

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Finding of No Significant Impact and Record of Decision
for
Environmental Assessment for Wing Aviation, LLC Proposed Drone
Package Delivery Operations in Dallas–Fort Worth, Texas

Summary

The Federal Aviation Administration (FAA) prepared the attached final Environmental Assessment (EA) to analyze the potential environmental impacts of amending the Operations Specifications (OpSpec) of Wing Aviation, LLC (Wing), a subsidiary of Alphabet Inc., per its 49 United States Code (U.S.C.) Section 44807 exemption and Part 135 certificate that allow Wing to carry the property of another for compensation or hire beyond visual line of sight (BVLOS) using its it Hummingbird Unmanned Aircraft System (UAS). Wing is seeking to amend its OpSpec to expand its unmanned aircraft (UA; also referred to as a drone) commercial package delivery operations in the Dallas–Fort Worth (DFW) metropolitan area. The EA was prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA; 42 U.S.C. § 4321 et seq.); Council on Environmental Quality (CEQ) NEPA-implementing regulations (40 Code of Federal Regulations [CFR] parts 1500 to 1508); and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

After reviewing and analyzing available data and information on existing conditions and potential impacts, the FAA has determined that the Proposed Action would not significantly affect the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required, and the FAA is issuing this Finding of No Significant Impact (FONSI) and Record of Decision (ROD). The FAA has made this determination in accordance with applicable environmental laws and FAA regulations. The EA is incorporated by reference into this FONSI/ROD.

Purpose and Need

Wing’s request to amend its OpSpec to expand drone delivery operations in the DFW metropolitan area requires FAA review and approval. The FAA has a statutory obligation to review Wing’s request to

determine whether the amendment would affect safety in air transportation or air commerce and whether the public interest requires the amendment.

The purpose of Wing's proposal is to expand drone delivery operations throughout the DFW metropolitan area. Wing has determined that the DFW market is appropriate for expansion after conducting initial pilot operations in the Frisco and Little Elm neighborhoods. Drone delivery operations are conducted in partnership with local merchants and provide an alternative to in-store pickup. Deliveries are conducted at the time of the customer's choosing and directly to the customer's home in the operating area. Expansion of deliveries would provide delivery flexibility to a greater number of partnering businesses and consumers throughout the DFW metropolitan area.

See Section 1.3 of the EA for detailed discussion.

Proposed Action

The Proposed Action is the FAA approval of an amendment to Wing's B050 OpSpec, Authorized Areas of En Route Operations, Limitations, and Provisions, specifically to a reference section titled Limitations, Provisions, and Special Requirements, dated March 17, 2022. The amendment would add a new paragraph with descriptive language about the expansion of the current DFW operating area boundaries. This amendment would allow Wing to expand the geographic scope of newly established nest locations as well as increase their number of daily operations from 100 to 400 deliveries per day from each nest. Wing is projecting to establish up to 25 nests in the DFW operating area under the scope of the Proposed Action over the next year. The exact timing and pace of nest installation is dependent on prevailing market conditions. If, in the future, Wing wanted to exceed 25 nests in the operating area, additional safety and NEPA reviews would be required. Nests would be distributed throughout the DFW metro area following a measured rollout plan to be developed with Wing's partners and continuing best practices from Wing's established community outreach program. Wing's nests would be located in established parking lots of commercial areas whose use is consistent with local zoning and land use requirements, such as shopping centers, large individual retailers, and shopping malls. Wing must comply with all local requirements, including zoning, to maintain consistency with community planning. Proposed operations would occur only during daylight hours, approximately 7:00 a.m. to 7:00 p.m., typically 7 days of the week, and would generally exclude holidays unless related to a community event or holiday-related promotion.

See Section 2.2 of the EA for further information.

Alternatives

Alternatives analyzed in the EA include the Proposed Action and the no action alternative. Under the no action alternative, the FAA would not issue the amendment to the OpSpec to enable Wing to expand commercial UA package delivery operations in DFW. Wing could continue operating its Hummingbird UA from 3 nests within the Frisco and Little Elm communities under Part 135, which includes up to 100 deliveries per day per nest, and at other locations under 14 CFR Part 107, which limits operations to UA weighing less than 55 pounds and within visual line of sight. Consumers in the areas not served by UA would be expected to continue to use personal ground transportation to retrieve small goods. This alternative does not support the stated purpose and need.

See Section 2.1 of the EA for further information.

Environmental Impacts

The potential environmental impacts of the Proposed Action and no action alternative were evaluated in the EA for each environmental impact category identified in FAA Order 1050.1F. Chapter 3 of the EA describes the affected environment within the project study area and identifies the following environmental impact categories that are not analyzed in detail: Air Quality and Climate; Coastal Resources; Farmlands; Hazardous Materials, Solid Waste, and Pollution Prevention; Land Use; Natural Resources and Energy Supply; Socioeconomics; Children's Environmental Health and Safety Risks; Visual Effects (Light Emission Only); and Water Resources (Wetlands, Floodplains, Surface Water, Groundwater, and Wild and Scenic Rivers).

Chapter 3 also evaluates the potential environmental consequences of the Proposed Action for each of the remaining environmental impact categories and documents the finding that no significant environmental impacts would result from the Proposed Action. A summary of the documented findings for each impact category, including requisite findings with respect to relevant special purpose laws, regulations, and executive orders, is presented below.

- **Biological Resources, EA Section 3.3 and Appendix E.** The Proposed Action is not anticipated to significantly influence wildlife within the affected area. Operations would occur mostly in an urban environment, typically well above the tree line and away from sensitive habitats. Individual areas would only briefly experience increased ambient sound levels during transit and delivery operations. Wing has also agreed to implement a bald eagle (*Haliaeetus leucocephalus*)

monitoring plan which includes routine monitoring of nests within the affected area and the establishment of 1,000 feet avoidance areas surrounding established nests. Monitoring reports will be submitted to U.S. Fish and Wildlife Service (USFWS) Region 2 and the Texas Parks & Wildlife Department (TPWD). Given these factors, FAA determined that the Proposed Action “may affect, but is not likely to adversely affect” whooping crane (*Grus americana*) and golden-cheeked warbler (*Setophaga chrysoparia*). On May 8, 2023, the USFWS issued concurrence of these effects. This concluded the FAA’s obligations under Section 7 of the Endangered Species Act. In addition, the Proposed Action would not result in long-term or permanent loss of wildlife species; would not result in substantial loss, reduction, degradation, disturbance, or fragmentation of native species’ habitats or populations; and would not have adverse impacts on reproductive success rates, natural mortality rates, non-natural mortality, or ability to sustain the minimum population levels of any species. Therefore, no significant impacts on biological resources are expected under the Proposed Action.

- **Department of Transportation Act Section 4(f), EA Section 3.4.** The FAA has determined that drone operations would not cause substantial impairment to Section 4(f) resources that could occur in the study area and would not be considered a *constructive use* of any Section 4(f) resource. Occasional flyovers would not result in significant noise levels at any location within the study area, and the short duration of en route flights (approximately 15 seconds) would minimize any potential for significant visual impacts. In addition, Wing’s flight planning software is designed to increase variability in flight paths to minimize overflights of any given location; with diversification of flight paths, the frequency of overflights would inversely scale as the distance from a nest increases. As discussed in Table J-1, Wing has established a direct line of communication with TPWD to discuss any concerns regarding parkland noise and will carefully coordinate any parkland delivery operations that may occur with the appropriate managing parkland entities. Therefore, the Proposed Action would not result in significant impacts on Section 4(f) resources.
- **Historical, Architectural, Archaeological, and Cultural Resources; EA Section 3.5, Appendices F and G.** The Proposed Action would not significantly influence historical, architectural, archaeological, and cultural resources. Drone effects on historic properties are limited to non-physical, reversible impacts (i.e., the introduction of audible and/or visual elements). The number of daily flights that Wing is projecting from each nest—up to 400 deliveries per day

spreading in all directions from each nest—means that any historic or cultural resource would be subject to only a small number of overflights per day, if any. Additionally, the FAA conducted a noise exposure analysis for the Proposed Action and concluded that noise levels would be below the FAA’s threshold for significance. Based on the information available, the FAA made a finding of *no historic properties affected* in accordance with 36 CFR Part 800. The FAA received concurrence from the State Historic Preservation Office (SHPO) on May 1, 2023, that “*no historic properties would be affected*” by the Proposed Action. Therefore, the Proposed Action would not result in significant impacts on historical, architectural, archaeological, or cultural resources.

- **Noise and Noise-Compatible Land Use, EA Section 3.6.** The Proposed Action is not anticipated to result in any significant changes in the overall noise environment within the affected area. Noise impacts would be significant if the action would increase noise by day-night average sound level (DNL) 1.5 decibel (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 will 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. The maximum noise exposure levels attributable to the Proposed Action are associated with nest operations, where DNL 65 dB occurs within 50 feet of a nest perimeter and DNL 60 dB occurs within 75 feet. However, nests would be located at least 75 feet away from noise-sensitive areas, as described in the Proposed Action. In addition, when nests are planned to be within the controlled surface areas of Class B and Class D airspaces, the nest would be placed 300 feet away from noise-sensitive areas, as described in the Proposed Action. Therefore, no significant impacts on noise and noise-compatible land use are expected under the Proposed Action.
- **Environmental Justice, EA Section 3.7.** The Proposed Action would not result in disproportionately high or adverse effects on minority or low-income populations. Drone noise emissions could be perceptible in areas within the study area but would stay well below the level determined to constitute a significant impact (DNL 65 dB). In addition, Wing’s service is meant to provide additional and on-demand access to small goods and groceries without making use of roads and provides a greater benefit in more congested areas. Commercial drone delivery services may therefore result in a positive effect on low-income and minority communities who experience greater traffic congestion and have no other mode of transportation. As such, the Proposed Action would not result in significant environmental

justice impacts or disproportionately high and adverse effects on minority and low-income populations.

- **Visual Effects (Visual Resources and Visual Character), EA Section 3.8.** Impacts on visual resources are expected to be less than significant. The Proposed Action would make no changes to any landforms or land uses; thus, there would be no effect on the visual character of the area, as the nests would be located in established commercial areas. Drone operations would not introduce new light emissions, and the short duration of overflights as well as the low number of overflights within any given location would minimize the potential for substantial visual impacts. Therefore, no significant impacts on visual effects are expected under the Proposed Action.

Please refer to Chapter 3 of the EA for a full discussion of the analysis for each environmental impact category.

Chapter 4 of the EA provides an analysis of the potential cumulative impacts of the Proposed Action when added to other past, present, and reasonably foreseeable actions. The FAA has determined that the Proposed Action would not result in significant cumulative impacts in any environmental impact category.

Public Involvement and Coordination

On September 8th, 2023, the FAA published the draft EA for a 30-day public comment period. The FAA received comments during the comment period for this EA, which closed on October 9, 2023. The FAA considered all public comments when preparing the EA. Comments were received in writing at 9-FAA-Drone-Environmental@faa.gov.

See Section 1.4 and Appendix J of the EA for further information.

Finding

The FAA finding is based on a comparative examination of environmental impacts for each of the alternatives studied during the environmental review process. The EA discloses the potential environmental impacts for each of the alternatives and provides a full and fair discussion of those impacts. Based on the FAA's review and analysis and consideration of comments, it has determined that

there would be no significant impacts on the natural environment or surrounding population as a result of the Proposed Action.

The FAA believes the Proposed Action best fulfills the purpose and need identified in the EA. In contrast, the no action alternative fails to meet the purpose and need identified in the EA. An FAA decision to take the required actions and approvals is consistent with its statutory mission and policies supported by the findings and conclusions reflected in the environmental documentation and this FONSI/ROD.

After careful and thorough consideration of the facts contained herein and following consideration of the environmental impacts described, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act of 1969 and other applicable environmental requirements, and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA.

Decision and Order

The FAA recognizes its responsibilities under NEPA, CEQ regulations, and its own directives. Recognizing these responsibilities, the undersigned has carefully considered the FAA's goals and objectives in reviewing the environmental aspects of the Proposed Action to approve Wing's request to expand drone delivery services in the DFW metropolitan area. Based upon the above analysis, the FAA has determined that the Proposed Action meets the purpose and need.

The environmental review included the purpose and need to be served by the Proposed Action, alternatives to achieving them, the environmental impacts of these alternatives, and conditions to preserve and enhance the human environment. This decision is based on a comparative examination of the environmental impacts for each of these alternatives. The EA provides a fair and full discussion of the impacts of the Proposed Action. The NEPA process included appropriate consideration for avoidance and minimization of impacts, as required by NEPA, the CEQ regulations, and other special-purpose environmental laws, and appropriate FAA environmental orders and guidance.

The FAA has determined that environmental concerns presented by interested agencies and the public have been addressed in the EA. The FAA believes that, with respect to the Proposed Action, the NEPA requirements have been met. FAA approval of this environmental review document indicates that applicable Federal requirements for environmental review of the Proposed Action have been met.

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 of NEPA and other applicable environmental requirements, and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant of Section 102(2)(C) of NEPA. In addition, the action is the type of action that does not require an Environmental Impact Statement under NEPA.

Issued on: 11/8/23

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Right of Appeal

This FONSI/ROD constitutes a final agency action and a final order taken pursuant to 49 U.S.C. §§ 40101 et seq., and constitutes a final order of the FAA Administrator, which is subject to exclusive judicial review by the Courts of Appeals of the United States in accordance with the provisions of 49 U.S.C. § 46110. Any party having substantial interest in this order may apply for a 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.