

**RECORD OF DECISION
FOR THE
F-35 FORCE DEVELOPMENT EVALUATION AND WEAPONS SCHOOL BEDDOWN
NELLIS AFB, NEVADA**

This document records the United States Air Force (Air Force) decision with regard to the F-35 Force Development Evaluation (FDE) and Weapons School (WS) Beddown at Nellis AFB in Nevada. This Record of Decision is based on the information, analysis, and public and agency comments presented in the Final Environmental Impact Statement (FEIS), as well as other factors.

This Record of Decision has been drafted in accordance with the regulations implementing the National Environmental Policy Act (NEPA), specifically Title 40 Code of Federal Regulations (CFR), Section 1505.2, *Record of decision in cases requiring environmental impact statements* (40 CFR § 1505.2). Specifically, this ROD:

- States the Air Force's Decision (page 11);
- Identifies all alternatives considered by the Air Force in reaching the decision (pages 6-7) and specifies the preferred and environmentally preferred alternative (page 7);
- Identifies and discusses the environmental consequences of the proposed action (pages 6-9); and
- Summarizes mitigation measures and programs/processes in place to address issues and assist in reducing the potential environmental impacts associated with the F-35 beddown (pages 9-11).

BACKGROUND

Based on decisions made by Congress, the Air Force will receive F-35 aircraft to supplement and replace legacy fighter aircraft like the F-16. The Air Force will receive the F-35A model designed for conventional takeoffs and landings on runways. Other variants have been designed for the U.S. Navy and Marine Corps.

Implementing the FDE program and WS represent essential elements in fielding the F-35 for combat. As such, the Air Force intends to implement this beddown as soon as feasible. The Air Force plans to begin the F-35 FDE program by fiscal year 2012 (FY12). The FDE program lasts as long as the aircraft remains in the Air Force inventory, repeatedly testing and evaluating the aircraft and its systems to ensure continued fulfillment of operational requirements. FDE also explores the use of new flight techniques and tactics for aircraft performance, supporting pilot development and training programs. By testing

capabilities of an aircraft in tactical situations, including air-to-ground, air-to-air, and electronic combat operations, FDE provides unique input on tactics to the WS and operational units.

The WS represents an essential activity also performed throughout the life of the aircraft. As established in AFI 11-415, the WS conducts graduate-level instructor courses in weapons and tactics employment. The WS offers academic courses and flight training on specific aircraft to qualified instructor pilots. Upon completion of WS courses, which include two weeks of combat training exercises, graduate officers return to their home units to provide advanced instruction to unit pilots on employing the aircraft for its mission. As currently planned under the Proposed Action, F-35 WS graduates from Nellis AFB would return to operational squadrons in FY17.

The ultimate goal of the F-35 development and deployment process is to provide Air Force operational units with a proven, tested aircraft, as well as tactics and operational guidance to meet mission requirements. The purpose, therefore, of the Proposed Action is to implement the F-35 FDE program and WS. The F-35 development and manufacturing process has been initiated and evaluation of the aircraft is currently taking place. The goal of the Air Force is to field the most up-to-date aircraft with the most highly trained pilots through the lifecycle of the weapons system. This is achieved through the FDE program and the WS for the aircraft and pilots, respectively.

For the Air Force, Air Combat Command (ACC) is responsible for implementing FDE and WS programs. These programs are best performed at a location that has infrastructure to support the full spectrum of testing and training activities. Nellis AFB is the location of the Air Force's only fighter WS. Nellis AFB, and its associated Nevada Test and Training Range (NTTR) and airspace, represent the only ACC Major Range and Test Facility Base (MRTFB) that meets the unique requirements for the F-35 FDE program and WS. No other base, or combination of bases, offers the specific physical or organizational infrastructure necessary to support the unique requirements of the F-35 FDE and WS programs. Nellis AFB and its ranges fulfill the F-35 testing and training program needs. Essentially, the F-35 is considered additive to the on-going Air Force fighter FDE and WS programs at Nellis AFB.

PUBLIC INVOLVEMENT

The public involvement process and Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) and agency consultation accomplished by the Air Force are discussed in the Final EIS (Section 7.0 and Appendix A). The major elements of public involvement are:

- The public involvement process began with the publication of the Notice of Intent to prepare an EIS in the *Federal Register* on August 23, 2004. After public notification in newspapers and public service announcements on radio stations, five scoping meetings were held September 13 through September 17, 2004, at the following Nevada locations: Carson City, Alamo, Pioche,

Pahrump, and Las Vegas. A total of 40 people attended the meetings and provided comments. By the end of the scoping period, October 1, 2004, nine comments and one agency letter were received. All relevant comments were considered in the development of the Draft EIS.

- The Notice of Availability of the Draft EIS was published in the *Federal Register* on April 4, 2008, beginning the 45-day public review period. Public hearings were held April 22 through April 24, 2008, in these Nevada locations: Las Vegas, Caliente, and Alamo. The closing of the comment period was extended from May 19, 2008 to May 22, 2008, by request of the U.S. Environmental Protection Agency. Issuance of a Notice of The Availability of this document was announced in the *Federal Register* on May 13, 2011 (Vol. 76, Number 93) [Notices] [Page 28029]. All relevant comments received during the public review and comment period were reviewed by the Air Force and considered in the preparation of the Final EIS. The Nevada public hearing locations were selected for the following reasons: interest in the proposal remained high in Las Vegas and Alamo, and both form part of the affected area; Alamo and Caliente, as indicated by findings in the analysis, were representative communities central under the MOA airspace – both communities revealed interest in the proposal; Pahrump lies outside the affected airspace and showed low levels of interest, and Pioche reflected negligible public interest as well. Seven people attended the three hearings. While none of the attendees provided oral or written comments, three of the attendees informally expressed opposition to existing and proposed aircraft overflights, suggesting a decrease in home values and quality of life.
- The Air Force received comment letters from three private individuals and from the following Nevada offices and federal agencies: Department of Comprehensive Planning, Department of Air Quality Management, Nevada State Historic Preservation Office, City of North Las Vegas, U.S. Department of the Interior, and U.S. Environmental Protection Agency (USEPA). Comments were also received from the Consolidated Group of Tribes and Organizations' Document Review Committee.

The final EIS reflected comments received during the public comment period, factual corrections, and improvements and/or modifications to the analyses presented in the Draft EIS. While the final EIS was, in large part, the same as the draft EIS, modifications included updated proposed construction projects and start dates, as well as a revised timeframe for the F-35 beddown. Also modified in the Final EIS was a re-evaluation of projected noise impacts. Since the 2008 publication of the Draft EIS, characterization of the noise generated by the F-35 has been refined and several supplemental noise analyses have been developed. The supplemental noise impact analyses now include speech interference, sleep disturbance, and potential hearing loss. Due to the new noise data, revised projected noise contour bands were also produced and potential impacts presented in the relevant resource sections. Air quality evaluations were also updated to reflect changes in proposed construction projects and start dates, the F-35 revised beddown phasing, and the outcome of the Clean Air Act General Conformity Determination. None of the

modifications made to the Final EIS resulted in substantive changes to the Proposed Action and the conclusions presented in terms of environmental consequences and impacts remain consistent with those presented in the Draft EIS.

AGENCY COORDINATION AND CONSULTATION

Interagency and Intergovernmental Coordination for Environmental Planning: NEPA and the Council on Environmental Quality (CEQ) regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the IICEP process, concerned federal, state, and local agencies (such as the USEPA, US Fish and Wildlife Service, Bureau of Land Management, Nevada Division of Environmental Protection, Nevada State Historic Preservation Officer, and Clark County Department of Air Quality and Environmental Management (DAQEM)) were notified and allowed sufficient time to evaluate potential environmental impacts of a Proposed Action.

General Conformity Determination: The Air Force made positive conformity determinations for the emissions of Nitrogen Oxide (NO_x), a precursor of ground-level Ozone, and Carbon Monoxide (CO). For NO_x, the Clark County DAQEM has agreed in writing to include Air Force F-35 emissions in any State Implementation Plan (SIP) submittal to the USEPA (October 20, 2009). DAQEM and the State of Nevada have issued a written commitment to include the NO_x emissions in the maintenance implementation plan that DAQEM and the State intend to submit pursuant to the provisions of 42 USC § 7505a in connection with a redesignation to attainment request under 42 USC § 7407(d) (November 16, 2009). Based on this commitment, the Air Force made a positive conformity determination with respect to NO_x per the provisions of 40 CFR 93.158(a)(5)(i)(B). With respect to CO, Clark County DAQEM has informed the Air Force that it included emissions from this F-35 project in its area-wide modeling that has already been submitted to USEPA as part of DAQEM's Maintenance Plan for CO. DAQEM observed that the F-35 project's emissions are very small in proportion to the total CO emissions inventory in the Las Vegas Valley, and concluded that no additional local air quality modeling or hot-spot analysis is necessary. Therefore, a positive conformity determination for CO may be made on this basis in accordance with 40 CFR Part 93.158(a)(4)(ii).

Government-to-Government Consultation: As part of the NEPA process, 37 members of the Nellis AFB Native American Program (NAP) who represent 19 tribes with historical ties to the land in the vicinity of NTTR were notified at the initiation of the project as part of an ongoing government-to-government consultation between Nellis AFB and these tribes. The Nellis AFB NAP Manager coordinated consultation between the Air Force and the tribes. These 19 tribes have aligned themselves together to form the Consolidated Group of Tribes and Organizations (CGTO). This group is formed by officially appointed representatives who are responsible for representing their respective tribal concerns and perspectives. The CGTO elects members to a Document Review Committee (DRC) who review numerous types of environmental documents and cultural resources reports, coordinate with tribal

members, and provide comments to represent the members of the Nellis AFB NAP. The DRC was involved in the review of the Draft EIS and provided their comments to the Air Force.

ALTERNATIVES ANALYZED IN THE EIS

The EIS analyzed two alternatives, the Proposed Action and No-Action. As noted above, only Nellis AFB and its associated range met the requirements for this beddown.

Proposed Action

The Proposed Action involves the following.

- Base 36 F-35 aircraft at Nellis AFB with 12 aircraft for the FDE program and an additional 24 for WS training; as a phased program reliant on manufacturing progress and other elements of F-35 deployment, the first aircraft would arrive in 2012 and the last in 2020.
- Implement the F-35 FDE program at the base in 2012 and implement the WS in 2015.
- Construct, demolish, or modify a variety of base facilities to support the F-35 programs, particularly along the flightline.
- Conduct an additional 17,280 annual airfield operations at Nellis AFB by 2020, and an additional 51,840 annual sortie-operations in NTTR.
- Practice ordnance delivery on approved targets and release of flares in approved airspace.

No-Action Alternative

Under the no-action alternative, no F-35 FDE program and WS beddown would occur at Nellis AFB and no on-base construction would be implemented or personnel increases occur. In addition, the F-35 FDE program and WS would not use NTTR.

Alternatives Considered But Not Carried Forward

Several alternatives were considered but not carried forward for detailed analysis; none of these alternatives met beddown requirements for the FDE and WS, nor did they fulfill the need for the Proposed Action. Establishing the F-35 FDE program or WS at a base other than Nellis AFB or at a range other than NTTR might be possible, but it would not represent a reasonable alternative. Other bases would need to make changes to their infrastructure, organization, existing programs, and probably, reconfigure/create new airspace and ranges in order to meet the specific requirements of an F-35 FDE program and WS. Such changes would conflict with the overall basing consideration regarding minimizing change by employing existing assets. To provide the integrated battlespace environment and level of training exercises important to the FDE program and WS, the Air Force would need to make wholesale changes to the ranges and the exercises held there. Basing the F-35 FDE program and WS at a

base other than Nellis AFB would require changes to that base, its organization, and its associated ranges and airspace. This would:

- Require additional time to establish the FDE program and WS, further delaying the entire F-35 program and potentially diminishing national defense capabilities;
- Substantially increase the costs of implementing the F-35 program beyond that allocated by Congress and approved by the President; and
- Likely result in more extensive actions that could have effects on the environment greater than those potentially occurring from the Proposed Action.

No location or combination of locations other than Nellis AFB would meet the specific requirements for basing the F-35 FDE program and WS. No reasonable action alternative to Nellis AFB exists, because none would fulfill the purpose and need for the proposal.

Preferred and Environmentally Preferred Alternatives

CEQ regulations require the proponent to identify the preferred alternative. The Air Force has defined the Proposed Action as the preferred alternative. CEQ regulations also require that an environmentally preferable alternative be identified. The no-action alternative would not substantially impact the environment in the short-term, and for NEPA purposes, it would be the environmentally preferable alternative in that it has the least potential for adverse environmental consequences.

ENVIRONMENTAL CONSEQUENCES

The findings in this EIS indicate that the proposed F-35 beddown would result in either negligible effects or would not change current environmental conditions at Nellis AFB or in the NTTR for airspace and aircraft operations, safety, recreation, soils, water, biological resources, cultural resources, or hazardous materials and waste. Each of the resources potentially affected by the proposal is presented below; resources where current environmental conditions would not change are not included in the discussion.

Airspace and Aircraft Operations: In terms of airspace and aircraft operations, there would be a total increase of 20 percent to airfield operations; however, no change to airfield airspace structure or operational procedures would occur. No impacts to civil and commercial aviation airspace and no changes in departure and arrival routes would be required to accommodate the F-35. In the NTTR, the F-35s would fly approximately 51,840 annual sortie-operations representing 17 to 26 percent of the 200,000 to 300,000 sortie-operations that now occur annually. This use would negligibly affect environmental conditions in the NTTR. During air combat maneuvering, the F-35 will fly supersonic within NTTR airspace at altitudes authorized for supersonic flight; most of these operations would occur above 25,000 feet mean sea level. The F-35 would deliver ordnance only on existing, previously disturbed targets. No new areas would be affected. The F-35 would also use flares as defensive countermeasures, but only in

areas already subject to and approved for such use. Overall, the activities proposed for the F-35 at the NTTR would be consistent with current activities and would not significantly affect the environment.

Safety: Additional munitions facilities and expansion of the live ordnance loading area on base would be constructed to support an increase in airfield operations; this would enhance safety. No other changes in safety at Nellis AFB or NTTR are anticipated. Current operations and maintenance procedures would remain in place, fire and crash response would not be affected, and munitions use and handling procedures would remain consistent with existing rules and regulations. No anticipated increase in the rate of bird/wildlife-aircraft strike hazards or aircraft mishaps above baseline levels would occur.

The proposed personnel increase would not have an adverse impact on local or regional demand on recreational/community services, utilities, or housing. Soils, water, biological, and cultural resources would be negligibly affected and would not introduce any adverse impacts to the environment. Hazardous materials and waste management procedures already established for other similar aircraft would continue to be followed. If new materials or wastes are generated, then Air Force procedures would be established to contain and properly dispose of them.

Air Quality: Emissions of air pollutants into the area around Nellis AFB would increase but would not significantly impact local air quality. Potential sources of emissions at Nellis AFB would include aircraft operations, facility construction, maintenance activities, refueling, as well as private and government vehicle travel. *De minimis* levels would be exceeded for carbon monoxide (CO) and nitrogen oxide (NO_x); however, Clark County's DAQEM has affirmed that they will include the added NO_x emissions into their Ozone SIP revision and that the CO exceedances have already been accounted for in the Clark County CO SIP. These exceedances, therefore, would not preclude the county from attaining and maintaining National Ambient Air Quality Standards. While greenhouse gas (GHG) emissions would also increase with implementation of the Proposed Action, they would not be expected to produce a significant environmental effect on global GHG concentrations.

Noise: The Proposed Action would generate a 42 percent increase (an additional 7,562 acres) in areas exposed to a day-night average sound level (DNL) of 65 decibels (dB) and greater by the year 2020. Twenty representative locations would experience increases of between 1 and 3.4 dB DNL in noise levels; populations in on-base dormitories would continue to be exposed to potential hearing loss (PHL) in the 80 to 85 dB DNL contour bands; daytime speech interference events when windows are closed would occur 1 to 3 more times an hour; when windows are open, events would increase between 2 and 3 more times per hour; there would be an increase in probability of sleep disturbance between 1 and 7 percent with windows closed and 1 and 10 percent with windows open; and noise complaints and annoyance levels in the Nellis AFB vicinity may increase. However, while there would be noticeable increases to the population exposed to noise levels greater than 65 dB DNL or greater, no long-term impacts to hearing or health are anticipated.

Within NTTR, subsonic noise levels would continue to range from less than 45 to 65 dB DNL for the 200,000 and 300,000 sortie scenarios. Supersonic noise levels would continue to range from less than 45 to 57 dB CDNL (or the day-night sound level computed for areas subject to sonic booms) under the 200,000 and 300,000 scenarios. All other supersonic-authorized airspace would be subject to increases of one dB CDNL or less and less than one sonic boom per month.

Land Use: Areas affected by noise in the 65 dB DNL contour band and greater would decrease when compared to the land use contours established by Clark County Department of Planning contours. In addition, when compared to Clark County Department of Planning contours, all land use categories affected by noise levels 65 dB DNL and greater would experience a decrease under the proposed action. The only exceptions are land uses in the commercial (experiencing less than a 1 percent increase) and military (increases by about 15 percent) categories. The greatest decrease is seen in the residential acreage where there would be 1,280 fewer acres affected by noise levels greater than 65 dB DNL and for public lands that would reduce by 1,046 acres, or 38 and 31 percent, respectively.

Environmental Justice and Protection of Children: About 40,703 people would be affected by noise levels within 65 dB DNL or greater contour bands, an increase of 574 over baseline levels. Of this total, 23,469 represent minority populations, an increase of 203 from baseline conditions; low-income populations would increase from 5,406 to 5,460 (or by 54 individuals). While there would be increases in the number of minority and low-income populations exposed to noise levels of 65 dB DNL and greater; these increases would not introduce significant impacts to these populations. Schools would continue to be exposed to noise levels of 65 dB DNL or greater; however, safety and health risks to children would not increase.

Socioeconomics: In terms of socioeconomic impacts, no significant negative effects are anticipated. There would be a net increase of 412 active duty personnel at Nellis AFB by 2020 (a 3.4 percent increase over 2006); this would represent nearly \$28.3 million in additional payroll disbursements.

Cumulative Impacts: The F-35 beddown at Nellis AFB, when considered cumulatively with past, present, and/or future actions, would not have an adverse and/or significant impact to noise; safety; land use and recreation; socioeconomics and infrastructure; environmental justice and protection of children; biological resources; or hazardous materials and waste. The analysis indicates a potential impact on airspace and aircraft operations; air quality; soils and water; and cultural resources; however, when considered cumulatively with other actions, the impacts would not be significant.

MITIGATION MEASURES AND MANAGEMENT ACTIONS

Reduction of the potential for environmental impacts represents an important part of NEPA.

CEQ regulations (at 40 CFR §1508.20) define mitigation as follows:

1. **Avoiding** the impact altogether by not taking a certain action or parts of an action.
2. **Minimizing** impacts by limiting the degree or magnitude of the action, and its implementation.
3. **Rectifying** the impact by repairing, rehabilitating, or restoring the affected environment.
4. **Reducing or eliminating** the impact over time by preservation and maintenance operations during the life of the action.
5. **Compensating** for the impact by replacing or providing substitute resources or environments.

Nellis AFB conducts ongoing efforts designed to achieve reductions in the effect the base has on the community and to work with groups or members of the community to address issues. All of these efforts, including those highlighted below and other operational mitigations which are part of the EIS, would continue to apply following the F-35 beddown. By continuing these efforts, Nellis AFB would reduce the potential impacts associated with the F-35 beddown.

Fugitive Dust Controls: Nellis AFB will mitigate fugitive dust emissions through the Western Regional Air Partnership (WRAP) fugitive dust handbook (WRAP 2004) guidelines. The WRAP guidelines, which were developed for use in western states, assume standard dust mitigation best practices activities of fifty percent from wetting.

Noise Abatement Program: Nellis AFB's noise abatement program focuses on reducing noise over residential areas surrounding the base. By employing this program, Nellis AFB will continue to reduce noise effects on the general populations, as well as affected minority and low-income populations.

Procedures used in the Noise Abatement Program include:

- Restricting nighttime flying activities and routes to have the least effect on populated areas;
- Modifying approach and departure procedures to increase altitude at various points along the arrival and departure paths;
- Using northbound departures to the extent possible during evening hours (10 p.m. until 8 a.m.) and for all aircraft carrying live ordnance;
- Minimizing unrestricted afterburner take-offs on weekends or holidays, or before 10 a.m. on weekdays; and
- Avoiding practice approaches before 9 a.m. daily.

The Air Force also will continue to evaluate the noise generated by the F-35 at Nellis AFB. Should further feasible noise abatement procedures be identified at the time of the F-35 beddown, the Air Force would assess and potentially implement them.

Air Installation Compatible Use Zone Program: The Air Installation Compatibility Use Zone Program (AICUZ) is an ongoing program for all Air Force airfields. It is designed to assist the adjacent community by recommending land use planning that ensures safe aircraft operations and minimizes noise impacts to the community. Elements of the AICUZ program include:

- Maintaining a cooperative, open dialogue between the base and the community for land use planning;
- Offering assistance to the community in planning for changes in aircraft operations and noise; and
- Developing noise contours around the base that can be used by the community for zoning ordinances.

Nellis AFB has conducted the AICUZ program for almost three decades. Nellis AFB continues to work with the Clark County's Department of Comprehensive Planning to recommend concepts for land use plans and zoning ordinances. Clark County has incorporated the AICUZ recommendations as an integral part of their comprehensive planning process in order to reduce the potential for conflicts between aircraft operations at Nellis AFB and development in the nearby community.

Community Outreach Program: Nellis AFB has been a part of the Las Vegas metropolitan area community for over 60 years. Like any major institution in a community, being a good neighbor is a top priority. At Nellis AFB, this has resulted in a public outreach program through such events as air shows and restoration advisory board meetings. To augment specific outreach efforts, Nellis AFB has expanded its community interaction program to provide more emphasis on the minority and low-income populations around the base. This effort aids these segments of the community in understanding the function and importance of Nellis AFB, as well as providing a focused opportunity for minority and low-income populations to work with the base on issues concerning them. NTTR range managers meet with communities and land management offices located under the training airspace to provide information and answer questions regarding noise and military training operations in the airspace above their communities and recreation areas.

Native American Program (NAP): Nellis AFB has a comprehensive NAP and conducts substantial government-to-government relations with Native Americans affected by activities at the base and in the NTTR. This ongoing interaction program addressed the F-35 proposal and EIS through:

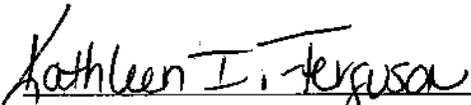
- Direct notification of the initiation of the EIS process and invitation to scoping meetings to 37 members of the Nellis AFB NAP who represent 19 tribes with historic ties to the land in the NTTR vicinity;
- Direct distribution of copies of the draft EIS to members of the Consolidated Group of Tribes and Organizations' Document Review Committee to ensure their awareness of the proposal and its potential effects, and to receive comments from them. AF responses to CGTO comments were incorporated and responded to in the FEIS.

Nellis AFB's NAP and associated government-to-government relations would continue should the F-35 beddown occur. Any future issues from the Native Americans regarding the F-35 would be addressed through this program.

The EIS used public involvement to identify impacts and assess the environmental consequences associated with the F-35 FDE and WS beddown at Nellis AFB. Measures currently implemented (and described above) to minimize the noise impacts around Nellis AFB will be applied to F-35 operations. The Air Force is taking all practicable means to avoid or minimize harm from the Proposed Action. Should additional prudent measures become available, the Air Force will implement them to the maximum extent possible, commensurate with cost, mission capability, and flight safety. The Air Force is committed to being a good neighbor and will continue to work with the Clark County's Comprehensive Planning Commission to evaluate land use recommendations around Nellis AFB. This coordination will aid in the reduction of noise impacts on the surrounding community.

DECISION

After considering the potential environmental consequences of the Proposed Action and no-action alternative, as well as other factors relative to national defense, including current military operational needs, the Air Force has decided to select the Proposed Action for F-35 FDE and WS beddown at Nellis AFB. The Preferred Alternative includes all practicable means to avoid, minimize, or mitigate environmental harm.



Kathleen I. Ferguson, P.E.
Deputy Assistant Secretary of the Air Force
(Installations)



Date