Federal Aviation Administration

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

For the Cleveland-Detroit (CLE-DTW) Metroplex

April 2018

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 Environmental Assessment for the CLE-DTW Optimization of Airspace and Procedures in the Metroplex (CLE-DTW Metroplex) Project 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 (Final EA) dated April 2018.

Furthermore, this FONSI/ROD:

- Documents the FAA's finding that the CLE-DTW 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 Proposed Action. Implementation of the Proposed Action will result in no airport-related development, land acquisition, construction, or other ground disturbance activities.

In approving the CLE-DTW 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)(2), which authorizes and directs the FAA Administrator to 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, and 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 CLE-DTW 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 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 a primarily ground-based system to a system that is satellite-based and will allow the FAA to guide and track air traffic more precisely and efficiently. 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 Arrival Routes (STARs), and Standard Instrument Approach Procedures (SIAPs)) around the country that use emerging technologies and aircraft navigation capabilities. The implementation of RNAV and Required Navigation Performance (RNP) procedures enables the use of other Performance Based Navigation (PBN) technology in the NAS, and facilitates more efficient procedures such as Optimized Profile Descents (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 better utilize the limited airspace in congested Metroplex environments.

The CLE-DTW Metroplex project is intended to address specific issues related to the efficient flow of traffic in and out of the CLE-DTW 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 consists of development of standard air traffic procedures to enhance efficient handling and movement of air traffic, while maintaining safety, into and out of the CLE-DTW Metroplex airspace. The Proposed Action includes:

- 27 new RNAV STARs
- 19 new RNAV SIDs
- 2 radar vector based SIDs
- 8 Conventional Preferred Departure Routes
- 15 Conventional Preferred Arrival Routes
- 30 new RNP/LPV/PRM/or GPS RNAV approaches

The Proposed Action considered in this study would include the implementation of optimized RNAV SID and STAR procedures that would improve existing procedures. The primary components of the Proposed Action are, to the extent possible, redesign standard instrument arrival and departure procedures to more efficiently serve the CLE-DTW Metroplex Airports and to (1) improve the flexibility in transitioning traffic between enroute and terminal area airspace and between terminal area airspace area and the runways; (2) improve the segregation of arrivals and departures in terminal area and enroute airspace; and, (3) improve the predictability in transitioning traffic between enroute and terminal area airspace and between terminal area airspace and the runways. The optimized RNAV procedures would also provide vertical navigation, allowing the aircraft to climb to or descend from cruise altitude into the CLE-DTW Metroplex area with reduced pilot-controller communications and fewer inefficient level flight segments. Chapter 3 of the 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 require local or state action. The Proposed Action consists only of procedural changes intended to improve operational efficiency, increase flight path predictability, and reduce required controller-pilot voice communication. Therefore, implementation of the Proposed Action would not increase the number of aircraft operations in the CLE-DTW Metroplex airspace when compared to the No Action Alternative. The target date for starting implementation of the CLE-DTW Metroplex procedures is on or about late spring or early summer of 2018.

IV. PURPOSE AND NEED FOR THE PROPOSED ACTION

The CLE-DTW Metroplex project consisted of a Study Team phase, which analyzed the CLE-DTW Metroplex operational challenges and explored opportunities to optimize air traffic procedures therein. Although there were limited CLE RNAV SIDs and no SIDS or STARs in the

DTW Metroplex area, the Study Team concluded that these procedures could be improved to increase efficient use of the airspace. In particular, the Study Team identified several performance-based navigation (PBN) solutions expected to improve efficiency in the Cleveland-Detroit Metroplex. The modifications proposed were conceptual in nature, and did not include a detailed technical assessment to evaluate the feasibility of the procedures. A detailed technical assessment of the proposed solutions was reserved for the D&I Team to conduct. The Study Team materials reflect three key factors as causes of inefficiencies in the CLE-DTW Metroplex:

- Lack of flexibility in the efficient transfer of traffic between the enroute and terminal area airspace
- Complex converging and dependent route and procedure interactions
- Lack of predictability in the efficient transfer of traffic between enroute 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 will help improve the efficiency of the airspace in the CLE-DTW 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 will also comply with direction issued by Congress in the Modernization and Reform Act of 2012.

V. ALTERNATIVES

The following provides a summary of the alternatives development process and alternatives considered. Further details are available in Chapter 3 of the EA and Metroplex Study Team Final Report; Section 4; Table 6 "Issues Disposition Summary".

Identification and Evaluation of Potential Alternatives – On January 28, 2014 the CLE-DTW Metroplex Study Team (MST) began work to define operational problems in the CLE-DTW Metroplex and to identify potential solutions. The MST included experts on the Air Traffic Control (ATC) system for the CLE-DTW Metroplex. The work completed 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 CLE-DTW Metroplex. These meetings helped identify operational challenges associated with existing procedures and potential solutions that would increase efficiency in the CLE-DTW Metroplex airspace. Initially, the MST identified 69 potential issues related to existing procedures in the CLE-DTW Metroplex. Similar issues raised by all involved parties were consolidated and categorized by the MST to determine potential solutions. Of the total, 12 issues required additional coordination and input and could not be addressed within the time constraints of the MST process and were deferred to D&I for further consideration and 14 issues were deemed out of scope. Ultimately, conceptual solutions addressing the 43 remaining identified issues were

carried forward to the Design Phase. The solutions proposed were conceptual 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 in May 2014, the D&I Team began work on the procedure designs. First, the Study Team proposals were prioritized based on complexity, interdependencies with other procedures, and degree of potential benefit to the Metroplex. Second, the D&I Team 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.

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, 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 have undergone several iterations as they were refined to meet safety and efficiency requirements and represent the final version of the procedure considered.

In addition, the D&I Team considered public comments received during Community Involvement outreach and on the Draft EA to determine if refinements could be made to address environmental concerns while still meeting the Purpose and Need. The combined final procedure designs have been brought forward in this EA as the Proposed Action alternative.

Alternatives Analyzed in the EA- In addition to the Proposed Action (described above), the EA also analyzed the No Action Alternative. Under the No Action Alternative, the FAA would maintain 26 existing arrival and departure procedures for the CLE-DTW Metroplex. The 26 currently published SIDs and STARs in the CLE-DTW Metroplex serving the CLE-DTW Metroplex Study Airports that comprise the No Action Alternative include:

- 1 RNAV SID
- 2 Radar Vector SIDs
- 8 Conventional (i.e., non-RNAV) SIDs
- 15 Conventional (i.e., non-RNAV) STARs

NOTE: There were no RNAV STARs in the No Action Alternative.

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 CLE-DTW 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.

VI. 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 and its reasonable alternative. The FAA requires consideration of impacts of airspace actions from the surface to 10,000 feet AGL if the study area is larger than the immediate area around an airport or involves more than one airport. Furthermore, policy guidance issued by the FAA Program Director for Air Traffic Airspace Management states that for air traffic project environmental analyses noise impacts should be evaluated for proposed changes in arrival procedures between 3,000 and 7,000 feet AGL and departure procedures between 3,000 and 10,000 feet AGL for large civil jet aircraft weighing over 75,000 pounds.

In developing the General Study Area, the FAA collected radar data from flight paths in the CLE-DTW Metroplex. The General Study Area was designed to capture all flight paths identified in the radar data collected for the preparation of the 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. This is accounting for the terrain in and around the CLE-DTW 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 on Exhibit 4-1 in the EA and includes all or portions of 58 counties in four states Michigan, Ohio, Pennsylvania, and West Virginia. Detailed information regarding the affected environment with respect to each relevant impact category is presented in Chapter 4 of the EA.

The CLE-DTW Metroplex General Study Area encompasses two major airports:

- DTW – Detroit Metropolitan Wayne County Airport
- CLE- Cleveland Hopkins International Airport

The CLE-DTW Metroplex General Study Area encompasses 10 satellite airports (referred to in the EA as study airports):

- **Study Airports**
  - Toledo Express Airport (TOL)
  - Akron-Canton Regional Airport (CAK)
  - Oakland County International Airport (PTK)
  - Willow Run Airport (YIP)
  - Cuyahoga County Airport (CGF)
  - Burke Lakefront Airport (BKL)
  - Coleman A. Young Municipal Airport (DET)
  - Selfridge Air National Guard Base (MTC)
  - Wayne County Airport (BJJ)
  - Windsor Airport (CYQG)

VII. ENVIRONMENTAL CONSEQUENCES

The FAA analyzed the potential environmental impacts that could result from implementation of the Proposed Action as well as the impacts associated with the No Action Alternative on all

relevant environmental impact categories specified in FAA Order 1050.1F. The FAA evaluated both alternatives for conditions in 2018, the first year of implementation of the optimized air traffic procedures under the Proposed Action, and 2023, five years after expected implementation of the Proposed Action.

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

- Coastal Resources
- Construction Impacts
- Farmlands
- Fish, Wildlife, and Plants (Fish and Plants sub-categories only)
- Floodplains
- Hazardous Materials
- Pollution Prevention and Solid Waste
- Light Emissions and Visual Impacts
- Natural Resources and Energy Supply (Natural Resources sub-category only)
- Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks (Socioeconomic Impacts and Children's Environmental Health and Safety Risks sub-categories only)
- Water Quality
- Wetlands
- Wild and Scenic Rivers

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

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

Noise

As required by FAA Order 1050.1F, the Aviation Environmental Design Tool (AEDT) was used to model the noise impacts for the CLE-DTW 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). FAA also applied its criteria of significance, an increase of 1.5 dB DNL[1] or more on any noise sensitive area within areas exposed

[1] 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.

to 65 dB DNL or higher, to determine whether the project would result in a significant noise impact. Noise was analyzed for both the Proposed Action and the No Action Alternative during the year in which implementation of the Proposed Action would be initiated (2018) and a five-year look-ahead (2023).

The AEDT model computed DNL 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 (Proposed Action compared to No Action Alternative) to determine if implementing the Proposed Action would result in significant noise impacts. The analysis also identified any DNL increase of 3 dB or higher in areas exposed to noise between DNL 60 dB and 65 dB and any DNL increase of 5 dB or higher in areas exposed to noise between DNL 45 dB and 60 dB. While the EA refers to such increases as a "reportable noise increase," they are not significant. The results of the AEDT modeling indicated that:

1. The Proposed Action 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 Proposed Action 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 Proposed Action would result in a DNL increase of 5 dB or higher in areas exposed to noise between DNL 45 dB and 60 dB.

A total of 335 people, associated with six population centroids located in Sumter Township southwest of DTW would experience a DNL 5 dB increase in areas exposed to DNL between 45 dB and 60 dB. This reportable noise increase is attributable to aircraft operating on the proposed KAYLN1 and CCOBB1 SIDs. Although there is a reportable noise increase in 2018, these results indicate that the Proposed Action would not result in a significant noise exposure impact on population exposed to DNL 65 dB or higher levels under the Proposed Action. Thus, the Proposed Action would <u>not</u> result in significant noise impacts. Accordingly, no mitigation is required per FAA Order 1050.1F, Appendix A, paragraph 14.4c.

<u>Compatible Land Use</u>

The compatibility of existing and planned land uses near the vicinity of an airport is usually associated with the extent of the airport's noise impacts. If the noise analysis concludes that there is no significant impact, a similar conclusion usually may be drawn with respect to compatible

land use. Because the Proposed Action is not expected to have significant noise impacts (as measured by changes in noise exposure at populated census block centroids) in 2018 and 2023, there would be no compatible land use impacts.

Department of Transportation Act, Section 4(f)

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 Proposed Action; therefore, the Proposed Action would not physically use any potential Section 4(f) resources. Consequently, the focus of the evaluation of potential Section 4(f) resources was adverse impacts that have the potential to result in a constructive use. This could occur because of noise impacts. With regard to aircraft noise, a constructive use would occur should noise levels substantially impair the resource.

As noted under "Noise" above, the FAA's noise modeling included areas potentially protected under Section 4(f). However, no potential Section 4(f) resources located in areas exposed to DNL 65 dB or higher would experience a significant increase of DNL 1.5 dB or higher. Furthermore, the Proposed Action would not cause reportable increases of DNL 3 dB or higher in areas exposed to noise between DNL 60 dB and 65 dB or DNL 5 dB or higher in areas exposed to noise between DNL 45 dB and DNL 60 dB.

Under FAA Order 1050.1F, a significant impact would occur when a proposed action either involves more than a minimal physical use of a Section 4(f) resource or would result in a "constructive use" substantially impairing the 4(f) property. Because the Proposed Action would not result in either a physical or constructive use of Section 4(f) resources, there would be no significant impacts on those resources.

Historical and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) requires the FAA to consider the effects of its undertakings on properties listed or eligible for listing in the National Register of Historic Places (NRHP). In assessing whether an undertaking, such as the Proposed Action, affects a property listed or eligible for listing on the NRHP, FAA must consider both direct and indirect effects. Direct effects include the physical removal or alteration of an historic resource. Indirect effects include changes in the environment of the historic resource that could substantially alter the characteristics that made it eligible for listing on the NRHP. Such changes could include changes in noise exposure and visual impacts.

To assess the potential indirect effects of the Proposed Action on historic resources, an area of potential effects (APE) was defined. Federal regulations define the 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 APE for the CLE-DTW Metroplex was defined as being contiguous with the General Study Area. Historic resources were identified within the General Study Area and their locations are shown on Exhibit 4-5 in Chapter 4 of the EA. No Indian reservations or tribal lands were identified within the General Study Area.

No land acquisition, construction, or other ground disturbance activities would occur under the Proposed Action; therefore, the Proposed Action would not directly (i.e., physically) affect any historical, architectural, archaeological, or cultural resources. The assessment focused on the potential for indirect adverse effects to historic and cultural resources that may result from changes

in air traffic routes, such as aircraft noise and visual impacts. Based on the modeled results for the unique grids and General Study Area uniform grids, no historically, architecturally or culturally significant properties located in the area exposed to DNL 65 dB or higher would experience a significant increase of DNL 1.5 dB or higher. Furthermore, the Proposed Action would not cause reportable noise increases of DNL 3 dB or higher in areas exposed to noise between DNL 60 dB and 65 Db.

However, reportable noise of DNL 5 dB or higher in areas exposed to noise between DNL 45 dB and DNL 60 dB was identified. Based on the results of the noise analysis for 2018 conditions, a total of 335 people, associated with six population centroids located in Sumpter Township southwest of DTW would experience a DNL 5 dB increase; based on the noise analysis for 2023 conditions, 438 people associated with nine population centroids would experience a DNL 5 dB increase. This reportable noise increase is attributable to aircraft operating on the proposed KAYLN1 and CCOBB1 SIDs. In this area reportable change, two properties are potentially eligible for National Registry of Historic Properties listing. Aircraft overflight and visual presence have been documented in the Detroit area since approximately 1910. DTW airport was officially opened on February 22, 1930 and by 1958 had full radar, air traffic control, multiple arrival and departure runways similar to the current layout, and was certified for international jet aircraft. Historic jet traffic has served the region and exposed properties to jet aircraft overflight including the Sumpter Township since the mid-1950s. Concluding the further research on the subject properties determined the reportable increase would not diminish the integrity of the applicable property's setting for which the setting contributes to historical or cultural significance. The two properties in the immediate vicinity of the reportable noise increases would experience no effect in their continuing potential eligibility for NHRP listing from implementation of the Proposed Action due to the historic and continuing overflight presence since the mid-1950s. Therefore, the Proposed Action would not result in an adverse effect to historic properties.

According to FAA Order 1050.1F, Appendix A, the visual sight of aircraft, aircraft contrails, or aircraft lights at night, particularly at a distance that is not normally intrusive, should not be assumed to constitute an adverse impact. Changes in aircraft routes associated with the Proposed Action would generally occur at altitudes above 3,000 feet AGL; therefore, the visual sight of aircraft and aircraft lights would not be considered intrusive. Consequently, the Proposed Action, when compared with the No Action Alternative, would not cause a significant visual impact in 2018 or 2023. Any changes in aircraft traffic patterns would occur at altitudes and distances from viewers that would not substantially impair the view or setting of the Section 4(f) resources. Therefore, the Proposed Action would not result in potential impacts to Section 4(f) resources.

The FAA determined that under the meaning of 36 CFR, Parks, Forests, and Public Property, section 800.5(a), Protection of Historic Properties, the Proposed Action would not have an "adverse effect" on historic resources. Additionally, in accordance with the Section 106 of the NHPA, written concurrence of FAA's determination was obtained from Michigan, Ohio, Pennsylvania and West Virginia State Historic Preservation Officers' (SHPOs) with both the definition of the APE and the finding of no adverse effects. The concurrence letters can be found in Appendix A of the Final EA.

Wildlife (Avian and Bat Species)

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. Table 5-6 in Chapter 5 of the EA provides a summary of wildlife strikes reported by Study Airport between January 1, 1990 and December 31, 2016. In total, 2,329 reported strikes (96 percent of all strike records) occurred at altitudes below 3,000 feet AGL. A total of 1,472 strikes reported at the Study Airports included species identification.

The number of aircraft operations under the Proposed Action 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. Only three percent of bird/bat strikes (81of 2,329 total records) occurred at altitudes above 3,000 feet AGL as shown in Table 5-6. 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 Proposed Action, changes to proposed flight paths would primarily occur at or above 3,000 feet AGL and there would be no significant changes to arrival and departure corridors below 3,000 feet AGL.

Therefore, no significant impacts to bird 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.

Environmental Justice

Under the Proposed Action, no areas within the General Study Area would experience a change in noise exposure or other relevant impact category, (such as air quality, hazardous materials, and water quality) that would exceed applicable thresholds of significance. The Proposed Action would not affect low income or minority populations at a disproportionately higher level than other population segments. Therefore, no adverse direct or indirect effects would occur to any environmental justice populations within the General Study Area under the Proposed Action for 2018 and 2023.

Energy Supply

Under the Proposed Action, the optimized air traffic routes would improve the efficiency of air traffic routes and operations, including continuous climb-outs and optimized descents, where possible. However, aircraft fuel consumption would increase slightly compared with the No Action Alternative.

Aircraft fuel burn is considered a proxy for determining whether the Proposed Action 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. In comparison to the No Action Alternative, the Proposed Action would result in approximately 15 metric tons (MT) more fuel burned in 2018 (1.47 percent increase) and approximately 23 MT more fuel burned in 2023 (2.06 percent increase). Given these relatively small increases, the FAA expects that when compared with the No Action Alternative, the

Proposed Action would not adversely affect local fuel supplies. Therefore, no significant impact to energy supply that would exceed available or future supplies of energy.

Air Quality

The Proposed Action would not change the number of aircraft operations compared with the No Action Alternative. Furthermore, although the Proposed Action would result in more efficient air traffic routes and operations, there would be a slight increase in emissions when compared with the No Action Alternative.

Under the Proposed Action there would be a slight increase in fuel burn (1.46 percent in 2018 and 2.03 percent in 2023) 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 would not result in an increase in emissions and ground concentrations. Any operational changes that could result in an increase in fuel burn would occur at or above 3,000 feet AGL. Procedures above 3,000 feet AGL are considered a *de minimis* action, would have little if any effect on emissions and ground concentrations, and are presumed to conform to all SIPs for criteria pollutants.

Therefore, no further air quality analysis is necessary, a conformity determination is not required, and the Proposed Action 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.

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. Greenhouse gas emissions were quantified in terms of carbon dioxide equivalent (CO_2e), which was calculated by multiplying the number of gallons of fuel projected to be burned under both the Proposed Action and the No Action Alternative by the CO_2e associated with each gallon of fuel burned (9.7438 kg of CO_2e). Based on the fuel burn values reported in the EA, CO_2e emissions would increase slightly with implementation of the Proposed Action compared with the No Action Alternative (47 MT or 1.47 percent more in the first year of implementation (2018) and 71.92 MT or 2.06 percent more in the five-year look-ahead year (2023).

Cumulative Impacts

NEPA implementing regulations define cumulative impacts as the incremental impact of the action when added to the impacts of other past, present, and reasonably foreseeable future actions regardless of the agency, federal or nonfederal, undertaking such actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time.

Due to the nature of the resources affected by the Proposed Action, only past, present, and reasonably foreseeable future actions that would have direct or indirect effects on aircraft flight patterns within the General Study Area were considered in this analysis. Reasonably foreseeable future actions were considered to be projects likely to be completed before 2023.

The same significance thresholds used to determine impacts associated with the Proposed Action were applied to determine significant cumulative impacts. Because there is no potential for impact, those environmental resource categories that are not affected by the Proposed Action (listed in Section 4.2 of the EA) were not further evaluated for cumulative impacts. Similarly, if no impacts to an environmental resource category were identified when compared to the No Action Alternative, then no further analysis for cumulative impacts was required.

Extensive research was conducted to identify relevant airport improvement projects related to runway changes. Sources reviewed included FAA, state, and local Capital Improvement Project lists and websites for all airports and associated state, county, and local planning, public works, and transportation agencies. No documents identified included information on past, present, and reasonably foreseeable future actions with the potential for direct or indirect effects on aircraft flight patterns within the General Study Area. Accordingly, no cumulative impacts would be anticipated for the Proposed Action when compared to the No Action Alternative for either 2018 or 2023. Based on that analysis, the FAA does not expect the Proposed Action to result in significant cumulative impacts.

Mitigation

Thresholds of significance for any environmental impact category would not be exceeded due to the Proposed Action; therefore, no mitigation is being proposed as part of this project.

Other Considerations

The Proposed Action 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)(l) and (2)]. To the extent applicable, and as there are no significant impacts under noise or compatible land use, the Proposed Action is consistent with the plans, goals, and policies for the area and with the applicable regulations and policies of federal, state, and local agencies.

VIII. AGENCY AND PUBLIC INVOLVEMENT

Public involvement and early consultation process began with the initiation of the preparation of the EA. The FAA distributed an early notification letter to 431 federal, state, and local agencies and elected officials on June 11, 2015, and placed a legal notice in four major newspapers covering the General Study Area. In addition, a website was developed (http://metroplexenvironmental.com). The FAA provided the web address in the public notices as well as the letters to agencies and elected representatives. Copies of the notification letter, legal notice, and comments received are provided in Appendix A of the EA.

In addition, for the first time as part of a Metroplex design process, the FAA engaged in community involvement. This included a number of meetings, briefings, and/or public workshops in the Study Area. Depending on the type of community outreach meeting, the FAA

invited stakeholders, such as the Study Airport sponsors; local, state, and federal elected officials; user groups including pilots and air carriers; and/or the public to attend. During the different events, the FAA invited comments from attendees about the preliminary designs. The FAA then considered the comments in the development of the procedures for the CLE-DTW Metroplex.

The Draft EA was released on November 10, 2017. The FAA updated the project website to reflect the release of the EA, including making the entire EA available electronically. The FAA published notice of availability of the EA in four regional newspapers. Digital copies were made available to the public in 69 libraries. The FAA initiated consultation with the State Historic Preservation Officer (SHPOs) for the States of Michigan, Ohio, Pennsylvania, and West Virginia on June 13, 2017, in accordance with Section 106 of the *National Historic Preservation Act of 1966* (16 U.S.C. § 470 *et seq.*) and the implementing regulations at 36 C.F.R. Part 800. Additional consultation was undertaken with the Michigan SHPO office beginning and concluding October 26, 2017 and the Sumpter Township Clerk's Office beginning October 27, 2017 and concluding November 1, 2017 regarding above ground properties that may be potentially eligible for NRHP listing. As there are no on-tribal or off-tribal lands located within the General Study Area based on readily available data and there are no historically recognized lands within the General Study Area, no Tribal Historic Preservation Officers (THPOs) contacted as part of the Section 106 process.

IX. THE AGENCY'S FINDINGS

A. The CLE-DTW Metroplex Project 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, RNP approaches, and Conventional SIDs and STARs in the CLE-DTW Metroplex. The Project will enhance the efficiency of the airspace in the CLE-DTW Metroplex by creating more efficient air traffic routes and more predictable ground and vertical paths. This Project will allow the FAA to begin to achieve its NextGen goals. In deciding to implement the Proposed Action, the FAA carefully evaluated both the Proposed Action and the No Action Alternatives. The No Action Alternative would do nothing to improve the efficiency of the

airspace nor would it 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. This project does not involve the use of any historic sites or other properties protected under Department of Transportation Act Section 303(c), also known as Section 4(f) or under the National Historic Preservation Act.

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 would result. The project would also not result in a constructive use of any protected property because it would not cause increases in noise sufficient to impair the value of those resources. None of the protected properties in the General Study Area has a quiet setting as a generally recognized purpose and attribute.

The project would 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 with the State Historic Preservation Officers in each state within the General Study Area.

C. Clean Air Act, Section 176 (c) (1) Conformity Determination (42 U.S.C. § 7506(c)).

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 would not result in the development of physical facilities nor would it result in or induce an increase in operational capacity in the study area. The project will not cause a new violation of the NAAQS, worsen an existing violation, or delay meeting the standards of the NAAQS in the study area.

D. Findings Pursuant to the Purpose and Need

Upon implementing the Proposed Action, the airspace that serves the Study Airports would include optimized air traffic routings to improve the efficiency of the air traffic routes. Based on the EA prepared for the Proposed Action, this FONSI/ROD is issued. Both the EA and the FONSI/ROD are hereby incorporated into this decision.

X. DECISIONS AND ORDERS

After careful and thorough consideration of the EA and the facts contained herein, I find that the Proposed Action 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 referenced 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 the Project described in the

EA is reasonably supported, and issuance of a finding of no significance is appropriate. Therefore, an environmental impact statement will not be prepared.

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 EA.

Accordingly, under the authority delegated to me by the Administrator of the FAA, I approve the operational changes as described in the proposed action alternative and direct that actions be taken that will enable implementation of the CLE-DTW Metroplex project.

Approved: Jodi S. McCarthy

Jodi McCarthy
Vice President, Mission Support Services
Air Traffic Organization
Federal Aviation Administration

April 30, 2018
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.