

# **WRITTEN RE-EVALUATION OF THE 2024 FINAL PROGRAMMATIC ENVIRONMENTAL ASSESSMENT, MITIGATED FINDING OF NO SIGNIFICANT IMPACT, AND RECORD OF DECISION FOR DRONE PACKAGE DELIVERY IN NORTH CAROLINA**

## **WING AVIATION, LLC AMENDMENT TO OPERATIONS SPECIFICATIONS (OPSPECS)**

### **Introduction and Background**

#### **Introduction**

This written re-evaluation (WR) evaluates whether supplemental environmental analysis is needed to support Federal Aviation Administration (FAA) Office of Safety Standards, Flight Standard Service decision to amend Wing Aviation, LLC's (Wing's) OpSpecs necessary to expand unmanned aircraft (UA) commercial package delivery operations in the Charlotte, North Carolina metropolitan area (Charlotte metro area).

The FAA's issuance of an amended OpSpecs is a major federal action subject to the requirements of the National Environmental Policy Act of 1969 (NEPA). As such, the FAA must assess the potential environmental impacts of issuing the amended OpSpecs. FAA Order 1050.1F (2015), Environmental Impacts: Policies and Procedures, provides that the FAA may prepare a WR to determine whether the contents of a previously prepared environmental document remain substantially valid or whether significant changes to a previously analyzed proposed action require the preparation of a supplemental environmental assessment (EA) or environmental impact statement (EIS). The affected environment and environmental impacts of drone package delivery operations in the Charlotte metro area were analyzed in the 2024 Final Programmatic Environmental Assessment for Drone Package Delivery in North Carolina (2024 PEA). The FAA's Mitigated Finding of No Significant Impact (Mitigated FONSI) and Record of Decision (ROD) were issued for this action on July 12, 2024. This WR evaluates whether supplemental environmental analysis is needed to support the FAA's decision to amend Wing's OpSpecs.

In accordance with FAA Order 1050.1F, Paragraph 9.2.c states that the preparation of a new or supplemental EA is not necessary when the following can be documented:

1. The proposed action conforms to plans or projects for which a prior EA and FONSI have been issued or a prior EIS has been filed and there are no substantial changes in the action that are relevant to environmental concerns;
2. Data and analyses contained in the previous EA and FONSI or EIS are still substantially valid and there are no significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; and

3. Pertinent conditions and requirements of the prior approval have been, or will be, met in the current action.

This WR provides documentation for the above three factors including the FAA’s conclusion that the contents of the 2024 PEA remain current and substantially valid and that the decision to amend Wing’s OpSpecs as described below does not require the preparation of a new or supplemental EA or EIS.

## Background

The 2024 PEA analyzed the potential environmental impacts of commercial drone package delivery operations from takeoff and landing areas (referred to as hubs) in North Carolina. The North Carolina Department of Transportation (NCDOT) maintains the authority to implement and manage regulations pertaining to state laws as set by the North Carolina State General Assembly concerning drone operations. The NCDOT developed a forecast for the 2024 PEA to identify potential drone package delivery areas and estimate future operational levels based on market analyses. The NCDOT-developed forecast identified seven regions within North Carolina as viable operating areas, including the Charlotte metro area (**Figure 2**). The proposed action analyzed in the 2024 PEA was developed based on NCDOT’s maximum forecasted operations as described below.

The FAA published a Notice of Availability (NOA) for the Draft 2024 PEA on April 10, 2024. The FAA received six comment submissions during the 30-day public comment period. Due to the nature of these comments, the FAA did not make substantive changes to the Final PEA. On July 12, 2024, the FAA published an NOA for the 2024 Final PEA and Mitigated FONSI/ROD.

The 2024 PEA forecasted daily operations for the Charlotte metro area to include a range of estimated daily deliveries from 1,649–4,801, occurring from an estimated six hub locations within the operating area. The 2024 PEA assessed up to 500 delivery flights per day per hub using daylight hours from 0700 (7:00 a.m.) to 2200 (10:00 p.m.), up to seven days per week, 365 days per year. The 2024 PEA did not consider nighttime operations. The 2024 PEA considered representative UA specification (UAS) characteristics depicted in **Table 1** (see Section 2.2.1 of the 2024 PEA). Operations analyzed included delivery distances for the representative UAS typically ranging from 3–10 miles one-way or 6–20 miles roundtrip, with a duration of around 5–20 minutes one-way or 10–40 minutes roundtrip and cruising altitudes for drone package deliveries typically ranging from 150–375 feet above ground level (AGL) and not exceeding 400 feet AGL.<sup>1</sup>

---

<sup>1</sup> Current FAA exemptions for drone package delivery include a condition and limitation that states the altitude of the aircraft must not exceed 400 feet AGL.

**Table 1. Unmanned Aircraft Specification Characteristics**

<b>Characteristics</b>	<b>Criteria</b>
Platform/Vehicle Type	Multi-copters (2 to 8 propellers), fixed-wing, and hybrid aircraft (vertical lift with fixed-wing cruise)
Power	Electric motor
Delivery Mechanism Types	Drop off, tethered (wire/cable), customer unloads, ground drop, parachute
Maximum Aircraft Weight	Approximately 87 pounds (lbs)
Maximum Payload (Package) Weight	Approximately 5 lbs
Maximum Aircraft Takeoff Weight	Approximately 92 lbs
Typical Cruise Altitude	150–375 feet above ground level (AGL)
Maximum Cruise Altitude	400 feet AGL
Hours of Operation	7:00 a.m.–10:00 p.m.
Operation Days	7 days per week, 365 days per year

The 2024 PEA described flight operations for a typical UA currently utilized for other drone package delivery operations (see Section 2.2.2 of the 2024 PEA). The five phases of operation for a typical multi-copter or hybrid UA are described below. **Figure 1** shows a typical flight profile.

### **Takeoff and Climb**

The takeoff and climb phase is described as the portion of the flight in which a fully loaded UA takes off from the hub and climbs vertically. The UA may then hover briefly as it conducts various systems checks to ensure it is functioning properly. With a multi-copter design, the UA can take off and descend vertically, as well as hover. Typical flights begin with the UA departing from a hub and ascending vertically to no more than 400 feet AGL.

### **En Route Outbound**

The en route outbound phase is defined as the part of the flight in which the fully loaded UA flies a pre-programmed route from its hub to a delivery point. During this flight phase, typical normal cruising speeds range from 30–60 knots (35–70 miles per hour), and typical cruising altitudes range from 150–375 feet AGL.

### **Delivery**

The delivery phase is defined by descent from the en route outbound phase to a delivery point to deliver a package. Upon arrival at the delivery point, the UA descends vertically to deliver the package. The UA may hover at an altitude that varies in height. Most UA use a tether to lower the package from the UA to the ground while the drone hovers. Once the UA releases the package from the tether, it climbs vertically to the cruise altitude and begins the en route inbound phase. The delivery process typically takes 30–90 seconds, depending on the operator (NCDOT 2023).

### **En Route Inbound**

Upon completion of a delivery, the UA flies from the delivery point back to a hub.

## Descent and Landing

Upon reaching the hub, the UA vertically descends, lands, and turns off.

### Typical Flight Profile

Typical Flight Duration: 10–40 minutes round-trip

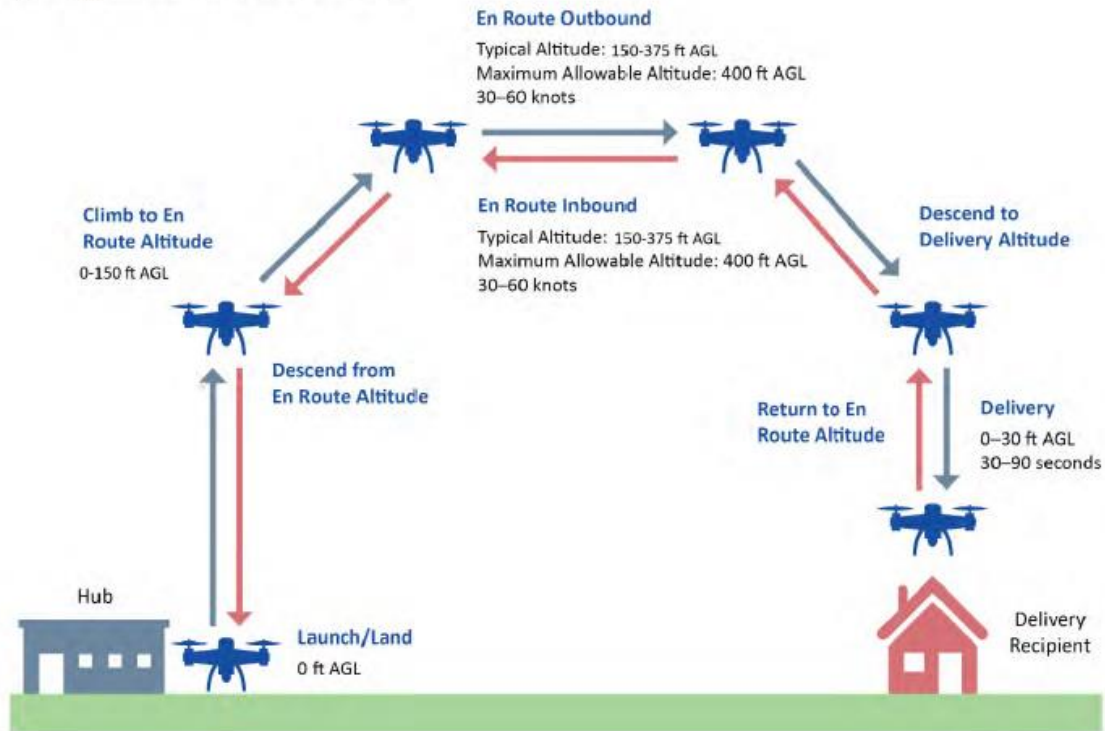


Figure 1. Typical Flight Profile

The FAA developed an Environmental Checklist to be used to determine if a commercial drone operator’s proposal to conduct drone package delivery operations under Part 135 in the state of North Carolina is covered under the scope of the 2024 PEA. On September 5, 2024, Wing submitted a proposal to operate a hybrid (rotary and fixed-wing) aircraft platform in the Charlotte metro area (see Table 1). The FAA completed and approved the Environmental Checklist for the 2024 PEA on December 18, 2024.

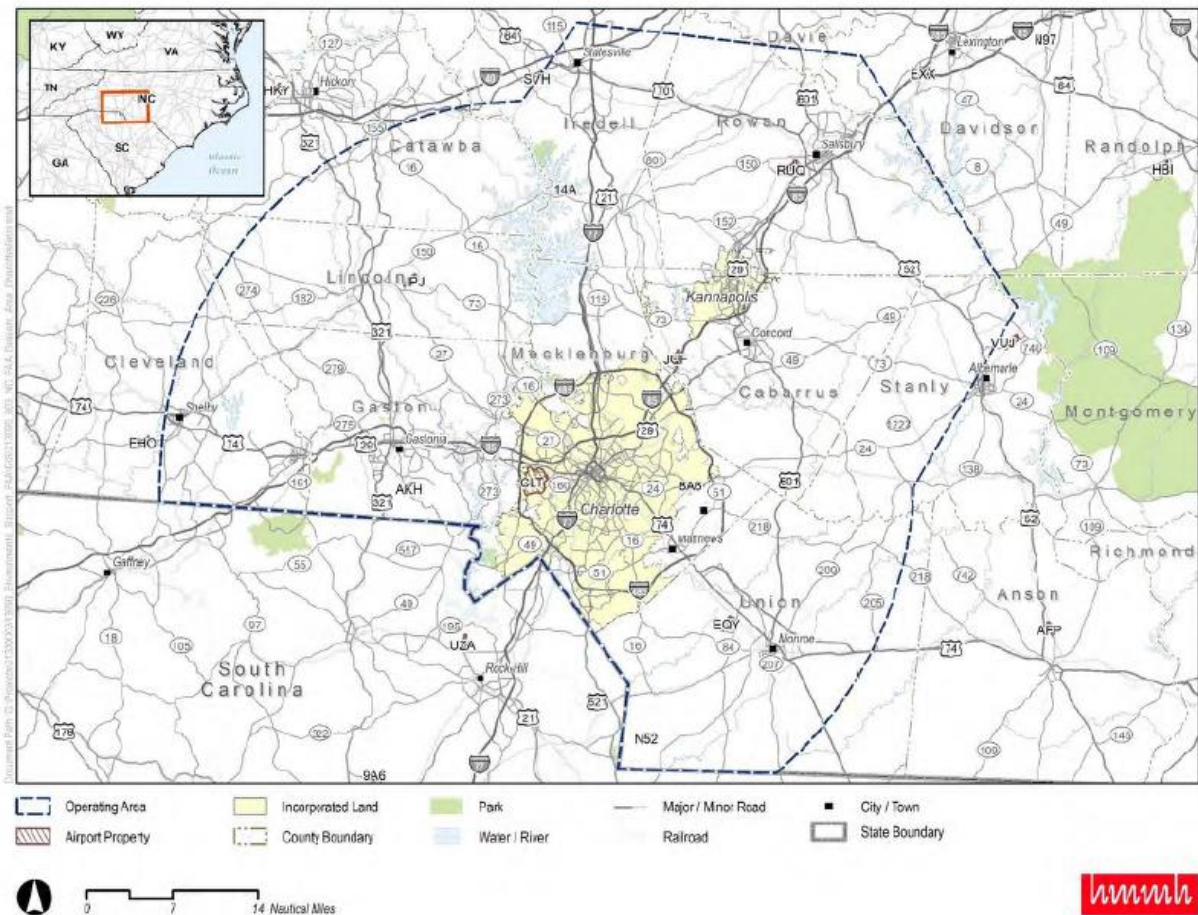


Figure 2. Charlotte Metro Operating Area

## Proposed Action

Wing has requested an OpSpecs amendment to increase the scope of its operations to include drone package delivery operations in the Charlotte metro area (operating area herein) using hybrid aircraft. The proposed hybrid aircraft specifications fall within the scope of the representative UAS as described in **Table 1**, weighing less than 55 lbs, with a typical cruise altitude of 165 AGL. Flight operations would be consistent with those described above and in **Figure 1** (see Section 2.2.2 of the 2024 PEA). The operating area and days of operations would remain the same as was previously analyzed in the 2024 PEA (see Chapter 2 of the 2024 PEA).

Aspects of the proposed action that differ from the previous NEPA analysis include the following:

- (1) A maximum of 25 hub locations within the operating area, with daily operations from each hub consisting of up to 400 deliveries, and
- (2) In-hub checkout flights (FitBITs) from 0600 (6:00 a.m.) to 0700 (7:00 a.m.).

These differences are analyzed below under the re-evaluation of environmental consequences.

Based on the 2024 PEA and in conformity with FAA Order 1050.1F, Paragraph 9-2.c, the FAA concludes that Wing's amendment to its OpSpecs conforms to the prior environmental documentation and that the data contained in the 2024 PEA remained substantially valid, therefore, preparation of a supplemental or new EA or EIS is not required.

## Affected Environment

The affected environment under the proposed action remains largely the same as discussed in the 2024 PEA. No substantial changes or alterations have occurred to the environmental impact categories or the operating area. Thus, the 2024 PEA remains a valid discussion of the affected environment for the proposed action.

## Re-evaluation of Environmental Consequences

### Resources Not Analyzed in Detail

The following environmental impact categories were reviewed and dismissed from detailed analysis in the 2024 PEA: air quality; biological resources (fish and plants only); climate; coastal resources; farmlands; hazardous materials, solid waste, and pollution prevention; land use; natural resources and energy supply; socioeconomic and children's environmental health and safety risks; and water resources (including wetlands, floodplains, surface waters, and groundwater). Refer to Section 3.2 of the 2024 PEA for the rationale for dismissing these impact categories. The proposed changes for Wing's operations in Charlotte to the action analyzed in the 2024 PEA—a maximum of 25 hub locations in the operating area and FitBITs between 0600 and 0700—does not change the rationale for dismissing those impact categories. Therefore, all impact categories originally dismissed are not re-evaluated in this WR. The impact categories that were analyzed in detail in the 2024 PEA are re-evaluated below in the context of the changes to the action, with the exception of environmental justice. Based on recent Executive Order Nos. 14148 and 14173 and the implementation of these executive orders by the Department of Transportation, this WR does not analyze environmental effects related to environmental justice.

### Resources Analyzed in Detail

#### Biological Resources (Wildlife)

Wildlife impacts under the proposed action would be comparable to those impacts described in the 2024 PEA. The action area the FAA analyzed for biological resources in the 2024 PEA would not change under the proposed action. The proposed action would not involve any construction or ground disturbance. Although the proposed action increases the number of hubs in the operating area, hubs are still expected to be established in a business parking lot, rooftop, or other previously developed/disturbed locations. Deliveries would still occur at residences or other places of business. Therefore, the proposed action would not physically alter any wildlife habitat.

The FAA determined the proposed action assessed in the 2024 PEA would have *no effect* on designated and proposed (critical habitat, *no effect* on some Endangered Species Act (ESA)-listed species and *may affect, but is not likely to adversely affect*, other ESA-listed species. The U.S. Fish and

Wildlife Service USFWS) concurred with the FAA's *may affect* determinations on February 2, 2024 (see Appendix H of the 2024 PEA). Additionally, Wing has agreed to implement measures to designate no-fly zones near ESA-listed species nesting sites and will include a 150-foot buffer of known bat roosts or hibernacula in its flight planning software.

As described in the 2024 PEA, the potential stressors or threats to wildlife from the proposed action include the possibility of airborne strikes with flying species, visual presence, and noise. All operations would occur within airspace, typically well above the tree line, and away from sensitive habitats. Given that the UA would cruise at an altitude of 165 feet AGL, operations would occur mostly in an urban and suburban environment, any increase in sound levels experienced by wildlife from drones would be low and of short duration, and the low likelihood of a UA striking an individual animal, operations are not expected to significantly influence wildlife. The proposed action is not expected to adversely affect wildlife populations in the action area.

While there is potential that UA operations could impact migratory birds and bald eagles, due to the short duration of potential nuisance and small chance of strike, the proposed action is anticipated to be compliant with the Migratory Bird Treaty Act and USFWS requirements for Birds of Conservation Concern. Wing is also required to comply with the Bald and Golden Eagle Protection Act, which requires identifying active bald eagle nests within the operating area. Operations that require an eagle permit would have to comply with permit conditions intended to avoid or minimize bald eagle disturbance. Due to the limited scale of operations, the altitude of overflights (typical cruising altitude of 165 ft AGL), and minimal anticipated noise and visual impacts from the action, the proposed action is not expected to result in significant impacts to migratory birds.

The changes to the action analyzed in the 2024 PEA—a maximum of 25 hub locations in the operating area and FitBITs between 0600 and 0700—would not substantially change the potential impacts on biological resources. The proposed changes may produce marginally greater levels of noise, light, and human activity around hubs; however, hubs are expected to be located in a business parking lot, rooftop, or other previously developed/disturbed area. Any common, urban species in the vicinity of the hubs are likely habituated to human disturbance and would not be adversely affected by the proposed action. Biological resources, including ESA-listed species, within the operating area would not experience a substantially greater number of overflights; any additional disturbance caused by overflights would not increase stress, reduce reproductive success, or induce injury or mortality outside the range of natural variation for any species. Additionally, Wing's flight planning software will implement flight paths to minimize overflights within the operating area to decrease potential impacts from increased package delivery operations.

The FAA reviewed the USFWS's Information for Planning and Consultation online system on March 14, 2025, and did not identify any additional species within the action area since the development of the 2024 PEA (USFWS 2025). Although the proposed action increases the maximum number of hubs in the operating area, these determinations are not expected to change for the rationale outlined above.

Wing is required to comply with mitigation measures identified in the 2024 Mitigated FONSI/ROD (See Section 3.8.4 of the 2024 PEA). Accordingly, the data and analyses contained in the 2024 PEA remain substantially valid, and the proposed action would not result in significant impacts on wildlife.

### **Department of Transportation Act Section 4(f)**

Impacts on Section 4(f) properties under the proposed action would be comparable to those impacts described in the 2024 PEA. As described in the 2024 PEA, the FAA identified many properties that could meet the definition of a Section 4(f) property, including public parks, recreation areas, and historic sites. Appendix F of the 2024 PEA lists 305 potentially impacted Section 4(f) resources within the Charlotte metro area. No Section 4(f) properties operated by the National Park Service and U.S. Forest Service are within the Charlotte metro area.

The 2024 PEA determined the proposed action would not result in a physical use of any Section 4(f) property because there would not be any physical occupation or alteration of a Section 4(f) property. Due to existing policies in place by the North Carolina Department of Natural and Cultural Resources that limit drone operations within the boundaries of Section 4(f) properties, operations analyzed in the 2024 PEA are not expected to result in substantial impairment that would result in a constructive use of a Section 4(f) property. The changes to action analyzed in the 2024 PEA do not change this determination, as Wing is required to comply with state policies regarding drone operations within Section 4(f) properties. Therefore, the proposed action is not expected to result in significant impacts on Section 4(f) properties.

Hubs are expected to be located in a business's parking lot, rooftop, or other previously developed/disturbed area and not within a Section 4(f) property. The increase to a maximum of 25 hub locations does not change this determination. Any increase in sound level at a Section 4(f) property or potential visual effect from a drone flying over or near a Section 4(f) property would be minimal and only last seconds as the drone flies by en route to or from a hub. Additionally, repeated daily overflights of a Section 4(f) property are not expected because Wing's flight planning software will minimize overflights. As described in the 2024 PEA and in the Noise section of this document, Wing would be required to site their hubs a sufficient distance away from noise-sensitive areas, which includes properties protected by Section 4(f), to avoid significant noise impacts. Therefore, the proposed action is not expected to result in significant impacts on Section 4(f) properties.

Under the proposed action, there would be no change to the operating area that was reviewed in the 2024 PEA, and no new Section 4(f) resources that would require further analysis. The changes to the action analyzed in the 2024 PEA would not substantially change the impacts on potential Section 4(f) properties. There are no significant new circumstances or information relevant to environmental concerns under the current action.

Wing is required to comply with mitigation measures identified in the 2024 Mitigated FONSI/ROD (See Section 3.6.4 of the 2024 PEA). Accordingly, the data and analyses contained in the 2024 PEA remain substantially valid, and the proposed action would not be expected to have a significant impact on Section 4(f) properties.

### **Historical, Architectural, Archaeological, and Cultural Resources**

Historical, architectural, archaeological, and cultural resource impacts under the proposed action would be comparable to those impacts described in the 2024 PEA. No additional properties have been listed under the National Historic Preservation Act of 1966 (NHPA) since the publication of the 2024 PEA. The FAA previously conducted Section 106 consultation with the North Carolina State Historic Preservation Officer (SHPO) in 2023-2024 concerning the seven identified regions in North



Carolina subject to the PEA, which included the Charlotte metro area. The FAA initiated Section 106 consultation with the North Carolina SHPO in November 13, 2023, letter requesting also requesting concurrence on the Area of Potential Effects(APE). The North Carolina SHPO responded on December 18, 2023, concurring with the APE, identifying historic property types that may be more sensitive to drone operations, and recommending other consulting parties to include in the Section 106 process. The FAA responded in a March 22, 2024, letter which identified historic properties within the APE, assessed project effects, and proposed a finding of no adverse effects. In a letter dated April 8, 2024, the SHPO concurred with FAA's determination that no historic properties would be adversely affected by the proposed project. Additionally, the FAA sent a letter to the Eastern Band of Cherokee Indians and did not receive responses or objections.

The flight characteristics under the proposed action would not be significantly different then the operations described in the 2024 PEA. According to the PEA:

Given the size of the UA and predicted sound levels, UA operations would not produce vibrations that could impact the architectural structure or contents of any historic property in the APE. While the UA is not expected to generate significant noise levels at or within any historic property, the FAA considered drone delivery noise and potential visual effects on historic properties where a quiet setting or visually unimpaired sky might be a key attribute of the property's significance. The highest concentration of flights would occur around hubs where drones takeoff and land.

Therefore, the area of most significant impact according to the PEA is expected to be in proximity to hubs. For this reason, the FAA (in consultation with the SHPO) identified in the PEA 12 specific NRHP-listed and eligible sites that had a sensitivity to noise and visual effects, primarily consisting of cemeteries, churches, and other sites where setting and feeling were significant aspects of integrity. The PEA stated that to avoid effects to these sensitive properties SHPO recommended that hubs be located at least 0.5 miles from these resources. The PEA further stated that should the operator decide to locate a hub within 0.5 miles of sensitive properties then the project would have to undergo further SHPO consultation.

Because the OpsSpecs amendment does not change this mitigation measure identified in the 2024 Mitigated FONSI/ROD (see Section 3.5.4 of the 2024 PEA), even with the increase in the number of hubs and flights, the continued siting of hubs at least 0.5 miles from sensitive resources will still avoid adverse effects from hub operations.

As described in the 2024 PEA, the FAA has determined that the limited number of daily flights in the operating area and noise impact would have no adverse effect to historic properties based on the nature of potential UA effects on historic properties, including delivery noise and potential visual effects on historic properties where a quiet setting or visually unimpaired sky might be a key attribute of the property's significance. Wing will comply with the FAA's recommended 0.5-mile no-fly buffer for any operations in the vicinity of the Belmont Abbey Historic District and will include outreach contact with the Historic District before any overflight of the district within 0.5-mi of a hub. Additionally, Wing's flight planning software implements flight paths to minimize overflights within the operating radius and avoid sensitive historic properties. Although the proposed action results in an increase in total operations throughout the action area, individual historic properties would not be exposed to 5,000 or greater overflights and would not contribute significant noise effects to any given property. Direct noise analysis of the Hummingbird platform shows that locations exposed to 800 overflights would not exceed 40.7 Day-Night Average Sound Level (DNL). The additional

proposed action of FitBITs between 0600 and 0700 would have no adverse effect to historic properties as FitBIT operations occur at the hub locations which would be located at least 0.5 miles from noise-sensitive historic properties. Therefore, the action will not have a significant impact on historic, architectural, archaeological, or cultural resources.

Wing is required to comply with mitigation measures identified in the 2024 Mitigated FONSI/ROD (See Section 3.5.4 of the 2024 PEA). Accordingly, the data and analyses contained in the 2024 PEA remain substantially valid, and the proposed action would not result in significant impacts on historical, architectural, archaeological, and cultural resources.

### **Noise and Noise-Compatible Land Use**

Impacts related to noise and noise-compatible land use under the proposed action would be comparable to those impacts described in the 2024 PEA. During the preparation of the 2024 PEA, the Noise Assessment for Package Delivery Operations with Unmanned Aircraft in North Carolina (Appendix D of the 2024 PEA) analyzed potential noise exposure in the area that could result from implementation of the proposed action. This analysis was based on an estimated maximum of 500 daily deliveries per hub, with a daily maximum of approximately 5,000 flights per day in the Charlotte metro operating area. The DNL noise exposure analysis concluded that for all flight phases, and even in areas with the highest noise exposure (i.e., the hub), noise levels would still be well below FAA's DNL 65 decibel (dB) threshold for noise-compatible land use.

### **Noise Exposure for Hub and Delivery Operations**

Wing's proposed action of a maximum of 400 daily deliveries per day per hub is consistent with the actions analyzed in the 2024 PEA, thus noise impacts from hub locations or deliveries are not expected to exceed the FAA's DNL 65 dB threshold for noise-compatible land use at hub locations and delivery sites. The 2024 PEA included conservative assumptions and criteria to evaluate noise impacts at hub operations and to develop setback distances from hubs. Based on FAA's experience with, and analysis of, the UA operations of Wing and other operators, the FAA finds that it is appropriate to use slightly less conservative criteria to develop the hub setback distances while still maintaining adequate distances to prevent significant noise impacts to noise-sensitive areas in this WR. Thus to avoid significant noise impacts from hub operations, Wing would site hubs outside of Class B, C, and D airspace in accordance with the DNL 60 dB noise exposure setback of 74 feet. In Class B, C, and D airspace, Wing would site hubs at least 199 feet from noise-sensitive resources in accordance with the setback distance for DNL 55 dB noise exposure.

The proposed action also includes up to 24 FitBITs from 0600 to 0700 which were not included in the 2024 PEA. However, recent noise analysis of Wing's 7000W-B and 8000-A UA<sup>2</sup> indicate that with 24 FitBIT operations the resulting noise exposure setbacks for hubs located outside Class B, C, and D airspace surface areas would be 65 feet for DNL 60 dB, and 125 feet for DNL 55 dB within Class B, C, and D airspace surface areas, respectively. These distances are less than the standoff distances associated with Group 1 UA as detailed in the 2024 PEA and demonstrate the analysis as detailed in the PEA is conservative and adequately accounts for the noise contribution from FitBIT operations

---

<sup>2</sup> Draft Supplemental Environmental Assessment for Wing Aviation, LLC, Proposed Drone Package Delivery Operations in Dallas-Fort Worth, Texas, FAA, December 2024, [https://www.faa.gov/uas/advanced\\_operations/nepa\\_and\\_drones/20241201\\_Wing-Draft-SEA](https://www.faa.gov/uas/advanced_operations/nepa_and_drones/20241201_Wing-Draft-SEA)

## **Noise Exposure for En Route Operations**

The 2024 PEA assumed the maximum number of annual average daily deliveries forecast to occur in the operating area to be approximately 5,000. Wing's UA is expected to generally cruise at an average altitude of 165 feet AGL and travel at a ground speed of 59 mph during en route flight. Noise impacts under the proposed action would be comparable to those evaluated in the 2024 PEA. Wing's proposed 25 hub locations in the operating area will result in a greater number of average daily deliveries, a maximum of 10,000, than the 5,000 analyzed in the 2024 PEA. However, it is highly unlikely that it would be possible for all deliveries occurring within the operating area to overfly the same locations, which would result in an exceedance of the FAA's threshold for noise and noise-compatible land use. Direct noise analysis of the Hummingbird platform shows that locations exposed to 800 overflights would not exceed 40.7 DNL. Furthermore, Wing would implement flight planning software to identify flight paths to minimize overflights within the operating radius.

Wing is required to comply with mitigation measures identified in the 2024 Mitigated FONSI/ROD (See Section 3.3.4 of the 2024 PEA). Accordingly, the data and analyses contained in the 2024 PEA remain substantially valid, and the proposed action would not result in significant impacts related to noise and noise-compatible land use.

## **Visual Effects (Including Light Emissions)**

The FAA has not established a significance threshold for visual resources / visual character, nor has the FAA established a significance threshold for light emissions.

The proposed action is not expected to have the potential to

- Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources,
- Contrast with the visual resources and/or visual character in the operating area,
- Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations,
- Create annoyance or interfere with normal activities from light emissions, and
- Affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.

Visual effects under the proposed action would be comparable to those emissions and impacts described in the 2024 PEA. Operations would occur in urban and suburban residential areas, rural farmlands, natural areas, and commercially developed properties between 0700 and 2200. Although the proposed action includes the addition of FitBIT from 0600 to 0700, FitBITs routinely take place at the hub in established developed/disturbed areas, thus no additional visual impacts are expected. Hubs are expected to be located in areas that are not visually sensitive, thus operations at the hubs are not expected to affect the nature of the visual character of the area or contrast with visual resources and/or the visual character of these developed areas. Additionally, given the small size of the drone, hub operations would not block or obstruct the views of visual resources.

As discussed in the 2024 PEA, the UAS would be en route at an altitude less than 400 feet AGL and therefore could be visible for approximately 6 to 8 seconds by an observer on the ground, thus

limiting the potential for visual effects to occur from overflights. Wing's flight planning software implements flight paths to minimize overflights within the operating radius and avoid visually sensitive areas. Additionally, most package deliveries would be to residences, and more than one or two package deliveries to the same location each day would be atypical. Therefore, the potential for visual effects to occur at any given delivery location is limited.

Based upon FAA requirements to avoid overflights of open-air assemblies of people (which may include public parks or other Section 4(f) properties at certain times), limitations in place for public land such as parks, and an expected low number of daily overflights of any given location, combined with the limited amount of time a UA would be visible to an observer on the ground and the en route and operating area within airspace that already contained various light sources, the proposed action is not expected to create annoyance or interfere with normal activities from light emissions; affect the visual character of the area due to light emissions; or affect the nature of the visual character of the area. Therefore, the proposed action is not expected to result in significant visual effects.

Wing is required to comply with mitigation measures identified in the 2024 Mitigated FONSI/ROD (See Section 3.4.4 of the 2024 PEA). Accordingly, the data and analyses contained in the 2024 EA remain substantially valid, and the proposed action would not be expected to have a significant impact related to visual resources and visual character.

### **Water Resources (Wild and Scenic Rivers)**

Impacts on wild and scenic rivers under the proposed action would be comparable to those impacts described in the 2024 PEA. The 2024 PEA analyzed potential impacts to wild and scenic rivers that could occur as a result of Wing's proposed operations throughout the operating area. The 2024 PEA identified two segments of rivers within the Charlotte metro operating area that are on the Nationwide Rivers Inventory (NRI); Mountain Creek and Yadkin River. Based on the analysis in the 2024 PEA, the proposed action would not result in significant effects on any wild and scenic river segments. Although drones might fly over NRI river segments during package delivery operations, the FAA does not expect drones would overfly NRI river segments at an intensity that could cause any detrimental impacts to the character or values of these resources. At the altitude and speed at which a drone would fly en route to or from a hub, the drone may not be detected by an observer recreating at a river on the NRI. If it is detected, the duration for which the drone would be visible would be short.

There would be no changes to the operating area under the proposed action and no construction activities could impact wild and scenic rivers. Although the proposed action includes the addition of FitBIT operations, FitBITs routinely take place at the hub in established developed/disturbed areas, thus no additional water resource impacts are expected.

There are no significant new circumstances or information relevant to environmental concerns under the current action. Accordingly, the data and analyses contained in the 2024 PEA remain substantially valid, and the proposed action would not result in significant impacts on wild and scenic rivers.

## Reasonably Foreseeable Effects in Context of Past, Present, and Future Actions

Reasonably foreseeable effects may include those that interact with baseline conditions caused by other past and present activity as well as reasonably foreseeable environmental trends and planned activity in the affected environment. The proposed action would not result in significant effects to any environmental impact category when considered in conjunction with other past, present, or reasonably foreseeable future actions. Further, the proposed action would not result in impacts which would be substantially different from those reasonably foreseeable impacts analyzed in the 2024 PEA. The FAA determined that because the impacts discussed were found to be minimal, the proposed action's potential for effects from past, present or reasonably foreseeable future actions would be limited to noise and biological resources.

Incremental noise impacts from increasing daily operations under Wing's proposed drone package delivery operations in the operating area are not anticipated to be significant. Drone operations, outside of Wing's operations, conducted in accordance with 14 Code of Federal Regulations Part 107, as well as recreational drone operations, may occur within the proposed operating area, but such operations would be infrequent and are not expected to combine with the proposed action to result in significant impacts to any environmental impact category. Additionally, as the number of operators within the operating area increases, operators, including Wing, would be required to coordinate with one another and the FAA to deconflict operations and mitigate potential reasonably foreseeable impacts.

The hubs would adhere to the above restrictions and would be located in Class G airspace and not in the vicinity of airports nor within the surface area for Class D or B airspace. Therefore, Wing operations, when considered in conjunction with other past, present, and reasonably foreseeable future actions, would not produce significant noise impacts.

The additional impacts of the proposed action's stressors (potential strike, visual presence, noise) to wildlife species would not result in adverse effects to wildlife populations in the operating area or adverse effects to individual ESA-listed species. The possibility of the proposed action's effects on wildlife overlapping and having a significant effect on wildlife in the operating area is not expected considering the limited time operations occur outside the commercial area where the hub is located. Therefore, the proposed action is not expected to result in significant effects on wildlife, when considered in conjunction with other past, present, and reasonably foreseeable future actions.

As discussed above, no significant impacts are expected from the proposed action. Further, impacts associated with the proposed action would not be expected to increase beyond those considered in the 2024 PEA. Accordingly, the data and analyses contained in the 2024 PEA remain substantially valid, and the proposed action would not result in significant impacts, when considered in conjunction with other past, present, and reasonably foreseeable future actions.

## Mitigation

Wing would abide by all applicable mitigation measures identified in the 2024 PEA. These measures include:

- Setback distances of at least 199 feet in Class B, C, or D airspace surface areas and 74 feet in all other areas from noise-sensitive resources.
- Hubs would be established at least 0.5 miles from historic properties identified as sensitive to drone package delivery operations (2024 PEA Table 8). Wing would comply with all existing policies regarding drone use for these properties.
- Wing UAs would not take off, land, or fly over the Pinehurst Historic District, Guilford Courthouse National Military Park, or Blue Ridge Parkway.
- Wing UAs would not take off, hover, or land within 150 feet of occupied bat roosts and hibernacula as documented by the North Carolina Wildlife Resources Commission statewide bat roost and hibernacula data.

## Decision and Order

The FAA prepared this WR to analyze the potential environmental impacts that may result from FAA's approval of the Part 135 air carrier OpSpecs amendments and other approvals requested by Wing to conduct commercial package delivery operations in Charlotte, North Carolina and the surrounding area. The FAA recognizes its responsibilities under NEPA and its own directives. Recognizing these responsibilities, I have carefully considered the FAA's goals and objectives in reviewing the environmental aspects of the proposed action to approve Wing's request to amend Wing's OpSpecs to allow changes to its UA commercial package delivery operations in Charlotte, North Carolina and the surrounding area. The proposed action meets the purpose and need described in the 2024 PEA.

This WR considered the 2024 PEA, which 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 areas evaluated for updated environmental impacts include biological resources (wildlife); Department of Transportation Act, Section 4(f); historical, architectural, archaeological, and cultural resources; noise and noise-compatible land use; visual effects (including light emissions); and water resources (wild and scenic rivers). The WR provides a fair and full discussion of the impacts of the current proposed action. The WR includes appropriate consideration for avoidance and minimization of impacts, as required by NEPA and other special purpose environmental laws, and appropriate FAA environmental orders and guidance.

Through this WR, the FAA has determined that environmental concerns presented by interested agencies and the general public were addressed in the 2024 PEA. The FAA believes that, with respect to the proposed action, the NEPA requirements have been met. FAA approval of this WR indicates that applicable federal requirements for environmental review of the proposed action have been met.

Having carefully considered and being properly advised as to the anticipated environmental impacts of the proposal as described in the 2024 PEA and the FONSI/ROD, under the authority delegated by the Administrator of the FAA, I find the OpSpecs amendment, and other approvals necessary to enable Wing's requested operations in Charlotte, North Carolina and the surrounding area are 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 to Section 102(2)(C) of NEPA. I further find that the action is the type of action that does not require a supplement to the 2024 PEA or the preparation of an EIS under NEPA.

Based on the above review and in conformity with FAA Order 1050.1F, Paragraph 9-2.c, the FAA has concluded that Wing Aviation, LCC's amendment to its OpSpecs to allow for the establishment of 25 hub locations within the Charlotte metro area and FitBITs between 0600 and 0700 does not require further environmental review. The proposed changes to delivery operations conforms to the prior environmental documentation; the data contained in the 2024 PEA remains substantially valid; there are no significant environmental changes; and all pertinent conditions and requirements of the prior approval have been met or will be met in the current action. Therefore, the preparation of a supplemental or new EA or EIS is not necessary.

Responsible FAA Official: \_\_\_\_\_

Derek Hufty  
Manager, General Aviation and Commercial Operations Branch  
Emerging Technologies Division  
Office of Safety Standards, Flight Standards Service

## Right to Appeal

This WR constitutes a final agency action and a final order taken pursuant to 49 United States Code (U.S.C.) Sections 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. Section 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. Section 46110.

## References

- National Park Service. 2025. National Register Database and Research. U.S. Department of the Interior, National Park Service. <https://www.nps.gov/subjects/nationalregister/database-research.htm#table>. Accessed March 14, 2025.
- U.S. Fish and Wildlife Service (USFWS). 2025. Information for Planning and Consultation Report. <https://ipac.ecosphere.fws.gov/location/MFU36TTFIJGGLN24IK2G2W7ATM/resources>. Accessed March 14, 2025.
- NCDOT (North Carolina Department of Transportation). 2023. North Carolina Part 135 UAS Operational Forecast (2030).