



Federal Aviation Administration

Finding of No Significant Impact (FONSI) and Record of Decision (ROD)

for the Las Vegas (LAS) Metroplex Project

July 2020

I. INTRODUCTION

This document serves as the Federal Aviation Administration's (FAA) Finding of No Significant Impact and Record of Decision (FONSI/ROD) for the Las Vegas Metroplex (LAS Metroplex) Project, July 2020, attached hereto and incorporated by reference. The FONSI/ROD has been prepared in compliance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code (U.S.C.) Section 4321 et seq.), implementing regulations issued by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations (CFR), parts 1500-1508), and FAA Order 1050.1F, Environmental Impacts: Policies and Procedures ("FAA Order 1050.1F"). This FONSI/ROD is also used by the FAA to demonstrate and document its compliance with the several procedural and substantive requirements of aeronautical, environmental, programmatic, and other statutes and regulations that apply to FAA decisions on proposed actions. This FONSI/ROD is based on the information and analysis contained in the Final Environmental Assessment (EA), the comments received on the Final EA, as well as the FAA's response to such comments. Those comments and responses are attached to this FONSI/ROD as an Appendix.

Furthermore, this FONSI/ROD:

- Documents the FAA's finding that the LAS Metroplex Project will not have significant environmental impacts and explains the basis for that finding; and
- Approves certain Federal actions associated with the implementation of the Project. Implementation of the Project will not result in airport-related development, land acquisition, construction, or other ground disturbance activities.

In approving the LAS Metroplex Project, the FAA has considered 49 U.S.C. § 40101(d)(4), which gives the FAA various responsibilities and holds it accountable for controlling the use of navigable airspace and regulating civil and military operations in that airspace in the interest of safety and efficiency. Additionally, consideration has been given to 49 U.S.C. §§ 40103(b)(1) and 40103(b)(2), which authorize and direct the FAA Administrator to develop plans and policy for the use of the navigable airspace; assign by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace; and prescribe air traffic rules and regulations governing the flight of aircraft for the navigation, protection, and identification of aircraft, and the protection of persons and property on the ground. These regulations also provide for the efficient utilization of the navigable airspace, including rules as to safe altitudes of flight and rules for the prevention of collisions between aircraft, between aircraft and land or water vehicles, and between aircraft and airborne objects.

Furthermore, the FAA has given careful consideration to the aviation safety and operational objectives of the LAS Metroplex Project in light of the various aeronautical factors and judgments presented, the need to enhance efficiency of the national air transportation system, and the potential environmental impacts of the LAS Metroplex Project.

II. BACKGROUND

The FAA is in the process of implementing the Next Generation Air Transportation System (NextGen), the FAA's plan to modernize the National Airspace System (NAS) through 2025. NextGen is a complex program intended to develop and implement new technologies while integrating existing technologies and adapting the air traffic management system to a new way of operating. NextGen represents an evolution from an air traffic control system that is primarily ground-based to a system that is satellite-based, thus enabling greater efficiency. To achieve NextGen goals, the FAA is implementing new Area Navigation (RNAV) and Required Navigation Performance (RNP) air traffic routes and instrument procedures (RNAV Standard Instrument Departures [SIDs], Standard Terminal Arrivals [STARs], and Standard Instrument Approach Procedures [SIAPs]) around the country that use emerging technologies and aircraft navigation capabilities. The implementation of RNAV and RNP procedures enables the use of other Performance Based Navigation (PBN) technology in the NAS, and facilitates more efficient procedures such as an Optimized Profile Descent (OPD).

The Metroplex initiative is considered a mid-term implementation step in the overall process of transitioning to the NextGen system. The FAA intends to design and implement RNAV procedures that will take advantage of the technology readily available in the majority of aircraft as part of the Metroplex initiative. The Metroplex initiative specifically addresses airspace congestion, airports in close geographical proximity, and other limiting factors that reduce efficiency in busy Metroplex airspace. Efficiency is improved by expanding the

implementation of RNAV-based standard instrument procedures and connecting the routes defined by the standard instrument procedures to high- and low-altitude RNAV routes. Efficiency would also be increased by taking advantage of RNAV to maximize the use of the constrained airspace in congested Metroplex environments.

The LAS Metroplex Project is intended to address specific issues related to the efficient flow of traffic in and out of the LAS Metroplex. A "Metroplex" is a geographic area that includes several commercial and general aviation airports in close proximity serving a large metropolitan area.

III. PROPOSED ACTION

The Proposed Action evaluated in the Final EA would implement optimized RNAV SID and STAR Air Traffic Control (ATC) flight procedures and RNP approaches, where feasible, in the LAS Metroplex. In addition, the Proposed Action includes preferred arrival/departure routes, a conventional STAR, conventional SIDs, ILS approaches, RNAV visual approaches, and T-routes. The Proposed Action would improve the predictability and segregation of routes, as well as increase flexibility in providing air traffic services. For a more detailed summary of the Proposed Action, see Section VI below and Chapter 3 of the Final EA.

The Proposed Action is a combined package of interrelated proposed ATC flight procedures. This group of proposed ATC procedures were considered and evaluated in combination with one another to determine whether they would meet the project's Purpose and Need. The FAA considered multiple versions of preliminary designs before developing final designs of the proposed procedures. Several versions of preliminary designs were eliminated from further consideration because they failed to meet the project's Purpose and Need.

Implementation of the Proposed Action would not increase the number of aircraft operations at the Study Airports. Furthermore, the Proposed Action does not involve physical construction of any facilities such as additional runways or taxiways, and does not require permitting or other approvals or actions on a state or local level. Therefore, the implementation of the proposed changes to ATC procedures in the LAS Metroplex would not require any physical alterations to environmental resources identified in FAA Order 1050.1F.

IV. PURPOSE AND NEED FOR THE PROPOSED ACTION

The LAS Metroplex Project consisted of a Study Team phase, which analyzed the LAS Metroplex operational challenges and explored opportunities to optimize air traffic procedures therein. Although RNAV-based SIDs and STARs have been in effect in the LAS Metroplex for the last two decades, the Study Team concluded that these procedures could be improved to increase efficient use of the airspace. The Study Team issued its final report dated November 2015 on November 24, 2015, and the Study Team materials reflect three key factors as causes of inefficiencies in the LAS Metroplex:

- Lack of predictable standard routes defined by procedures to/from airport runways from/to en route airspace;
- Complex converging and dependent route procedure interactions; and

- Lack of flexibility in the efficient transfer of traffic between the en route and terminal area airspace.

These three factors demonstrate the need for the Proposed Action.

The purpose of the Proposed Action is to take advantage of the benefits of PBN by optimizing RNAV procedures that would help improve the efficiency of the airspace in the LAS Metroplex. The Proposed Action would address the three key factors causing the inefficiencies in the airspace and improve the efficiency of air traffic operations through improved flexibility in transitioning aircraft, enhanced segregation between aircraft, and improving the predictability of air traffic flow. Optimizing RNAV procedures would also comply with direction issued by Congress in the Modernization and Reform Act of 2012.

V. FAA AGENCY ACTIONS AND APPROVALS

The FAA actions, determinations, and approvals necessary for this project to proceed require the FAA to:

- Undertake air traffic controller training
- Publish new or revised STAR flight procedures
- Publish new or revised SID flight procedures
- Publish new or revised transitions
- Publish new or existing conventional procedures
- Publish new or amended approaches
- Publish new T-routes
- Approve new RNAV visual approaches

VI. ALTERNATIVES

The following provides a summary of the alternatives development process and alternatives considered. Further details are available in Chapter 3 of the Final EA.

Identification and Evaluation of Potential Alternatives Prior to the NEPA Analysis – In July 2015, the LAS Metroplex Study Team began work to define operational problems in the LAS Metroplex and to identify potential solutions. The Study Team included experts on the Air Traffic Control (ATC) system for the LAS Metroplex. The work was intended to provide a guide for later design efforts by the Design and Implementation (D&I) Team. The Study Team held several meetings with local facilities (e.g., ATC), airspace users (e.g., pilots), and aviation industry representatives to learn more about the challenges of operating in the LAS Metroplex. These meetings helped identify operational challenges associated with existing procedures and potential solutions that would increase efficiency in the LAS Metroplex airspace. Initially, the Study Team identified more than 140 potential issues related to existing procedures in the LAS Metroplex. As the Study Team identified additional issues, the issues were grouped together in generalized causal factor categories based on similarity. Ultimately, 97 issues were worked on by the Study Team, and other issues that required additional coordination were deferred to the Design Phase. Forty-eight of the 145 identified issues were not addressed by the Study Team because no performance-based navigation (PBN) or airspace solution could be identified or because the identified solutions fell outside the scope of the Metroplex process. For the remaining issues, the Study Team identified several PBN solutions that resulted in increased efficiency in the LAS Metroplex. The solutions proposed

were conceptual or notional in nature and did not include a detailed technical assessment, which was reserved for the D&I Team to conduct.

Following completion of the Study Team's Final Report, the D&I Team began work on the procedure designs in January 2017. First, the Study Team proposals were prioritized based on complexity, interdependencies with other procedures, and degree of potential benefit to the Metroplex. The D&I Team then divided into workgroups to further develop and refine the Study Team proposals into preliminary designs. Finally, the preliminary designs were brought to the whole D&I Team for review and modification, if necessary. In developing the proposed procedures, the D&I Team was responsible for following regulatory and technical guidance as well as meeting criteria and standards in three general categories: RNAV design criteria and Air Traffic Control regulatory requirements, operational criteria, and safety factors.

Alternatives Analyzed in the Draft EA – To ensure that procedures included in the Proposed Action were viable, the D&I Team undertook validation exercises that further refined the procedures. The D&I Team relied on stakeholder input, community engagement, design solution tools (e.g., design and testing software), and the criteria described above to meet several final design milestones. Many procedures included in the Proposed Action underwent several iterations as they were refined to meet safety and efficiency requirements. For example, the proposed GIDGT and RATPK SIDs, which would replace the current STAAV and TRALR SIDs, went through multiple iterations before being finalized and brought forward in the Draft EA as part of the Proposed Action Alternative. See Section 3.1.2.2 of the Final EA. The Proposed Action in the Draft EA, as corrected by the *Correction to the Draft Environmental Assessment for the Las Vegas Metroplex Project*, dated December 6, 2019 (Correction Document),¹ consisted of 29 SIDs, STARs, and preferred arrival/departure routes, as well as five new RNAV (RNP) approaches, two amended RNAV (GPS) approaches, and three amended ILS approaches. The Proposed Action described in the Draft EA also included five new T Routes (low altitude [below 18,000 feet MSL] RNAV routes) for use within the terminal and en route environments to enhance the safety and efficiency of primarily smaller aircraft transitioning through the LAS Metroplex airspace.

Under the No Action Alternative in the Draft EA, the FAA would maintain existing arrival/departure procedures. The related routes and air traffic flow in use in the LAS Metroplex as of 2017 (representing existing conditions) would remain largely the same under the No Action Alternative.² Some procedure modifications and/or cancellations independent of those recommended as part of the LAS Metroplex Project are intended to be implemented prior to the Proposed Action to deal with specific issues separate from this Project. Existing procedures with expected modifications are listed on the FAA's Instrument Flight Procedure Gateway website. Details related to changes to procedures were collected and defined for purposes of the No Action Alternative.

Alternatives Analyzed in the Final EA – The Proposed Action would implement air traffic procedures to enhance efficient handling and movement of air traffic, while maintaining

¹ The description and analysis of the Proposed Action Alternative in the Draft EA, dated November 18, 2019, inadvertently omitted a proposed new departure procedure at McCarran International Airport. The Correction Document corrected this error.

² Radar data obtained from the FAA's Performance Data Analysis and Reporting System (PDARS) identified 447,403 IFR-filed flights to and from the Study Airports between November 1, 2016 and October 31, 2017. This data was collected immediately prior to commencing modeling activities for this Environmental Assessment.

safety, into and out of the LAS Metroplex airspace. The Proposed Action contains 28 SIDs and STARs Air Traffic Control (ATC) procedures:

- Two new conventional SIDs
- Four new conventional STARs
- Nine new RNAV SIDs
- Ten new RNAV STARs
- Two existing conventional SIDs
- One existing conventional STAR

In addition to SIDs and STARs, the Proposed Action includes existing preferred arrival/departure routes, five new RNAV (RNP) approaches, four amended RNAV (GPS) approaches, five new RNAV visual approaches, and three amended ILS approaches. The Proposed Action also includes five new T Routes (low altitude [below 18,000 feet MSL] RNAV routes) for use within the terminal and en route environments to enhance the safety and efficiency of primarily smaller aircraft transitioning through the LAS Metroplex airspace.

The Proposed Action considered in this study would implement optimized ATC procedures. The primary components of the Proposed Action are standard instrument arrival and departure procedures redesigned to more efficiently serve the LAS Metroplex Airports and to (1) improve the flexibility in transitioning traffic between en route and terminal area airspace and between terminal area airspace and the runways, (2) improve the segregation of arrivals and departures in terminal area airspace and en route airspace, and (3) improve the predictability of air traffic flow for traffic transitioning between en route and terminal area airspace and between terminal area airspace and the runways. The optimized air traffic procedures would also provide vertical navigation, allowing the aircraft to climb to or descend from cruise altitude into the LAS Metroplex area with reduced pilot-controller communications and fewer inefficient level flight segments. Chapter 3 of the Final EA provides details on the Proposed Action.

Implementation of the Proposed Action would not require any ground disturbance or development of facilities, nor would it increase the number of aircraft operations in the LAS Metroplex airspace when compared to the No Action Alternative.

The Proposed Action Alternative discussed in the Final EA incorporates the following changes since the release of the Draft EA and Correction Document:

- Revision of the proposed RNP approach to runway 19R at LAS (KLAS RNAV (RNP) Z RWY 19R)
- Addition of a proposed modification to an existing RNAV GPS approach to runway 19R at LAS (KLAS RNAV (GPS) RWY 19R)
- Addition of a proposed modification to an existing RNAV GPS approach to runway 19L at LAS (KLAS RNAV (GPS) RWY 19L)
- Addition of five proposed new RNAV Visual (special) approaches at LAS (2 to runway 19R, 2 to runway 19L, and 1 to runway 08R)
- Revision of the flight tracks associated with the proposed GAMES procedure to better represent where the aircraft are expected to be vectored to blend with the proposed KLAS COKTL and RNDZ STARs

These changes are discussed in more detail below, and they are reflected in changes to the following portions of the Final EA: Section 3.2.2, Proposed Action Alternative; Table 3-3, Proposed Action Approaches; Section 5.6, Energy Supply (Aircraft Fuel); Section 5.7, Air Quality; Appendix G, Las Vegas Metroplex Design and Implementation Team Final Report; and Appendix I, Las Vegas Metroplex Noise Technical Report (Section 5.4 and Appendices 4-7).

KLAS RNAV (RNP) Z RWY 19R. The proposed RNP approach to runway 19R at LAS (KLAS RNAV (RNP) Z RWY 19R) was revised due to the FAA's updates to approach criteria implemented after the original design was developed. The new criteria required the FAA's Design and Implementation Team to redesign the RNP approach to Runway 19R. The redesign consisted of small changes, between the MOBBB and CEGIL waypoints: an approximately 850-foot lateral shift to the northwest and an increase in altitude of 200 feet at MOBBB. For more information, see the design sheets for KLAS RNAV (RNP) Z RWY 19R in Appendix G. All flight tracks would remain within historic flight tracks. Therefore, no new areas would be overflowed. The results of noise modeling (incorporated in Appendix I) show that the revised proposal would not result in significant or reportable noise increases. These changes would not have significant impacts in the other environmental impact categories.

KLAS RNAV (GPS) RWY 19R. The proposed modification to the existing KLAS RNAV (GPS) RWY 19R approach would match the glideslope of the revised proposed RNP approach to runway 19R. This change would raise the altitudes and adjust the lateral path slightly. Like the existing approach, the modified approach would conflict with Nellis Air Force base operations and would only be usable in extraordinary situations. For more information, see the design sheets for KLAS RNAV (GPS) Y RWY 19R in Appendix G. All flight tracks would remain within historic flight tracks. Therefore, no new areas would be overflowed. The proposed modification would not result in significant or reportable noise increases nor significant impacts in the other environmental impact categories.

KLAS RNAV (GPS) RWY 19L. The proposed modification to the existing KLAS RNAV (GPS) RWY 19L approach was added to the Proposed Action to allow the same fixes and altitudes to be used for this procedure as for the modified KLAS RNAV (GPS) Y RWY 19R, as is the case for the existing procedures. Like the existing approach to Runway 19L, the modified approach would conflict with Nellis Air Force base operations and would be usable only in extraordinary situations. For more information, see the design sheets for KLAS RNAV (GPS) Y RWY 19L in Appendix G. All flight tracks would remain within historic flight tracks. Therefore, no new areas would be overflowed. The proposed modification would not result in significant or reportable noise increases nor significant impacts in the other environmental impact categories.

RNAV Visual (special) approaches at LAS. In addition to the above changes, the airline industry submitted in February 2020 five new RNAV Visual (special) approaches at LAS. These RNAV Visual approaches serve aircraft that cannot otherwise fly the FAA's proposed RNP approaches to runways 08R, 19L, and 19R (see Table 3-3). These visual approaches were developed to have similar routing to the proposed RNP approaches but have fewer requirements for both aircraft and flight crews. All flight tracks would remain within historic flight tracks. Therefore, no new areas would be overflowed. These proposed procedures would not result in significant or reportable noise increases nor significant impacts in the other environmental impact categories.

GAMES procedure. Aircraft operating on the proposed GAMES procedure into LAS would depart the procedure after the GAMES waypoint. After the GAMES waypoint, aircraft would be issued radar vectors from the air traffic controller(s) to join the flight tracks of the KLAS COKTL and RNDRZ STARs at the ENNVY waypoint for landing when using runways 26L and 26R. Modeled flight tracks were shifted further south to coincide with the proposed COKTL and RNDRZ STARs. All flight tracks would remain within historic flight tracks. Therefore, no new areas would be overflown. The revised proposal would not result in significant or reportable noise increases nor significant impacts in the other environmental impact categories.

The Final EA also analyzed the No Action Alternative. Under the No Action Alternative, the FAA would maintain 27 existing arrival and departure procedures for the LAS Metroplex. The SIDs and STARs in the LAS Metroplex serving the LAS Metroplex Study Airports that comprise the No Action Alternative are:

- Eight RNAV STARs
- Nine RNAV SIDs
- Five conventional (i.e., non-RNAV) STARs
- Five conventional (i.e., non-RNAV) SIDs

The existing conventional and RNAV arrival and departure procedures would remain as is, subject to minor periodic reviews and revisions in response to changes in the operational environment (i.e., magnetic variation changes, obstruction surveys, and changes in FAA Air Traffic Control regulations). The No Action Alternative would not implement the specific procedures designed as part of the LAS Metroplex Project.

The No Action Alternative would not meet the purpose and need for the Project. It would not improve the efficiency of the airspace nor address any of the three key causal factors for airspace inefficiency. Furthermore, the No Action Alternative would not meet the congressional mandate to implement additional RNAV procedures.

Of the two Alternatives (the Proposed Action and the No Action Alternative) carried forward for analysis, only the Proposed Action would meet the purpose and need for the LAS Metroplex Project based on the criteria presented and referenced in the Final EA document. Therefore, the Proposed Action is the FAA's preferred alternative (hereafter referred to as the Preferred Alternative).

VII. AFFECTED ENVIRONMENT

The General Study Area for this Project includes the geographic area in which natural resources and the human environment are potentially affected by the Proposed Action. Paragraph B-1.3 of Appendix B to FAA Order 1050.1F states that the "study area for the noise analysis of a proposed change in air traffic procedures...may extend vertically from the ground to 10,000 feet above ground level (AGL), or up to 18,000 feet AGL if the proposed action or alternative(s) are over a national park or wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute."

In developing the General Study Area, the FAA collected radar data from flight paths in the LAS Metroplex. The General Study Area was designed to capture all flight paths identified in the radar data collected for the preparation of the Final EA as well as the designed Proposed Action routes out to the point at which 95 percent of aircraft are at or above 10,000 feet AGL.

for departures and at or above 7,000 feet AGL for arrivals, accounting for the terrain in and around the LAS Metroplex. The lateral extent of the General Study Area was concisely defined to focus on areas of traffic flow.

The resulting General Study Area is depicted in Exhibit 4-1 in the Final EA and includes all or portions of 6 counties in the states of Arizona, California, and Nevada. Detailed information regarding the affected environment with respect to each relevant impact category is presented in Chapter 4 of the Final EA.

The LAS Metroplex General Study Area encompasses one major airport:

- McCarran International Airport (LAS)

The LAS Metroplex General Study Area also includes the following satellite airports:

- Henderson Executive Airport (HND)
- North Las Vegas Airport (VGT)

The Final EA refers to the one major and two satellite airports collectively as the Study Airports.

VIII. ENVIRONMENTAL CONSEQUENCES

The FAA analyzed the potential environmental impacts that could result from implementation of the Preferred Alternative as well as the impacts associated with the No Action Alternative in all relevant environmental impact categories specified in FAA Order 1050.1F. The FAA evaluated both alternatives for conditions in 2020, the first year of implementation of the optimized air traffic procedures under the Preferred Alternative if approved, and 2025, five years after expected implementation of the Preferred Alternative if approved.

The Preferred Alternative would not involve land acquisition, physical disturbance, or construction activities and, therefore, would not affect certain environmental impact categories. The following environmental impact categories would remain unaffected because either the relevant resource does not exist within the General Study Area or the impact category would not be affected by the activities associated with the Preferred Alternative. The unaffected environmental impact categories or sub-categories include:

- Biological Resources (fish and plants only)
- Coastal Resources
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources (Archeological and Architectural sub-category only)
- Land Use
- Natural Resources and Energy Supply (Natural Resources sub-category only)
- Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks (except Environmental Justice)
- Visual Effects (Light Emissions only)
- Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

The Preferred Alternative would not cause changes in patterns of population movement or growth, public service demands, or business and economic activity. In addition, the Preferred Alternative does not involve construction or other ground disturbing activities that would involve the relocation of people or businesses. Furthermore, the Preferred Alternative does not include the construction of airport facilities that would result in or induce an increase in operational capacity. Thus, the Preferred Alternative would not result in Secondary or Induced impacts.

Those environmental impact categories that could potentially be affected by the Preferred Alternative are discussed further below.

Noise and Noise Compatible Land Use

As required by FAA Order 1050.1F, the Aviation Environmental Design Tool (AEDT) version 2d was used to model the noise impacts for the LAS Metroplex Project because the Project involves a study area larger than the immediate vicinity of an airport, incorporates more than one airport, and includes actions above 3,000 feet above ground level (AGL). While this is the policy delineating under what circumstances the AEDT model is to be used, this policy does not delineate the methodology applied in modelling noise. All noise modelling for this analysis was conducted from the ground elevation up to 18,000 feet AGL. All noise results are reported at the ground level elevation of that point based on the terrain model in AEDT. Noise was analyzed for both the Preferred Alternative and the No Action Alternative during the year in which implementation of the Preferred Alternative would be initiated (2020) and a five-year future condition (2025).

The AEDT model computed DNL³ exposure values at three sets of data points throughout the General Study Area:

1. United States Census Bureau population census block centroids (center point of a census block)
2. Unique points representing certain specific cultural resources and areas potentially protected under Section 4(f) of the Department of Transportation Act (DOT Act) (49 U.S.C. § 303(c)), and historic properties protected under Section 106 of the National Historic Preservation Act (NHPA)(16 U.S.C. § 470 *et seq.*)
3. A uniform grid covering the General Study Area (using 0.5 nautical mile spacing) to document aircraft DNL exposure levels at potential noise sensitive locations that were not otherwise identified

The results identified the differences in DNL noise exposure between the two alternatives (Preferred Alternative compared to No Action Alternative) to determine if implementing the Preferred Alternative would result in significant noise impacts, as defined in the FAA's NEPA procedures.⁴ In accordance with those procedures, the analysis also identified any

³ DNL is the Day Night Average Sound Level. It is a single value representing the aircraft sound level over a 24-hour period. To represent the greater annoyance caused by a noise at night, the DNL metric includes a 10-decibel penalty weighting for noise occurring between 10:00 pm and 6:59 am.

⁴ Under the FAA's NEPA procedures, an action would cause a significant noise impact if it would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that would be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe. For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB. FAA Order 1050.1F, Exhibit 4-1.

“reportable” noise increase, defined as a DNL increase of 3 dB or higher in areas exposed to noise between DNL 60 dB and 65 dB or a DNL increase of 5 dB or higher in areas exposed to noise between DNL 45 dB and 60 dB. The results of the AEDT modeling indicated that:

1. The Preferred Alternative would not result in a DNL 1.5 dB or higher increase in noise-sensitive areas exposed to aircraft noise at or above DNL 65 dB
2. The Preferred Alternative would not result in DNL increases of 3 dB or higher in areas exposed to noise between DNL 60 dB and 65 dB
3. The Preferred Alternative would result in a DNL increase of 5 dB or higher in areas exposed to noise between DNL 45 dB and 60 dB

Thus, the Preferred Alternative would not result in significant noise impacts.

The 2020 noise analysis results indicate that the Preferred Alternative when compared to the No Action Alternative would not result in a DNL 1.5 dB or higher increase in noise in sensitive areas exposed to DNL 65 dB or higher. Furthermore, although there is an area that would be exposed to reportable noise, no population would experience a reportable noise increase in areas exposed to DNL between 60 dB and 65 dB or in areas exposed to DNL between 45 dB and 60 dB.

The 2025 noise analysis results indicate that the Preferred Alternative when compared to the No Action Alternative would not result in a DNL 1.5 dBA or higher increase in sensitive areas exposed to DNL 65 dB or higher. In addition, although there is an area that would be exposed to reportable noise, no population would be exposed to reportable noise increases between DNL 60 dB and 65 dB or in areas exposed to DNL between 45 dB and 60 dB.

A reportable noise increase south-southwest of LAS can be attributed to aircraft operating on the BOACH8 departure procedure in the 2020 No Action Alternative Scenario shifting to RADYR1 in the 2020 and 2025 Proposed Action Alternative.

Air Quality

Under the Preferred Alternative there would be a slight decrease in fuel burn (-0.03 percent) in 2020 when compared to the No Action Alternative. Under the Preferred Alternative there would be a slight increase in fuel burn (0.12 percent) in 2025 when compared to the No Action Alternative. While increased fuel burn corresponds with an increase in emissions, operational changes that could result in an increase in fuel burn would occur at 3,000 feet AGL or above and any increase in emissions from these changes would be *de minimis*. Furthermore, air traffic actions below the mixing height are also presumed to conform when modifications to flight paths and ATC procedures are designed to enhance operational efficiency (i.e., to reduce delay). Therefore, no further air quality analysis is necessary, a conformity determination is not required, and the Preferred Alternative would not result in a significant impact to air quality. The No Action Alternative would not result in a change in the number of aircraft operations or air traffic routes; therefore, no impacts to air quality would be anticipated.

Biological Resources – Wildlife (Avian and Bat Species) and Migratory Birds Sub-Categories only

The greatest potential for impacts to wildlife species related to air traffic procedure changes would result from wildlife strikes on avian and bat species at altitudes below 3,000 feet AGL. The FAA’s Wildlife Strike Database provides strike information that is reportable by airport,

including species struck, height of strike, and type and extent of aircraft damage. Since 1990, the FAA has compiled pilot and airport reports of wildlife strikes with aircraft. Between the most recent comprehensive reporting period of 1990 and 2017, 197,833 wildlife strikes were reported nationally. Of the records that identify the type of animal involved in the strike incident, birds represent 95.0 percent of all strikes. Of those records, for commercial and GA aircraft, 71 and 72 percent of the bird strikes, respectively, occurred at or below 500 feet AGL and declined by 34 percent for every 1,000-foot gain in height for commercial aircraft and 44 percent for GA aircraft. The Wildlife Strike Database reports that of identified species, waterfowl, gulls, and raptors are the species groups of birds with the most damaging strikes.

Table 5-6 in the Final EA provides a summary of wildlife strikes reported for the Study Airports between January 1, 1990 and December 31, 2018. In total, 581 reported strikes occurred at the Study Airports. One hundred seventy-four reported strikes did not include altitude information. Of the 407 reported strikes that included altitude information, 240 occurred at altitudes less than or equal to 3,000 feet AGL. A total of 158 strikes reported at the Study Airports included species identification.

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §§ 703–712) protects all the bird species identified in these reports. Furthermore, federal and state laws protect listed endangered and threatened species. In Chapter 4 of the Final EA, Table 4-3 identifies the federally-listed bird species believed to occur or known to occur in counties in the General Study Area. None of the bird strike reports at the Study Airports included the species listed in Table 4-3 in the Final EA.

The number of aircraft operations under the Preferred Alternative and No Action Alternative would be the same. Therefore, the assessment of the potential impacts focuses on changes to flight paths and the potential for impact due to wildlife strikes. As shown in Table 5-6 in the Final EA, only 167 (an average of 5.96/year) occurred at altitudes above 3,000 feet AGL. The decline in the number of strikes reported above 3,000 feet AGL indicates that there is less likelihood of bird/bat strikes at these altitudes. Under the Preferred Alternative, changes to proposed flight paths would primarily occur at or above 3,000 feet AGL, and no significant changes to arrival and departure corridors below 3,000 feet AGL would be expected. Therefore, no significant impacts to avian or bat species would be anticipated.

The No Action Alternative would not involve changes to air traffic flows, land acquisition, construction, or other ground disturbance activities. Therefore, no impacts to avian and bat species would occur.

Climate

Although there are no federal standards for aviation-related greenhouse gas emissions, the CEQ has indicated that climate should be considered in NEPA analyses. In 2020, the Preferred Alternative would produce approximately 2,962.56 Metric Tons (MT) of carbon dioxide equivalent (CO₂e), and the No Action Alternative would produce approximately 2,963.49 MT of CO₂e. This represents a slight decrease of approximately 0.93 MT of CO₂e or -0.03 percent under the Preferred Alternative when compared to the No Action Alternative. In 2025, the No Action Alternative would produce approximately 3,310.62 MT of CO₂e and the Preferred Alternative would produce approximately 3,314.59 MT of CO₂e. This represents a slight increase of approximately 3.97 MT of CO₂e or 0.12 percent under the

Preferred Alternative when compared to the No Action Alternative. This would comprise less than 0.000070 percent of U.S.-based greenhouse gas emissions as reported for 2017.

Department of Transportation Act, Section 4(f) Resources

The FAA identified resources within the General Study Area that had the potential to qualify for protection under Section 4(f) of the DOT Act. No land acquisition, construction, or other ground disturbance activities would occur under the Preferred Alternative. Due to the historic presence of aircraft in this vicinity, and the altitudes and distance from viewers of changes in aircraft traffic patterns, the Preferred Alternative would not substantially impair the view or setting of Section 4(f) resources. The Preferred Alternative would not result in significant increases in aircraft noise exposure in 2020 or 2025. Although some archaeological Section 4(f) resources would be exposed to reportable increases in aircraft noise, these noise increases would have no effect on the archaeological resources or their ability to yield important information in the future. Therefore, the Preferred Alternative would not involve the use of Section 4(f) resources and there would be no significant impact on those resources.⁵

Historic, Architectural, Archeological, and Cultural Resources – Historic Properties and Cultural Resources sub-categories only

Section 106 of the National Historic Preservation Act (NHPA) requires the FAA to consider the effects of its undertakings on historic properties listed or eligible for listing in the National Register of Historic Places (NRHP). Exhibit 4-5 in Section 4.3.3 of the Final EA shows the historic and cultural resources listed in the NRHP that are found within the General Study Area and the 18K Supplemental Boundary Area. An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Federal regulations implementing Section 106 of the NHPA require the FAA to define the area of potential effects (APE) as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The FAA initially defined the APE as coterminous with the General Study Area boundary. Because the Preferred Alternative's potential effects would be limited to non-physical effects of aircraft overflights, the FAA considered the potential for the Preferred Alternative to introduce visual, atmospheric, or audible elements that could diminish the integrity of a historic property's significant historic features. The FAA compared the proposed flight procedures in the Preferred Alternative with current flight tracks within the General Study Area. Based on this comparison, the FAA determined that there would be no new areas overflown within the General Study Area, and therefore no potential to introduce new visual, atmospheric, or audible elements.

The FAA also considered the potential for the Preferred Alternative to have noise effects that could alter the character or use of historic properties. As discussed in Section 5.1 of the Final EA, the FAA's noise modeling analysis indicated that the Preferred Alternative would not

⁵ Although the General Study Area includes a 2.5 statute-mile portion of the Old Spanish Trail that would experience a reportable noise increase as a result of the Preferred Alternative, that resource is not subject to Section 4(f). See Appendix A of the Final EA (email dated December 12, 2019 from Jill Jensen of the National Park Service's National Trails Office).

result in any noise increase that would be “significant” under FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*. However, that order recognizes that the “significant” standard may not be relevant to determining the potential for effects on certain historic properties where a quiet setting is a generally recognized purpose and attribute. Accordingly, the FAA redefined the APE to focus on the potential for “reportable” noise increases resulting from the Preferred Alternative to cause adverse noise effects on historic properties. The grid points in Exhibit 5-1 in the Final EA were bounded by a ½ NM buffer to create an Area of Potential Effect (APE). The resulting APE, roughly rectangular in shape and approximately 13.5 square miles in size, extends north-south just west of the Jean Airport. See **Exhibit 5-1** of the Final EA for the location of the revised APE within the project General Study Area. The APE includes portions of US Interstate 15, County Road 161 (Goodsprings Road), and an aerobatic box (used by aircraft operating at the Jean Airport). The APE is adjacent to the Jean Airport, a US Postal facility, a casino hotel complex, a state correctional facility, and a gas station/convenience/fast food complex.

There are no historic properties within the revised APE that are listed in the National Register of Historic Places. However, the revised APE includes a 2.5 statute-mile portion of the Old Spanish Trail, which is co-administered by the Bureau of Land Management (BLM) and the National Park Service (NPS). The FAA consulted with the National Park Service’s National Trails Office for the Old Spanish Trail. According to that office, with concurrence from its counterpart in BLM, the revised APE does not include land of historic significance under the criteria for listing in the NRHP.

Since the revised APE contains other BLM lands and is located within Clark County, the BLM and Clark County were also consulting parties. The BLM did not identify any potentially eligible or listed properties within the revised APE. Clark County, through the Administrator of the Clark County Museum System, identified one property in the revised APE: a large concrete arrow on the ground approximately one mile south of Jean and east of I-15. The arrow was part of an airmail route that was in use from the 1920s to the 1960s. Based on the information provided by the county, the FAA considered the concrete arrow to be potentially eligible for listing in the NRHP.

The FAA also reviewed the Nevada Cultural Resources Information System (NVCRIS). That review confirmed that there were no NRHP-listed properties in the revised APE. The NVCRIS database showed only archaeological sites to be present in the revised APE. Some are associated with standing structures, such as the gas station, or are transportation related features such as road and rail segments. There are no historic homes or districts, and none of the sites are managed for recreation, or with a quiet setting as part of their historic character.

There are no tribal lands in the revised APE. However, in addition to the identification efforts discussed above, the FAA engaged in extensive outreach with Federally-recognized tribes that the FAA identified within a 250-mile radius of the Las Vegas area. In a letter dated July 13, 2017, the FAA invited 35 tribes to participate in consultation under Section 106 of the NHPA. The letter requested information from the tribes on any locations within a 70-mile radius of McCarran International Airport (essentially the General Study Area) to which they attached religious or cultural significance. In the letter, the FAA offered to meet with the tribes

to provide an overview of the Project and request their input. In a letter dated September 17, 2018, the FAA again sought input from the tribes (and one additional tribe) on any Project-related concerns and invited the tribes to meet with the FAA to receive information about the Project and provide their input. The FAA also sought information on historic properties in the General Study Area in a letter, dated October 25, 2018, to Tribal Historic Preservation Officers (THPOs) of tribes within the General Study Area, namely the: Pyramid Lake Paiute Tribe, Reno-Sparks Indian Colony, Washoe Tribe, Colorado River Indian Tribes, Hualapai Tribe, Timbisha Shoshone Tribe, and Twenty- Nine Palms Band of Mission Indians. The only tribe that responded to these FAA letters was the Hualapai Tribe, which expressed interest in consulting in person with the FAA regarding the LAS Metroplex Project. On March 26, 2019, the FAA's Western Pacific Region Deputy Regional Administrator and other FAA representatives met with the Chairman of the Hualapai Tribe to discuss the Project. The Chairman expressed no concerns regarding the Project, nor did he identify any traditional cultural properties or other historic properties.

Because the revised APE is based on the potential for increased aircraft noise from the Preferred Alternative to alter the character or use of historic properties, the FAA's assessment of effects considered whether the noise increases from the Preferred Alternative in the revised APE would diminish the integrity of a property's significant historic features. Based on the FAA's review of the NVCRIIS, it concluded that the modeled increases in aircraft noise exposure from the Preferred Alternative would have no effect on archaeological resources or their ability to yield important information in the future. Furthermore, the consultation process under Section 106 of the NHPA has not revealed any historic or cultural resource within the revised APE for which a quiet setting is a characteristic that would qualify it for listing in the NRHP or that could otherwise be affected by the modeled increases in aircraft noise exposure levels. Based on this analysis, the FAA determined that the Preferred Alternative would not adversely affect any historic or cultural properties. Accordingly, the FAA made a finding of "no adverse effect" on historic properties under Section 106 of the NHPA. The Nevada SHPO has concurred in this finding (see **Appendix A** of the Final EA). Therefore, the FAA has determined that the Preferred Alternative would not significantly affect historic or cultural resources.

Under the No Action Alternative, no changes to air traffic routes in the LAS Metroplex would occur in either 2020 or 2025, and no adverse effects related to changes in aircraft noise exposure would be anticipated. Therefore, the No Action Alternative would not result in an adverse effect to historic or cultural resources.

Natural Resources and Energy Supply – Energy Supply sub-category only (aircraft fuel only)

Under the Preferred Alternative, the optimized air traffic routes would improve the efficiency of air traffic routes and operations, including continuous climb-outs and optimized descents, where possible. Aircraft fuel burn is considered a proxy for determining whether the Preferred Alternative would have a measurable effect on local energy supplies when compared with the No Action Alternative. The FAA's AEDT model calculates aircraft-related fuel burn as an output along with calculating aircraft noise exposure. AEDT fuel burn analysis was completed for the Preferred Alternative and No Action Alternative. In comparison to the No Action Alternative, the Preferred Alternative would result in approximately 0.30 metric tons (MT) less

fuel burned in 2020 (0.03 percent decrease) and approximately 1.25 MT more fuel burned in 2025 (0.12 percent increase). Given the relatively small increase (0.09 percent overall), the FAA expects that when compared with the No Action Alternative, the Preferred Alternative would not adversely affect local fuel supplies. Therefore, no significant impacts to energy supply would be anticipated.

Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks – Environmental Justice sub-category only

Under the Preferred Alternative, neither people nor businesses would be displaced. As discussed in Section 5.1 in the Final EA, under the Preferred Alternative no census block centroids in the General Study Area would experience a significant noise impact in either 2020 or 2025. The Preferred Alternative would not have the potential to lead to a disproportionately high and adverse impact to an environmental justice population, i.e., a low-income or minority population, due to an absence of significant impacts in other environmental impact categories and a lack of significant impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA has determined are unique to the environmental justice population and significant to that population. Under 2020 conditions, there are no population centroids (thus representing zero persons) located in areas identified as environmental justice communities that experience reportable noise increases of DNL 3 dB in areas exposed to DNL 60 to 65 dB of DNL or 5 dB in areas exposed to DNL 45 to 60 dB.

Under 2025 conditions, there are no population centroids (thus representing zero persons) located in areas identified as environmental justice communities that experience reportable noise increases of DNL 3 dB in areas exposed to DNL 60 to 65 dB of DNL or 5 dB in areas exposed to DNL 45 to 60 dB. Therefore, no adverse direct or indirect effects would occur to any environmental justice populations within the General Study Area under the Preferred Alternative for 2020 and 2025.

Under the No Action Alternative, neither people nor businesses would be displaced. Furthermore, air traffic routes would not change, and there would be no change in aircraft noise exposure in 2020 or 2025 that could result in an indirect impact. Therefore, the No Action Alternative would not result in disproportionately high and adverse human health or environmental effects on minority and low-income populations.

Visual Effects (Visual Resources / Visual Character Only)

The FAA has not established a significance threshold for Visual Resources / Visual Character. Significant factors to consider include potential effect an action has on the nature of the visual character of the area, potential to contrast with the visual resources and/or visual character in the General Study Area, and/or potential to block or obstruct the views of visual resources.

Implementation of the Preferred Alternative would not increase the number of aircraft operations at the Study Airports compared with the No Action Alternative. Changes in aircraft traffic patterns under the Preferred Alternative are expected to be at altitudes and distances sufficiently removed from viewers that visual impacts would not be anticipated. Under the No Action Alternative, no changes in air traffic routes would occur and no changes in aircraft overflight patterns would be expected. Therefore, the No Action Alternative would not result in visual impacts.

Cumulative Impacts

Research was conducted to identify any present or reasonably foreseeable (past actions are reflected in the environmental baselines described in Chapter 4) airport improvement projects at the Study Airports or FAA actions relating to airspace, flight procedures, or air traffic routes that would have the potential for such effects. This included reviewing capital improvement program (CIP) projects at the Study Airports that directly affect or involve runway surfaces having the potential to affect local or regional flight patterns. For these projects, five years corresponds to the typical CIP planning horizon and was therefore applied as the timeline for including projects to be reviewed. “Reasonably foreseeable future actions” refers to projects that would likely be completed by 2025.

This research did not reveal any present or reasonably foreseeable actions with the potential for direct or indirect effects on aircraft flight patterns within the General Study Area.⁶ Therefore, no cumulative impacts would be anticipated for the Proposed Action when compared to the No Action Alternative for either 2020 or 2025.

Other Considerations

The Preferred Alternative involves air traffic control routing changes for airborne aircraft only. The United States Government has exclusive sovereignty of airspace in the United States [49 U.S.C. Section 40103(a)]. Congress has provided extensive and plenary authority to the FAA concerning the efficient use and management of the navigable airspace, air traffic control, air navigation facilities, and the safety of aircraft and persons and property on the ground [49 U.S.C. Sections 40103(b)(1) and (2)]. To the extent applicable, and as there are no significant impacts under noise or compatible land use, the Preferred Alternative is consistent with the plans, goals, and policies for the area and with the applicable regulations and policies of federal, state, and local agencies.

IX. AGENCY COORDINATION AND COMMUNITY ENGAGEMENT

FAA Community engagement and early consultation process within the overall Environmental Assessment (EA) process began with a notice the FAA was initiating preparation of an EA for the Project. On September 26, 2018, the FAA distributed a letter containing the notice of intent to prepare an EA for the LAS Metroplex Project to 239 federal, state, regional, and local officials.

On September 30, 2018, a notice of intent to prepare an EA was published in the Las Vegas Review Journal. Three responses were received acknowledging the notice of intent. On October 25, 2018 the FAA initiated Section 106 consultation with the Nevada SHPO office. There are no federally recognized tribes in the Area of Potential Effect, however, the FAA initiated government-to-government consultations with 43 tribes on September 18, 2018.

Throughout the post-Study Team recommendations, and in the Project period spanning from Preliminary Design to Proposed Final Designs, the Design and Implementation Team undertook a Community Engagement process that encompassed 23 select official briefings,

⁶ The LAS capital improvement program on file with the FAA includes an item relating to planning and environmental documentation for a new air carrier airport in the Ivanpah Valley, approximately 35 miles south-southwest of LAS. This project is not considered further in this EA because it is currently projected that the new airport would begin operation between the years 2035 and 2040, well beyond the temporal boundary of this cumulative impact evaluation, and information is not available that provides enough specificity to provide meaningful information for consideration in assessing the potential for cumulative impacts with the Proposed Action.

aviation stakeholder briefings, and public workshops. These Community Engagement activities occurred between December 6, 2016 and December 13, 2019. As a result of the 11 public workshops held, 256 email comments and 45 written comments were received and considered in the procedure design process. Design changes were reviewed as a result of the comments received and changes to the preliminary designs were attempted to address the public comments.

On November 18, 2019, the FAA released a Draft EA for the proposed LAS Metroplex Project for a 32-day public review and comment period. The FAA subsequently released the Correction Document on December 11, 2019 that included one additional procedure to the proposed action. The comment period was then extended to 64 days ending on January 21, 2020. The FAA recognizes the importance and value of public input in this process. In addition to accepting written comments, the FAA hosted five public workshops between December 9th and December 13th in the cities of Las Vegas and Henderson, Nevada. FAA representatives were available at each public workshop to help interested attendees better understand the Project.

The FAA appreciates and acknowledges receipt of the thoughtful responses to its requests to comment on the Draft EA. All comments received during the November 18, 2019 through January 21, 2020 public review period were considered in the issuance of the Final EA. The comments received on the Draft EA were submitted through the FAA website comment form, regular mail, the public workshop comment card, and FAA email correspondence. The FAA received 138 comments by private citizens and groups, elected officials, municipalities, local, State, and Federal agencies. Of the 140 (two were repeat comments duplicated by regular mail) total comments received, 79 were submitted through the FAA website comment form, two were submitted through regular mail, 28 were submitted at the public workshops, and 31 were received at an FAA email address. Consistent with FAA Order 1050.1F, all substantive comments to the Draft EA and the FAA's responses were included in Appendix J of the Final EA.

On June 8, 2020, the FAA released the Final EA for the proposed LAS Metroplex Project. The Final EA included updates to the Proposed Action, as discussed in Section VI above. In light of the updated Proposed Action Alternative, the FAA provided a 14-day public comment period, from June 8, 2020 through June 22, 2020, which was limited specifically to comments on the updates to the Proposed Action Alternative.

The comments received and the FAA's responses to them are included in the **Appendix** to this FONSI-ROD. The FAA received six comment submissions. The FAA carefully considered the comments and no changes were made to the Preferred Alternative as described in the Final EA.

X. THE AGENCY'S FINDINGS

A. The Preferred Alternative will ensure the safety of aircraft and the efficient use of airspace (49 U.S.C. § 40103(b)).

The Federal Aviation Act of 1958 gives the Administrator the authority and responsibility to assign by order or regulation the use of the navigable airspace in order to ensure the safety

of aircraft and the efficient use of the airspace. In its continuous effort to ensure safety of aircraft and improve the efficiency of transit through the navigable airspace, the FAA will create or modify SIDs, STARs, T routes, and approaches in the LAS Metroplex. The Project will also implement new and existing conventional air traffic procedures. The Project will enhance the efficiency of the airspace in the LAS Metroplex by creating shorter, more predictable ground and vertical paths through the limited airspace in the LAS Metroplex. Additionally, this Project will allow the FAA to continue to achieve its NextGen goals.

In deciding to implement the Preferred Alternative, the FAA carefully evaluated both the Preferred Alternative and the No Action Alternative. The No Action Alternative will do nothing to improve the efficiency of the airspace or address any of the three key causal factors for airspace efficiency. The No Action Alternative would not further the Agency's goal in transitioning to NextGen.

B. The Preferred Alternative does not involve the direct or constructive use of any historic sites or other properties protected under Department of Transportation Act Section 303(c), also known as Section 4(f).

The Project does not involve any physical development or modification of facilities, and therefore no actual, physical use of resources protected under Section 4(f) of the Department of Transportation Act or Section 106 of the National Historic Preservation Act will result. The Project will also not result in a constructive use of any protected property because it will not cause increases in noise sufficient to impair the value of those resources. None of the protected properties in the General Study Area have a quiet setting as a generally recognized purpose and attribute.

C. The Preferred Alternative will not adversely affect historic resources protected under Section 106 of the National Historic Preservation Act.

The Project will not cause an adverse effect on historic resources listed on or eligible for listing on the National Register of Historic Places. This determination is based on consultation under Section 106 of the National Historic Preservation Act.

D. The Preferred Alternative does not require a conformity determination under Section 176(c)(1) of the Clean Air Act (42 U.S.C. § 7506(c)(1)).

The Project is an air traffic control activity that adopts approach and departure procedures for air operations. It is presumed to conform under 72 Fed. Reg. 41565 (July 30, 2007). The Project will not result in the development of physical facilities nor will it result in or induce an increase in operational capacity in the study area. Detailed analysis was not necessary to conclude that the Project conforms to the purposes of the State Implementation Plan (SIP) for the States of Arizona, California, and Nevada. The Project will not cause a new violation of the National Ambient Air Quality Standards (NAAQS), worsen an existing violation, or delay meeting the standards of the NAAQS in the General Study Area.

E. The Preferred Alternative will not have a disproportionately high and adverse impact on minority or low income populations (Executive Order 12898)

The FAA has determined that no disproportionately high and adverse impacts to environmental justice communities will occur from the Preferred Alternative, based upon findings that there are no noise impacts on residential communities, no community disruptions or divisions, no surface transportation impacts, no human health impacts and no essential services disruptions or other impacts that could potentially disproportionately impact any minority or low-income community.

XI. DECISIONS AND ORDERS

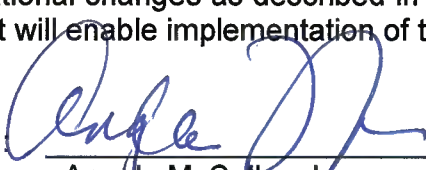
After careful and thorough consideration of the Final EA and the facts contained herein, I find that the Preferred Alternative is consistent with existing national environmental policies and objectives as set forth in Section 101 of National Environmental Policy Act and other applicable environmental requirements and will not significantly affect the quality of human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of National Environmental Policy Act. Therefore, an environmental impact statement will not be prepared.

I, the undersigned, have reviewed the Final EA, including the evaluation of the purpose and need that this Project would serve, the alternative means of achieving the purpose and need, and the environmental impacts associated with these alternatives. I find that the Preferred Alternative described in the Final EA is reasonably supported, and issuance of a FONSI is appropriate.

I have carefully considered the FAA's statutory mandate under 49 U.S.C. § 40103 to ensure the safe and efficient use of the national airspace system as well as the other aeronautical goals and objectives discussed in the Final EA.

Accordingly, under the authority delegated to me by the Administrator of the FAA, I approve the operational changes as described in the Preferred Alternative and direct that actions be taken that will enable implementation of that alternative.

Approved: _____


 Angela McCullough
 Vice President, Mission Support Services
 Air Traffic Organization
 Federal Aviation Administration



 Date

RIGHT OF APPEAL

This FONSI/ROD constitutes a final order of the FAA Administrator and is subject to exclusive judicial review under 49 U.S.C. § 46110 by the U.S. Circuit Court of Appeals for the District of Columbia or the U.S. Circuit Court of Appeals for the circuit in which the person contesting the decision resides or has its principal place of business. Any party having substantial interest in this order may apply for review of the decision by filing a petition for review in the appropriate U.S. Court of Appeals no later than 60 days after the order is issued in accordance with the provisions of 49 U.S.C. § 46110. Any party seeking to stay implementation of the ROD must file an application with the FAA prior to seeking judicial relief as provided in Rule 18(a) of the Federal Rules of Appellate Procedure.

APPENDIX
to
Finding of No Significant Impact (FONSI) and Record of Decision (ROD)
for the Las Vegas (LAS) Metroplex Project
COMMENTS ON THE FINAL ENVIRONMENTAL ASSESSMENT
AND THE FAA'S RESPONSES

The National Environmental Policy Act of 1969 (NEPA) [42 United States Code (U.S.C.) §4321 et seq.] requires Federal agencies to disclose to decision-makers and the interested public a clear and accurate description of the potential environmental impacts that could arise from proposed Federal actions. The Federal Aviation Administration (FAA) implements NEPA through FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

The Final Environmental Assessment (EA) for the Las Vegas (LAS) Metroplex Project included updates to the Proposed Action Alternative described in the Draft EA, issued on November 18, 2019, and the *Correction to the Draft Environmental Assessment for the Las Vegas Metroplex Project*, issued on December 6, 2019. These updates to the Proposed Action are described in Chapter 3, "Alternatives," Section 3.2.2.1, of the Final EA. In light of the updated Proposed Action Alternative, the FAA provided a 14-day public comment period, starting on June 8, 2020, and concluding on June 22, 2020, limited specifically to comments on the updates to the Proposed Action Alternative.

The FAA appreciates and acknowledges receipt of the thoughtful comments on the Final EA. All comments received during the June 8, 2020 to June 22, 2020 public review period have been considered. The comments received were submitted through the FAA website comment form, by regular mail, and by email. The FAA received six comments on the Final EA. Of the six total comments received, five unique comments were submitted through the FAA website comment form and/or an FAA email address, and one comment was submitted through regular mail. All substantive comments on the Final EA and the FAA's responses have been included in this Appendix.

The comment submissions are individually numbered 1 through 6 and are followed with the commenter's or agency's name. The term "comment," as used in this Appendix, refers to each submission offered by a commenter.

Comments-Responses**Comment #1 Submitted by: Clark County Department of Aviation (CCDOA)****Comment Received:**

From: [Jeffrey Jacquart](#)
To: [9-LAS-Metroplex-FA \(FAA\)](#); [Kozica, Shawn M \(FAA\)](#)
Cc: [Girvin, Raquel \(FAA\)](#); [Swann, Tamara A \(FAA\)](#); [Garcia, Faviola \(FAA\)](#); [Mayhugh, Bradley R \(FAA\)](#); [cthomas@natca.net](#); [Moses, Augustin \(FAA\)](#); [Weller, Ryan \(FAA\)](#); [yolanda.king@ClarkCountyNV.gov](#); [Rosemary Vassiliadis](#); [Sandra Cikity](#); [James Chrisley](#); [Heather Harper](#); [Joseph Piurkowski](#); [Cynthia Sanders](#); [Charles Hall](#); [John Howard](#)
Subject: Las Vegas Metroplex Final EA Comments from CCODA
Date: Thursday, June 18, 2020 3:49:16 PM
Attachments: [Final EA Comments from CCDOA.pdf](#)

Attached are the Clark County Department of Aviation's (CCDOA) comments regarding the Las Vegas Metroplex Final EA. A hard-copy is being send via Priority Mail.

Jeff Jacquart
 Clark County Department of Aviation
 Business Office, Land Use and Noise Team
 (702) 261-5510
jeffj@mccarran.com

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Department of Aviation

ROSEMARY A. VASSILIADIS
DIRECTOR

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June 18, 2020

Las Vegas Metroplex Final EA
Federal Aviation Administration
Western Service Center - Operations Support Group
2200 S. 216th St.
Des Moines, WA 98198-6547

Re: Comments on Final Environmental Assessment, Las Vegas Metroplex Project

To Whom It May Concern,

On January 17, 2020, the Clark County Department of Aviation (CCDOA) submitted a significant number of constructive comments on the Draft Environmental Assessment (EA) for the Las Vegas Metroplex Project (Project). The CCDOA continues to support this Project and the anticipated benefits of the improved NextGen procedures when implemented. However, we believe that the environmental review process could have been executed more effectively. Our comments on the Draft EA included 28 pages of specific, detailed recommendations intended to assist with providing a more straightforward and understandable account of current conditions, the proposed changes, and the potential consequences of those changes. We believe the CCDOA Draft EA comments would have provided a more transparent and understandable document for our community stakeholders. Throughout the Metroplex process, CCDOA has emphasized the importance of ensuring the Project and its impacts are clearly and transparently presented in a manner that can be fully understood by our community and elected representatives.

After reviewing the Final EA, the CCDOA still believes that the following should be provided in the document to provide a better description of the Project:

1. Positive findings on pollution, fuel burn, and flight time reductions;
2. An executive summary of the six minor flight path changes within the urban area;
3. Changing the scale and clarity of important maps and other figures;
4. Utilizing more up-to-date and detailed population and land-use data;
5. Providing specific flight track modeling assumptions (usage, fleet mix, altitudes, etc.);
6. Better describing existing conflicts between arriving and departing traffic and related delays; and
7. Including non-grid noise exposure maps over the urban area.

Because many of these CCDOA recommended enhancements were not incorporated, community stakeholders may have questions once the Project is implemented. We recommend that when these questions arise in the future, the Western Service Center, Operations Support Group be prepared to provide the response.




Clark County Board of Commissioners

Marilyn Kirkpatrick, Chair • Lawrence Weekly, Vice Chair
Larry Brown • James B. Gibson • Justin C. Jones • Michael Naft • Tick Segerblom

We look forward to the operational enhancements and benefits the Project will achieve. Should you have any questions in the meantime, please feel free to contact Jeffrey M. Jacquart at 702-261-5510 or jeffj@mccarran.com.

Sincerely,



ROSEMARY A. VASSILIADIS
Director of Aviation

cc (via e-mail):

Shawn Kozica (FAA)
Raquel Girvon (FAA)
Tamara Swann (FAA)
Faviola Garcia (FAA)
Brad Mayhugh (FAA)
Chris Thomas (FAA)
Augustin Moses (FAA)
Ryan Weller (FAA)

Yolanda T. King
James Chrisley
Joseph Piurkowski
Charles Hall
John Howard
Jeff Jacquart

FAA Response to Comment #1

The FAA appreciates the comments submitted by the Clark County Department of Aviation (CCDOA). The CCDOA believes the following items should be provided in the Final EA to provide a better description of the LAS Metroplex Project:

- Item #1. Positive findings on pollution, fuel burn, and flight time reductions;
- Item #2. An executive summary of the six minor flight path changes within the urban area;
- Item #3. Changing the scale and clarity of important maps and other figures;
- Item #4. Utilizing more up-to-date and detailed population and land-use data;
- Item #5. Providing specific flight track modeling assumptions (usage, fleet mix, altitudes, etc.);
- Item #6. Better describing existing conflicts between arriving and departing traffic and related delays; and
- Item #7. Including non-grid noise exposure maps over the urban area.

FAA's Response for Item #1: "Positive findings on pollution, fuel burn, and flight time reductions"

This is very similar to one of CCDOA's comments (Global Comment G) on the Draft EA. That comment and the FAA's response are included in Appendix J, *Comments on the Draft EA & FAA Responses*, of the Final EA.

Although the discussion regarding pollution, fuel burn and flight time is not presented in the manner requested or preferred by CCDOA, the Final EA meets all applicable requirements in regulations of the Council of Environmental Quality (CEQ) implementing the National Environmental Policy Act (NEPA) and in the FAA's NEPA-implementing procedures (FAA Order 1050.1F).

As noted in the FAA's responses to comments in Appendix J, *Comments on the Draft EA & FAA Responses*, of the Final EA, there are important differences to note between the Study Team Final Report (Appendix F of the Final EA) and the proposed final designs presented by the Design and Implementation (D & I) Team (the D & I Team's final report is Appendix G of the Final EA). While the Study Team developed notional designs in efforts to improve

efficiency in the NAS, the D & I Team's proposed final designs differ from the notional designs due to a more in-depth examination of potential solutions. Therefore, estimates regarding fuel burn, pollution and flight time evolved in the process.

As an example, the Study Team proposed a reversal of the existing arrival and departure aircraft routes through the northwest corridor. During the subsequent D & I Phase, the industry stakeholders (i.e. airline tech pilots) advised they could not climb fast enough to avoid the terrain west of Las Vegas. Therefore, departures had to be routed south of Mt. Potosi before turning north-westbound. The change adds track miles to one procedure and results in fewer savings than the Study Team Report estimated. The change was driven by safety.

The Study Team also proposed a much shorter downwind leg for arrivals from the Los Angeles Valley. The D & I Team concluded that the Study Team's notional design would have caused the merging of two streams on top of the departure stream off KLAS Runways 19. This would have had an impact on safety and, therefore, the Study Team notional design was discarded even though the proposed action increased track miles.

It is also important to note that the Study Team Final Report analysis measures project benefits from the beginning of a procedure. The EA primarily considers benefits at or below 10,000 feet AGL. Therefore, any gains that the Study Team determined above 10,000 feet AGL due to reduced track miles and optimized profile descents are not included in the EA.

FAA's Response for Item #2: "An executive summary of the six minor flight path changes within the urban area"

This item is similar to Global Comment D of CCDOA's comments on the Draft EA. In Global Comment D, CCDOA stated:

"In truth, available information suggests there may be just six low altitude changes over urbanized (or developed) areas of Clark County: (i) a slight southern shift in the final approach into Runways 26L/R and 19L/R from the west; (ii) an immediate right-turn off Runways 19L/R for general aviation aircraft; (iii) runway heading directly over Southern Highlands from Runways 19L/R prior to initiating any turns; (iv) a 10 [degree] divergence off Runways 26L/R towards the south; (v) a 10 [degree] divergence off Runways 08L/R towards the south; and (vi) a loop towards the northeast when departing Runways 08L/R. ..."

The FAA concurred with CCDOA that there were indeed six low altitude changes over urban areas in Clark County. In response to CCDOA's comment (*see Appendix J, Comments on the Draft EA & FAA Responses*, of the Final EA, page 591, paragraph D), the FAA stated: "CCDOA is correct when it states 'available information suggests there may be just six low-altitude changes over urbanized (or developed) areas of Clark County.'" As further noted in

the FAA's response, all of these changes were documented in the Draft EA, discussed in supplemental information on the Metroplex Environmental website (http://www.metroplexenvironmental.com/las_metroplex/las_docs.html), and highlighted on display boards used at public workshops held by the FAA in April and December 2019.

For ease of reference, we highlight below the discussion contained in the Final EA regarding the six low-altitude changes over urbanized (or developed) areas of Clark County that were proposed for the LAS Metroplex:

1. FAA has proposed a 10-degree divergence departing KLAS Runway 08L over Henderson for the JOHKR, LOHLA, NIITZ, RADYR, RASLR and RATPK departure procedures to increase efficiency on KLAS departures. The 10-degree divergence is shown in the design package for these procedures in Appendix G, *Las Vegas Metroplex Design and Implementation Team Final Report*, and the procedures are listed in Chapter 3, Section 3.2.2, of the Final EA.
2. The FAA proposed the RATPK SID for Runway 08 to increase efficiency on KLAS departures and allow optimized climb profiles through segregation from KLAS Runway 19 arrivals. *See* Chapter 3, Section 3.2.2. of the EA (listing the RATPK SID); *see also* Appendix G, *Las Vegas Metroplex Design and Implementation Team Final Report*, page 94; Appendix J, *Comments on the Draft EA & FAA Responses*, page 447.
3. The FAA has proposed a 10-degree divergence for aircraft departing KLAS Runways 26 for the JOHKR, NIITZ, RADYR, and RASLR departure procedures to increase efficiency on KLAS departures. The 10-degree divergence is shown in the design package for these procedures in Appendix G, *Las Vegas Metroplex Design and Implementation Team Final Report*, and the procedures are listed in Chapter 3, Section 3.2.2, of the Final EA.
4. The proposed KLAS Runway 19 L/R GIDGT and RATPK departures were developed to reduce safety concerns involving extensive ground movement at KLAS and to reduce safety concerns involving convergence of two separate departure procedures, controlled by separate air traffic positions 45 miles northeast of KLAS. *See* Chapter 3, Section 3.2.2, of the Final EA (listing the GIDGT and RATPK SIDs); *see also* Appendix J, *Comments on the Draft EA & FAA Responses*, pages 603-604 and 613-614; Appendix G, *Las Vegas Metroplex Design and Implementation Team Final Report*, pages 10, 41-49 and 105-113.
5. The proposed KLAS Runway 19 L/R JOHKR, NIITZ, RASLR and RADYR departure procedures are expected to eliminate or delay convergence with KLAS Runway 26 departures. *See* Appendix J, *Comments on the Draft EA & FAA Responses*, page 477;

see also Appendix G, *Las Vegas Metroplex Design and Implementation Team Final Report*, page 10, 50- 59, 68-77, 84-93 and 94-101.

6. The proposed downwind approach to KLAS Runways 26 would route aircraft between $\frac{3}{4}$ and $\frac{1}{2}$ mile south of the existing arrival routes from the west. The procedure was proposed to allow connectivity of optimized arrival routes with approaches. The proposed design allows lower power settings for arrivals, with aircraft flying 700 to 1000 feet higher than on the existing downwind approach. See Appendix J, *Comments on the Draft EA & FAA Responses*, pages 122, 474 and 475; see also Appendix F, *Las Vegas Metroplex Study Team Final Report*, page 45; Appendix G, *Las Vegas Metroplex Design and Implementation Team Final Report*, pages 10, 290-292.

Although the discussion in the Final EA regarding these changes is not presented in the manner requested or preferred by CCDOA, the Final EA meets all applicable requirements in regulations of the Council of Environmental Quality (CEQ) implementing the National Environmental Policy Act (NEPA) and in the FAA's NEPA-implementing procedures (FAA Order 1050.1F).

FAA's Response for Item #3: "Changing the scale and clarity of important maps and other figures"

This item is similar to Global Comment B of CCDOA's comments on the Draft EA. The comment requests changing the scale and clarity of the maps and figures in the Final EA.

As explained in the FAA's response to CCDOA's Global Comment B in Appendix J, *Comments on the Draft EA & FAA Responses*, of the Final EA, the graphics within the Final EA (unless they are not directly correlated to an existing or proposed procedure) are in pdf format and to scale. The Google Earth files are not officially part of the Final EA, but are supplemental materials. The agency has made them available to the public as a tool to help understand the material. The Google Earth files allow an infinite adjustment of range so the viewer can tailor materials to specific needs. To the extent CCDOA suggests that graphics are not clear and are not understandable, CCDOA does not specify which graphics the comment refers to. Where CCDOA had specifically identified a graphic or exhibit in its comments to the Draft EA (see Section 2, *Specific Comments*, of CCDOA's comment letter dated January 17, 2020; Appendix J, *Comments on the Draft EA & FAA Responses*, at p. 563), the FAA was able to more particularly respond in its responses. Where CCDOA had not specifically identified a graphic, the FAA was unable to respond with specific information or a specific response. Generally, some exhibits were not prepared to scale because the purpose of the exhibit was to highlight or identify a specific issue and the scale of the graphic did not have any or much bearing on meeting the purpose of the graphic. Other times it was impractical to include a

graphic to scale given the expansive Study Area, however, as noted above, the agency has also made available Google Earth files.

The information in Google Earth format is provided to allow the public to better understand the proposed procedures and the results of the noise analysis. These files can be downloaded from the project website at <http://www.metroplexenvironmental.com/>

The information provided in Google Earth format includes the following:

- The flight corridors depicted in Exhibits 3-7 and 3-8 (No Action Alternative) and 3-9 and 3-10 (Proposed Action) in Chapter 3 of the Final EA
- The AEDT model flight tracks used to complete the noise analysis prepared for the Final EA and to develop the flight corridors depicted in Exhibits 3-7, 3-8, 3-9 and 3-10 in the Final EA
- The procedure route designs including waypoints
- The results of the noise analysis for each grid point modeled under each scenario

The Google Earth application can be downloaded from <https://www.google.com/earth/>.

Information on how to use Google Earth, including tutorials, is provided at

<https://www.google.com/earth/learn/>. Please note that due to file size and depending on the internet connection speed, the files may take some time to download into Google Earth.

FAA's Response for Item #4: "Utilizing more up-to-date and detailed population and land-use data"

CCDOA made this same point in its comments on the Draft EA. Those comments, and the FAA's responses to them, are included in Appendix J, *Comments on the Draft EA & FAA Responses*, of the Final EA.

Exhibit 4-3 in the Final EA depicts existing land use in the General Study Area. It is characterized using generalized land coverage data from the USGS National Land Cover Database 2011 (NLCD 2011). The data used for land cover is designed to correlate with the Census data the FAA used. If there were "reportable" or significant impacts (there were no significant impacts here), we "drill down" to evaluate in more detail and rely on local land use, on-site in-person surveys, geospatial imagery, and other tools to ascertain accurately the coverage within a defined area.

As to population data referenced in the comment, FAA used the 2010 U.S. Census data. The decennial census data is not an estimate. It is based upon survey data that is only collected every 10 years. It is therefore assumed to be the most accurate representation of the populace. Generally, if reportable or significant noise increases are found within an area, the area is

subject to further “drill down” scrutiny by FAA that would reveal any changes to population including an examination of land use (rural, urban, suburban, etc.), dwellings, and other structures that indicate the location of the population and potential nature of the affected area. Site surveys (windshield survey) are also completed for areas subject to the “drill down” to further understand the nature and place of reportable noise. For the Las Vegas Metroplex project, there were no significant noise impacts, though there was one area that would potentially experience a reportable noise increase.

Finally, the FAA collected radar data between 2016 and 2017 because it was the most recent data available at the time FAA began the environmental assessment and modelling process for existing conditions. The data was collected just prior to the beginning of noise modeling for existing conditions.

The population and land-use data used in the Final EA meets all applicable requirements in regulations of the CEQ implementing the NEPA and in the FAA’s NEPA-implementing procedures (FAA Order 1050.1F).

FAA’s Response for Item #5: “Providing specific flight track modeling assumptions (usage, fleet mix, altitudes, etc.)”

This item is similar to Global Comment F of CCDOA’s comments on the Draft EA. The comment requests information pertaining to the assumptions used in the modeling process. The assumptions concerning flight track use and fleet mix are discussed in Appendix H, *Flight Schedules Technical Report*. The assumptions concerning dispersion and/or concentration are discussed in Section 5.1.2, *Methodology*, of the Final EA. Additional information on dispersion can be found in paragraph 3.2.9, *Flight Track Definitions*, of Appendix I, *Las Vegas Metroplex Noise Technical Report*. A comparison of the No Action Alternative to the Proposed Action dispersion can be found in the Final EA, Exhibits 3-7 through 3-10.

The aircraft noise analysis documented in the Final EA was conducted in compliance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

FAA’s Response for Item #6: “Better describing existing conflicts between arriving and departing traffic and related delays”

This item is similar to Comment No. 7 of CCDOA’s comments on the Draft EA. In Comment No. 7, CCDOA asked for details regarding the number of conflicts between traffic and the extent of delay. As already explained on page 594 of Appendix J, *Comments on the Draft EA & FAA Responses*, the FAA has adequately described the existing conflicts between arriving and departing traffic and related delays with the information it has available. Therefore, no change was warranted in the Final EA on this subject. The Final EA meets all applicable

requirements in regulations of the Council of Environmental Quality (CEQ) implementing the National Environmental Policy Act (NEPA) and in the FAA's NEPA-implementing procedures (FAA Order 1050.1F).

Further information on this topic is in Appendix F, *Las Vegas Metroplex Study Team Final Report*. Section 4 of this report, entitled *Identified Issues and Proposed Solutions*, discusses detailed considerations relating to the need for the Project. Exact answers to the number of conflicts and delay cannot be provided since the FAA does not have the specific information available. This is because conflicts between aircraft are routinely handled by air traffic controllers but are not logged. Moreover, the FAA does not track delays of less than 15 minutes.

In the Final EA, Section 2.1.1, *Description of the Problem*, the FAA discusses the existing conditions as follows:

“In addition, some arrival and departure flight paths intersect, requiring controllers to direct pilots to level off to maintain adequate vertical and lateral separation between aircraft. Aircraft arriving to LAS on all RNAV STARs and departing on some RNAV SIDs experience more than one segment of level-off during flight. Departures from HND and VGT experience delays due to conflicts with arrivals into LAS. These complex, converging interactions require more frequent controller-to-pilot and controller-to-controller communication and reduce the efficient use of the airspace.”

FAA's Response for Item #7: “Including non-grid noise exposure maps over the urban area”

This item is similar to one of CCDOA's comments on the Draft EA. According to FAA Order 1050.1F, Appendix B, the FAA does not prepare noise contours for large airspace actions involving more than one airport, which are not within the immediate vicinity of the airport, and/or includes actions above 3,000 feet AGL. The FAA used the required noise model, the AEDT model, and the required noise metric, DNL. Per FAA 1050.1F, AEDT can be used to provide noise contours for airport development projects or other actions in the immediate vicinity of the airport; however, the Las Vegas Metroplex Project is not an airport development project or action involving the immediate vicinity of one airport. Rather, it is a large airspace action involving more than one airport. The use of grid points is compliant with what is required under the FAA's implementing order. *See* FAA Order 1050.1F, Appendix B, *Federal Aviation Administration Requirements for Assessing Impacts Related to Noise and Noise-Compatible Land Use and Section 4(f) of the Department of Transportation Act (49 U.S.C. § 303)*.

Comment #2 Submitted by: Clark County Department of Aviation (CCDOA)

Comment Received:



Department of Aviation

ROSEMARY A. VASSILIADIS
DIRECTOR

POSTAL BOX 11005
LAS VEGAS, NEVADA 89111-1005
(702) 261-5211
FAX (702) 597-9553

June 18, 2020

Las Vegas Metroplex Final EA
Federal Aviation Administration
Western Service Center - Operations Support Group
2200 S. 216th St.
Des Moines, WA 98198-6547

Re: Comments on Final Environmental Assessment, Las Vegas Metroplex Project

To Whom It May Concern,

On January 17, 2020, the Clark County Department of Aviation (CCDOA) submitted a significant number of constructive comments on the Draft Environmental Assessment (EA) for the Las Vegas Metroplex Project (Project). The CCDOA continues to support this Project and the anticipated benefits of the improved NextGen procedures when implemented. However, we believe that the environmental review process could have been executed more effectively. Our comments on the Draft EA included 28 pages of specific, detailed recommendations intended to assist with providing a more straightforward and understandable account of current conditions, the proposed changes, and the potential consequences of those changes. We believe the CCDOA Draft EA comments would have provided a more transparent and understandable document for our community stakeholders. Throughout the Metroplex process, CCDOA has emphasized the importance of ensuring the Project and its impacts are clearly and transparently presented in a manner that can be fully understood by our community and elected representatives.

After reviewing the Final EA, the CCDOA still believes that the following should be provided in the document to provide a better description of the Project:

1. Positive findings on pollution, fuel burn, and flight time reductions;
2. An executive summary of the six minor flight path changes within the urban area;
3. Changing the scale and clarity of important maps and other figures;
4. Utilizing more up-to-date and detailed population and land-use data;
5. Providing specific flight track modeling assumptions (usage, fleet mix, altitudes, etc.);
6. Better describing existing conflicts between arriving and departing traffic and related delays; and
7. Including non-grid noise exposure maps over the urban area.

Because many of these CCDOA recommended enhancements were not incorporated, community stakeholders may have questions once the Project is implemented. We recommend that when these questions arise in the future, the Western Service Center, Operations Support Group be prepared to provide the response.

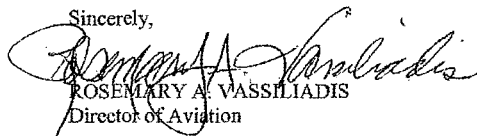


Clark County Board of Commissioners

Marilyn Kidgpatrick, Chair • Lawrence Weekly, Vice Chair
Larry Brown • James B. Gibson • Justin C. Jones • Michael Nait • Tiek Segerblom

We look forward to the operational enhancements and benefits the Project will achieve. Should you have any questions in the meantime, please feel free to contact Jeffrey M. Jacquart at 702-261-5510 or jeffj@mccarran.com.

Sincerely,



ROSEMARY A. VASSILIADIS
Director of Aviation

cc (via e-mail):

Shawn Kozica (FAA)
Raquel Girvon (FAA)
Tamara Swann (FAA)
Faviola Garcia (FAA)
Brad Mayhugh (FAA)
Chris Thomas (FAA)
Augustin Moses (FAA)
Ryan Weller (FAA)

Yolanda T. King
James Chrisley
Joseph Piurkowski
Charles Hall
John Howard
Jeff Jacquart

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TO: Las Vegas Metroplex Final EA
Federal Aviation Administration
Western Service Center - Operations Support Group
2200 S. 216th St.
Des Moines, WA 98198-6547

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FAA Response to Comment #2

This comment is identical to Comment #1. Please see the FAA's response to that comment.

Comments-Responses**Comment #3 Submitted by: Nevada Division of State Lands****Comment Received:**

From: [NevadaClearinghouse](#)
To: [9-LAS-Metroplex-FAA \(FAA\)](#)
Subject: Nevada State Clearinghouse Comments for Las Vegas Metroplex Final Environmental Assessment
Date: Friday, June 19, 2020 5:06:50 PM
Attachments: [image008.png](#)
[E2020-251 DWR Comment.pdf](#)
[E2020-251 NDOW Comment.pdf](#)

Ryan,

Attached please find a comments received through the Nevada State Clearinghouse for the FAA's Las Vegas Metroplex Final Environmental Assessment. If you have any questions or need any additional information please feel free to contact me.

Thank You,

Scott H. Carey
State Lands Planner
Nevada Division of State Lands
Department of Conservation and Natural Resources
901 S. Stewart Street, Suite 5003
Carson City, NV 89701
scarey@lands.nv.gov
(O) 775-684-2723 | (F) 775-684-2721

- Please reply directly from this e-mail and attach your comments.
- Please submit your comments no later than Friday June 19th, 2020.

[Clearinghouse project archive](#)

Questions? Scott Carey, Program Manager, (775) 684-2723 or nevadaclearinghouse@state.nv.us

____ No comment on this project ____ Proposal supported as written

AGENCY COMMENTS:

Nevada State Clearinghouse
Department of Conservation and Natural Resources
 901 South Stewart Street, Suite 5003
 Carson City, NV 89701
 775-684-2723
<http://clearinghouse.nv.gov>
www.lands.nv.gov

DATE: June 16, 2020
 Division of Water Resources
 Nevada SAI # E2020-251
 Project: E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County

____ No comment on this project ____ X Proposal supported as written

AGENCY COMMENTS:

General:

All Nevada water laws must receive full compliance.
 All water used on a project must be permitted by the State Engineer's Office.

Scott Carey

From: NevadaClearinghouse
To: Sue Gaskill
Subject: RE: Nevada State Clearinghouse Notice E2020-251 (E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County)

From: Sue Gaskill <sgaskill@water.nv.gov>
Sent: Tuesday, June 16, 2020 10:00 AM
To: Amanda Brownlee <abrownlee@water.nv.gov>; NevadaClearinghouse <NevadaClearinghouse@lands.nv.gov>
Cc: Chris Thorson <cthorsen@water.nv.gov>; Thomas Pyeatte <tpyeatte@water.nv.gov>
Subject: RE: Nevada State Clearinghouse Notice E2020-251 (E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County)

NEVADA STATE CLEARINGHOUSE

Department of Conservation and Natural Resources, Division of State Lands
 901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
 (775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 06/10/2020

U.S. Federal Aviation Administration

Nevada State Clearinghouse Notice E2020-251

Project: E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County

the Federal Aviation Administration (FAA) has prepared a Final Environmental Assessment (EA) for the Las Vegas Metroplex (LAS Metroplex) Project. The Final EA for the LAS Metroplex Project includes updates to the Proposed Action Alternative described in the Draft EA, issued on November 18, 2019, and its attendant Correction to the Draft EA (Correction Document), issued on December 6, 2019. These updates to the Proposed Action are described in Chapter 3 "Alternatives," Section 3.2.2.1, of the Final EA. In light of the updated Proposed Action Alternative, the FAA is hosting a 14-day Public Comment period, starting on June 8, 2020, and concluding on June 22, 2020, limited specifically to comments on the updates to the Proposed Action Alternative.

The LAS Metroplex Project would improve the efficiency of the national airspace system in the Las Vegas region by optimizing aircraft arrival and departure procedures at McCarran International Airport, Henderson Executive Airport, and North Las Vegas Airport. To review the final EA and other project documents please visit <http://www.metroplexenvironmental.com/>. Comments due to the Clearinghouse on June 19, 2020.

Follow the link below to find information concerning the above-mentioned project for your review and comment.

E2020-251 - <http://clearinghouse.nv.gov/public/Notice/2020/E2020-251.pdf>

- Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.

Scott Carey

From: NevadaClearinghouse
To: Brad Hardenbrook
Subject: RE: Nevada State Clearinghouse Notice E2020-251 (E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County)

From: Brad Hardenbrook <bhrdnbrk@ndow.org>
Sent: Friday, June 19, 2020 1:45 PM
To: NevadaClearinghouse <NevadaClearinghouse@lands.nv.gov>
Subject: RE: Nevada State Clearinghouse Notice E2020-251 (E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County)



NEVADA STATE CLEARINGHOUSE

Department of Conservation and Natural Resources, Division of State Lands
 901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
 (775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 06/10/2020

U.S. Federal Aviation Administration

Nevada State Clearinghouse Notice E2020-251

Project: E2020-251 EA FAA Las Vegas Metroplex Final Environmental Assessment - Clark County

The Federal Aviation Administration (FAA) has prepared a Final Environmental Assessment (EA) for the Las Vegas Metroplex (LAS Metroplex) Project. The Final EA for the LAS Metroplex Project includes updates to the Proposed Action Alternative described in the Draft EA, issued on November 18, 2019, and its attendant Correction to the Draft EA (Correction Document), issued on December 6, 2019. These updates to the Proposed Action are described in Chapter 3 "Alternatives," Section 3.2.2.1, of the Final EA. In light of the updated Proposed Action Alternative, the FAA is hosting a 14-day Public Comment period, starting on June 8, 2020, and concluding on June 22, 2020, limited specifically to comments on the updates to the Proposed Action Alternative.

The LAS Metroplex Project would improve the efficiency of the national airspace system in the Las Vegas region by optimizing aircraft arrival and departure procedures at McCarran International Airport, Henderson Executive Airport, and North Las Vegas Airport. To review the final EA and other project documents please visit <http://www.metroplexenvironmental.com/>. Comments due to the Clearinghouse on June 19, 2020.

Follow the link below to find information concerning the above-mentioned project for your review and comment.

E2020-251 - <http://clearinghouse.nv.gov/public/Notice/2020/E2020-251.pdf>

- Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.

- Please reply directly from this e-mail and attach your comments.
- Please submit your comments no later than Friday June 19th, 2020.

[Clearinghouse project archive](#)

Questions? Scott Carey, Program Manager, (775) 684-2723 or nevadaclearinghouse@state.nv.us

XX No comment on this project ____ Proposal supported as written

AGENCY COMMENTS:

Signature: D. Bradford Hardenbrook
Supervisory Habitat Biologist
NDOW – Southern Region

Date: 19 June 2020

FAA Response to Comment #3

The Federal Aviation Administration (FAA) appreciates the comments submitted through the Nevada State Clearinghouse. The FAA acknowledges that the Nevada Department of Wildlife has no comment on the FAA proposal. The FAA also acknowledges that the Nevada Division of Water Resources supports the FAA proposal as written.

Comments-Responses**Comment #4 Submitted by: Glassco, Greg****Comment Received:**

From: [Greg Glassco](#)
To: [9-LAS-Metroplex-FA \(FAA\)](#)
Subject: maps Metroplex
Date: Thursday, June 18, 2020 10:51:30 AM

Hi Ryan,

Can send or help me find maps showing the proposed flight and departure routes for the LAS Metroplex project?

I could not find them in the EA.

Thank you,

Greg Glassco

Yavapai-Prescott Indian Tribe

FAA Response to Comment #4

The Federal Aviation Administration (FAA) appreciates the commenter's request. The FAA provided the requested information by telephone.

Comments-Responses**Comment #5 Submitted by: Marques, Shania****Comment Received:**

From: [shania.marques](#)
To: [9-LAS-Metroplex-EA \(FAA\)](#)
Subject: FAA Las Vegas Metroplex Final Environmental Assessment and Public Comment Period
Date: Monday, June 15, 2020 3:50:18 PM

At this time, the Ely Shoshone Tribe does not have any comments or concerns. Please feel free to contact the tribe for future endeavors. We suggest contacting the Southern Paiute tribes if you have not already done so.

--

Shania Marques|Cultural Representative
Ely Shoshone Tribe
Cell: 775-296-3594
Office: 775-289-4133
Email: sjmarquesest@gmail.com

FAA Response to Comment #5

The Federal Aviation Administration (FAA) appreciates the commenter's review of the FAA proposal.

Comments-Responses

Comment #6 Submitted by: Department of Environment and Sustainability, Division of Air Quality

Comment Received:

From: [Brenda Whitfield](#)
To: [9-LAS-Metroplex-FA \(FAA\)](#)
Cc: [Mike Sword](#); [Robert Tekniepe](#); [Russell Merle](#)
Subject: DES Review of Final Environmental Assessment for the Las Vegas Metroplex Project
Date: Tuesday, June 23, 2020 1:58:29 PM
Attachments: [20200622 Final FA - Las Vegas Metroplex.pdf](#)

Dear Ms. Kozica,

The Department of Environment and Sustainability's review of the Final Environmental Assessment for the Las Vegas Metroplex Project is attached.

If you have questions, comments or need additional information, contact Robert Tekniepe at 702-455-4063.

Best Regards.

Brenda Whitfield
 Air Quality Specialist
 Department of Environment and Sustainability
 4701 W. Russell Road #200
 Las Vegas, NV 89118



4701 W. Russell Road 2nd Floor
Las Vegas, NV 89118-2231
Phone: (702) 455-5942 • Fax: (702) 383-9994
Marci Henson, Director

June 23, 2020

Shawn M. Kozica
Federal Aviation Administration
Western Service Center – Operations Support Group
2200 S. 216th St.
Des Moines, WA 98198-6547

9-las-metroplex-ca@faa.gov

Re: Release of the Federal Aviation Administration's Final Environmental Assessment for the Implementation of new RNAV-based flight procedures for the Las Vegas Metroplex

Dear Ms. Kozica:

The Department of Environment and Sustainability (DES) has reviewed the Final Environmental Assessment (EA) submitted by the Federal Aviation Administration (FAA) for the Las Vegas Metroplex Project. This environmental assessment is intended to evaluate the potential environmental impacts associated with implementation of new RNAV-based flight procedures. The FAA intends to improve the efficiency of the airspace serving McCarran International Airport, the Henderson Executive Airport and the North Las Vegas Airport. The Las Vegas Metroplex Project involves redesigning standard instrument arrival/departure procedures and the supporting airspace management structure of these airports to improve the overall efficiency of the national airspace system in the Las Vegas Valley.

After reviewing the proposal, DES has determined that the project should not have a significant impact upon air quality. According to the Section 4.2 (page 4-6) of the Final Environmental Assessment "The proposed action would not involve construction, or development of any physical disturbances of the ground." In addition, the general study area takes place 3000 feet above ground level (AGL), the most significant pollution impact would be the noise level. The results of noise modelling (incorporated in Appendix I) show that the revised proposal would not result in significant or reportable noise increases nor significant impacts for the other environmental impact categories.

Thank you for the opportunity to review and comment on this EA. If you have further questions, please contact Robert Tekniepe at (702) 455-4063.

Sincerely,

Mike Sword, Planning Manager
Division of Air Quality

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YOLANDA T. KING, County Manager

FAA Response to Comment #6

The Federal Aviation Administration (FAA) appreciates the comments submitted by the Clark County Department of Environment and Sustainability (DES). The FAA acknowledges that DES has determined that the project should not have significant impact upon air quality and would not result in significant or reportable noise increases or significant impacts in the other environmental impact categories.