to the extent possible, through the use of BMPs that could include the following: | |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
|---|---|---|---|
| | | • Coordinate with the Nevada Division of Environmental Protection (NDEP) regarding land use controls at L-13 prior to construction.<br>• Identify the extent of PFAS-impacted soils for AT001P/AFFF Area #3, AT002P/AFFF Area #8, B-2069/AFF Area #5, and the fire training area prior to construction.<br>• Characterize the unidentified debris dumped within the Proposed Project area prior to construction, and coordinate with NDEP to properly manage or dispose of any wastes that are identified.<br>• Create and implement a soil and water management plan in compliance with NDEP requirements.<br>• Implement measures to stockpile contaminated soils to prevent further impacts.<br>• Adhere to the Nellis AFB Hazardous Waste Management Plan, Lead-Based Paint Management Plan, and Asbestos Management and Operations Plan. | |

| | No Action Alternative | Alternative 1 (Complete Development) | Alternative 2 (Partial Development) |
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| Infrastructure, Including Transportation and Utilities | Under the No Action Alternative, there would be no changes to utilities or infrastructure improvements in the ROI beyond baseline conditions. The 99 ABW would continue to utilize existing facilities and infrastructure as its number of personnel and mission continue to grow. Beneficial impacts from stormwater infrastructure improvements would not occur under the No Action Alternative. Demand for current facilities and infrastructure would continue to outpace capacity.<br><br>Several locations would experience an unacceptable level of service with future projected growth under the No Action Alternative. Additionally, the Hollywood Gate would continue to remain closed. The volume of traffic at the existing four gate entrances would continue to increase in relation to the 10-percent increase in personnel, and these gates would continue to be inadequate to support anticipated growth. | Development under Alternative 1 would eventually require the future construction of approximately 43,000 linear feet of water main line. Potable water demand under Alternative 1 would increase by approximately 0.3 million gallons per day, an increase of 18 percent. Future construction occurring under Alternative 1 would have the potential to further strain the long-term potable water availability on Nellis AFB, resulting in long-term, adverse impacts to the potable water supply that would not be significant.<br><br>To decrease potable water demand, the following measures are considered for mitigation:<br><br>• Ensure proposed landscaping design is water efficient.<br>• Ensure low-flow plumbing fixtures are integrated into the design of the new facilities.<br>• Eliminate potable water for outdoor use/irrigation.<br>• Curtail waste by minimizing unrecoverable potable water losses:<br>  ○ termination of the Area II flushing system with a looped system that would connect the existing water supply lines from Areas I and II,<br>  ○ implementation of hardening strategies for the water distribution system, including a deeper burial of distribution pipes,<br>  ○ improving the overall management of the distribution system by installation of a Supervisory Control and Data Acquisition system.<br><br>Approximately 25,000 linear feet of sewage piping would be required to support | Impacts to infrastructure, including transportation and utilities, under Alternative 2 would be anticipated to be generally the same as under Alternative 1, albeit on a smaller scale. Future improvements to infrastructure to support development under Alternative 2 are described below.<br><br>Development under Alternative 2 would require the future construction of approximately 41,000 linear feet of water main line.<br><br>Approximately 23,000 linear feet of sewage piping would be constructed in the future to support development under Alternative 2.<br><br>Alternative 2 would involve the same stormwater infrastructure improvements as Alternative 1.<br><br>Development under Alternative 2 would increase electricity demand by 24 megawatts, approximately 15-percent less than development under Alternative 1. Electrical infrastructure upgrades would be the same as those described under Alternative 1.<br><br>Approximately 70,000 linear feet of underground duct bank telecommunications infrastructure pathways would be required to support development under Alternative 2, or approximately 20 percent less than Alternative 1.<br><br>Natural gas demand under Alternative 2 would increase by approximately 1.1 trillion British thermal units, or approximately 40 percent less than Alternative 1. Approximately 19,500 linear feet of natural gas lines would be required to support development under Alternative 2, |

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| | | development under Alternative 1. Overall, changes in regional demand would be minimal and the wastewater treatment system would have the capacity required to meet increased demands under Alternative 1.<br><br>Stormwater rate control would be managed within the Proposed Action area by the construction of stormwater culverts, open-top flumes, and other stormwater management features per Nevada General Permit NVR100000. A stormwater detention facility would be constructed on the southwest corner of the Proposed Action area. A reinforced berm within the fence line would be constructed in the future to safely divert stormwater runoff from Sunrise Mountain around the Proposed Action area toward the proposed stormwater basin. Long-term, beneficial impacts to stormwater infrastructure would be anticipated to occur with implementation of Alternative 1.<br><br>Development under Alternative 1 would increase electrical demand by 28 megawatts, requiring the installation of a new Nellis AFB-owned distribution South substation in the southeastern corner of the Proposed Action area; future construction of this substation would double the overall electricity capacity of the Installation to 80 megavolt-ampere. The future infrastructure improvements would ensure that the electrical system would have the capacity required to meet new demands under Alternative 1.<br><br>Approximately 85,000 linear feet of underground duct bank telecommunications infrastructure pathways would be required to support development under Alternative 1. The future data/communications fiber optic | approximately 7 percent less than Alternative 1.<br><br>Alternative 2 would involve the same hydrant fuel infrastructure improvements as Alternative 1.<br><br>Impacts to traffic at the gates were analyzed compared to the No Action Alternative; no significant queuing impacts at the gates would be expected under Alternative 2 with implementation of future improvements, including construction of Hollywood Gate. Traffic at the gates under Alternative 2 would be expected to improve when compared to the No Action Alternative. Improvements to the transportation infrastructure under Alternative 2 would be anticipated to maintain an acceptable level of service, and no significant adverse impacts to transportation infrastructure would occur.. |

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| | | system would originate from existing information transfer buildings B-1740 in Area I and B-10215 in Area II. These infrastructure improvements would ensure that the telecommunications system would have the capacity required to meet new demands under Alternative 1.<br><br>Natural gas demand under Alternative 1 would increase by approximately 1.6 trillion British thermal units. Approximately 21,000 linear feet of natural gas lines would be installed in the future to support development. Changes in demand would not be significant and the natural gas supply system would have the capacity required to meet new demands under Alternative 1.<br><br>A new hydrant fuel system would be required to support development under Alternative 1. Future construction would include 11,000 linear feet of 8-inch steel fuel lines and four 500,000-gallon (approximately 12,000-barrel each) tanks installed and connected to proposed flightline facilities for airframe use and interconnected with the existing system. Infrastructure improvements would ensure that the hydrant fuel system would have the capacity required to meet new demands under Alternative 1.<br><br>Alternative 1 would require the development of a completely new transportation system to support development within the Proposed Action area, including the future extension of Ellsworth Avenue from its current end at O'Bannon Road to Hollywood Boulevard. Feeder roads connected to the extended Ellsworth Avenue would also be constructed. An anticipated 75 percent of the 2,500 personnel expected to be added to Nellis AFB over the next decade would live off Installation, resulting in an increase in total | |

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| | | gate volume. Impacts to traffic at the gates were analyzed compared to the No Action Alternative; no significant queuing impacts at the Nellis AFB gates would be expected under Alternative 1 with implementation of the proposed improvements, including future construction of Hollywood Gate. Traffic at the gates under Alternative 1 would be expected to improve when compared to the No Action Alternative. | |
| Safety and Occupational Health | Under the No Action Alternative, there would be no change to safety conditions, including current explosive safety quantity-distance (ESQD) arcs, foreign object damage (FOD) hazards, and bird/wildlife aircraft strike hazard (BASH) concerns, in the ROI beyond baseline conditions. | Three portions of the Clear Zone (CZ) totaling 5.41 acres overlap the Proposed Action area and 4.98 acres of Accident Potential Zone (APZ) I overlap the Proposed Action area. Future construction would not occur within the CZ, and future construction within the APZ would be in compliance with existing guidance.<br><br>Future construction activities under Alternative 1, including those associated with Airfield/Industrial/Light Industrial functional use categories, would take place in close proximity to the airfield. Debris associated with future construction of new facilities in this area would have the potential to create additional FOD hazards. Future construction activities would be conducted in accordance with the Nellis AFB FOD Prevention Program, which would help to prevent and minimize FOD incidents. Therefore, no significant impacts to ground safety would be anticipated to occur with implementation of Alternative 1.<br><br>No changes to existing ESQD arcs would be anticipated to occur with implementation of Alternative 1. Should future construction include facilities that handle explosive materials and specified exposures, new ESQD arcs would be established in compliance with DAF regulations. | Impacts to safety and occupational health would be the same under Alternative 2 as Alternative 1. |

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| | | There would be no changes to existing flight safety procedures; therefore, no impacts to flight safety would be anticipated to occur with implementation of Alternative 1.<br><br>No BMPs or mitigation measures are recommended for impacts to safety and occupational health. | |
| Socioeconomics | Under the No Action Alternative, there would be no changes to the socioeconomic environment of the ROI beyond baseline conditions. | Alternative 1 would have the potential to result in short-term, beneficial impacts to income and employment in the ROI that would not be significant because of the temporary need for future construction personnel and the expenditures associated with implementing the Proposed Action. Alternative 1 would also have the potential for long-term, beneficial impacts to income and employment that would not be significant from creating a small number of jobs needed to support the new development.<br><br>A long-term, permanent, beneficial impact to housing availability on Nellis AFB would occur under Alternative 1 as a result of the construction of the dormitories.<br><br>Alternative 1 would not be anticipated to impact educational resources in the ROI.<br><br>No BMPs or mitigation measures are recommended for impacts to socioeconomics. | Impacts to socioeconomic resources under Alternative 2 would be largely the same as Alternative 1, albeit on a smaller scale. However, no dormitories would be constructed in the future, resulting in an increased demand for off-Installation housing as compared to Alternative 1. |

99 ABW = 99th Air Base Wing; AFB = Air Force Base; AFFF = aqueous film forming foam; B- = Building (as in B-224); BASH = Bird/Wildlife Aircraft Strike Hazard; BLM = Bureau of Land Management; BMP = best management practice; DAF = Department of the Air Force; ERP = Environmental Restoration Program; ESQD = explosive safety quantity-distance; FOD = foreign object damage; NDEP = Nevada Division of Environmental Protection; PBO = Programmatic Biological Opinion; PCBs = polychlorinated biphenyls; $PM_{2.5}$ = fine inhalable particles with diameters of 2.5 micrometers or smaller; ROI = Region of Influence; SGCN = species of greatest conservation need; SHPO = State Historic Preservation Officer; USFWS = US Fish and Wildlife Service