

Environmental Assessment

UPS Flight Forward

Drone Package Delivery Operations

Lake Sumter Landing Route, Villages, FL



November 2021

United States Department of Transportation
Federal Aviation Administration

Washington, D.C.

FAA MISSION STATEMENT

The FAA's continuing mission is to provide the safest, most efficient aerospace system in the world. We strive to reach the next level of safety and efficiency and to demonstrate global leadership in how we safely integrate new users and technologies into our aviation system.

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Finding of No Significant Impact/Record of Decision
for
Environmental Assessment for UPS Flight Forward
Drone Package Delivery Operations
Lake Sumter Landing Route, Villages, FL

Summary

The Federal Aviation Administration (FAA) prepared the attached Environmental Assessment (EA) to analyze the potential environmental impacts of approving amendments to the UPS Flight Forward (UPS FF) air carrier Operations Specifications (OpSpecs) to add the Lake Sumter Landing (LSL) route in The Villages, Florida. UPS FF projects it would operate 22 flight operations per day between its LSL location to its existing distribution center (DC) approximately 2.38 miles away at Elan Buena Vista Senior Living community (Elan). The EA was prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA; 42 United States Code [U.S.C.] § 4321 et seq.); Council on Environmental Quality NEPA implementing regulations (40 Code of Federal Regulations [CFR] parts 1500 to 1508); 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 the Proposed Action will 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.

For any questions or to request a copy of the EA, please email 9-FAA-Drone-Environmental@faa.gov. A copy of the EA may also be viewed on the FAA's website:

https://www.faa.gov/uas/advanced_operations/nepa_and_drones/

Purpose and Need

The purpose and need are outlined in Section 1.3 of the EA.

Proposed Action

The proposed action is outlined in Section 2.1 of the EA.

Alternatives (Section 2.2 of the EA)

Alternatives analyzed in detail in the EA include the proposed action and the no action alternative.

Under the no action alternative, the FAA would not issue the approvals necessary, including the amendment to the OpSpecs, to enable UPS FF to conduct UA commercial package delivery operations on the LSL route. This alternative does not support the stated purpose and need.

Environmental Impacts

The potential environmental impacts from the proposed action and no action alternative were evaluated in the attached EA for each of the environmental impact categories identified in FAA Order 1050.1.F. Section 3 of the attached EA describes the physical, natural, and human environment within the project study area, and identifies those environmental impact categories that are not analyzed in detail, explaining why the proposed action would have no potential effects on those environmental impact categories. Those categories are Air Quality and Climate; Coastal Resources; Farmlands; Hazardous Materials, Solid Waste, and Pollution Prevention; Land Use; Natural Resources and Energy Supply; Environmental Justice, Socioeconomic Impacts, and Children's Environmental Health and Safety Risks; Visual Effects (Light Emissions Only); Water Resources (Wetlands, Floodplains, Groundwater, and Wild and Scenic Rivers).

Section 3 also provides detailed evaluations of the environmental consequences 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 category, including requisite findings with respect to relevant special purpose laws, regulations, and executive orders, is presented below:

- **Biological Resources (including Fish, Wildlife, and Plants)**, EA Section 3.2. There is no significant impact to biological resources. The operations will be taking place within airspace, and typically well above the tree line and away from sensitive habitats. The low number of daily operations and characteristics of the flights are not expected to significantly influence wildlife in the area.

The Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*) has the potential to nest near wetland areas in the study area. The U.S. Fish and Wildlife Service (USFWS) Snail Kite Management Guidelines state that a 500-foot no-entry buffer zone should be established around any active kite nests that are discovered. The no-entry buffer is meant to prevent any direct disturbance that may affect their nesting.

On November 8, 2021, the USFWS informed the FAA that snail kites would not be impacted by the proposed action. Additionally, the USFWS said that while the project falls within the snail kite consultation area, they have no known species data to support snail kites in the study area.

UPS FF has indicated that it can keep aircraft at least 500 feet from any Everglade Snail Kite nest that happens to be discovered in the operating area. Additionally, while no impacts to Bald Eagles are anticipated, UPS FF has indicated it can keep aircraft at least 1,000 feet from any active Bald Eagle nests within the operating area during its breeding season, in accordance with the USFWS Bald Eagle Management Guidelines. And if UPS FF learns of any active Red-headed Woodpecker nests within the operating area, it has indicated that it would plan to keep aircraft a reasonable distance from the nesting tree to avoid any disturbance during its breeding season.

No impacts to bats, insects, fish, reptiles, or terrestrial mammal species are expected. The proposed action would not result in adverse impacts on any species' reproductive success rates, natural mortality rates, non-natural mortality, or ability to sustain the minimum population levels required.

- **Department of Transportation Act, Section 4(f) Resources**, EA Section 3.3. The FAA has determined that infrequent UAS overflights as described in the proposed action would not cause substantial impairment to Section 4(f) resources, and would not be considered a constructive use of any Section 4(f) resource. There will be no physical use of Section 4(f) resources. Noise and visual effects from UPS FF's occasional overflights are not expected to diminish the activities, features, or attributes of any resources in the study area.
- **Historical, Architectural, Archaeological, and Cultural Resources**, EA Section 3.4. The proposed action would have no effect on historical, architectural, archaeological, and cultural resources, and impacts would be less than significant. The FAA identified no historic sites within the study area that could be affected by the overflight of UPS FF drones. On July 22, 2021, the FAA

received confirmation from the Florida State Historic Preservation Office (SHPO) that they have no objections to the proposed action.

The nature of UAS effects on historic properties is limited to non-physical, reversible impacts (i.e., the introduction of audible and/or visual elements). The number of daily flights that UPS FF is proposing from this location – 22 operations per day – means that any historic or cultural resource would be subject to only a small number of overflights per day, if any.

- **Noise and Noise-Compatible Land Use**, EA Section 3.5. The proposed action is not anticipated to result in any significant changes in the overall noise environment within the affected area. There is no construction and therefore no construction noise that will result from the proposed action. Considering the noise impacts from the proposed flight operations, the FAA determined that noise impacts along the Villages LSL route will be well below the 45 DNL threshold minimum change-in-exposure discussed in the FAA Order 1050.1F Desk Reference. UPS FF will not be conducting operations at night.
- **Visual Effects (Visual Resources and Visual Character)**, EA Section 3.6. Impacts to visual resources are expected to be less than significant. The proposed action makes no changes to any landforms, or land uses, thus there would be no effect to the visual character of the area. The proposed action involves airspace operations that could result in visual impacts on sensitive areas where the visual setting is an important resource of the property. However, the proposed 22 operations per day would occur in daylight hours, and any visual impacts to people on the ground will be brief and temporary. Additionally, UPS FF will not be conducting operations on weekends or holidays.
- **Water Resources (Surface Waters)**, EA Section 3.7. The proposed action would not be expected to result in significant impacts to water quality. There are no construction activities occurring under the proposed action. The drone is equipped with an emergency safety parachute that will deploy in the event of an incident, and the aircraft's Lithium-ion battery packs are not expected to detach from the aircraft or become lost in the event of a water landing. UPS FF is required to locate and secure any downed aircraft.

Finding

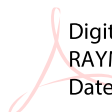
The FAA finding is based on a comparative examination of environmental impacts for each of the alternatives studied during the environmental review process. The EA discloses the potential environmental impacts for each of the alternatives and provides a full and fair discussion of those impacts. There would be no significant impacts to 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.

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. This environmental assessment becomes a federal document when evaluated, signed, and dated by the responsible FAA official.

Responsible FAA Official:

**KEVIN A.
RAYMOND**

 Digitally signed by KEVIN A.
RAYMOND
Date: 2021.11.15 11:38:34 -06'00'

Kevin Raymond
Acting Manager, General Aviation Operations Section
General Aviation and Commercial Division
Office of Safety Standards, Flight Standards Service

Record of Decision and Order

The FAA recognizes its responsibilities under NEPA, CEQ regulations, and its own directives. Recognizing these responsibilities, I have carefully considered the FAA's goals and objectives in reviewing the aeronautical and environmental aspects of the proposed action to approve UPS FF's OpSpec amendment request to add the LSL route to its existing flight network in The Villages. Based upon the above analysis, the FAA has determined that the proposed action meets the purpose and need of the proposed project.

Having carefully considered the public safety and operational objectives of the project, as well as being properly advised as to the anticipated environmental impacts of the proposal, under the authority delegated by the Administrator of the FAA, I find the OpSpec amendment reasonably supported, and that it is the type of action that does not require an Environmental Impact Statement under NEPA.

Issued on: November 15, 2021

**KEVIN A.
RAYMOND**

Digitally signed by KEVIN
A. RAYMOND
Date: 2021.11.15 11:
-06'00'

Kevin Raymond
Acting Manager, General Aviation Operations Section
General Aviation and Commercial Division
Office of Safety Standards, Flight Standards Service

Right of Appeal

This FONSI/ROD constitutes a final order taken pursuant to 49 U.S.C. §§40101 et seq., and constitutes an order of the 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. Section 46110.

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1.0 PURPOSE AND NEED

1.1 Introduction

UPS Flight Forward, Inc. (UPS FF) is seeking to amend its air carrier Operations Specifications (OpSpecs) to conduct unmanned aircraft (UA) commercial package delivery operations from a new location at the Lake Sumter Landing (LSL) shopping center in The Villages, Florida. UPS FF projects it would operate 22 roundtrip flight operations per day from its LSL location to its distribution center (DC) approximately 2.38 miles away at Elan Buena Vista Senior Living community (Elan). UPS FF projects that operations could increase on this route depending on customer demand. The operations would occur during daylight hours between Monday and Friday, with no flights on holidays. The approval of the amendment to UPS FF's OpSpecs to include this new route is considered a major federal action subject to NEPA review requirements.

This Environmental Assessment (EA) is being prepared by the FAA to evaluate the potential environmental impacts that may result from FAA's approval of the proposed action, which would enable UA commercial delivery operations from LSL to Elan in The Villages, Florida. The FAA has prepared this EA pursuant to the National Environmental Policy Act of 1969 (NEPA) [42 United States Code (U.S.C.) § 4321 et seq.] and its implementing regulations (40 Code of Federal Regulations (CFR) §§1500-1508)). NEPA requires federal agencies to consider the environmental effects of proposed federal actions and to disclose to decision-makers and the interested public a clear and accurate description of the potential environmental impacts of proposed major federal actions. Under NEPA, federal agencies are required to consider the environmental effects of a proposed action, the reasonable alternatives to the proposed action, and a no action alternative (assessing the potential environmental effects of not implementing the proposed action). The FAA has established a process to ensure compliance with the provisions of NEPA through FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* and FAA Order 1050.1F Desk Reference.

1.2 Background and Location

In 2012, Congress first charged the FAA with integrating unmanned aircraft systems (UAS) into the National Airspace System (NAS).¹ The FAA has engaged in a phased, incremental approach to integrating UAS into the NAS and continues to work toward full integration of UAS into the NAS. Part of that approach involves providing safety review and oversight of proposed operations to begin commercial UA delivery in the NAS.

Over the past five years UPS FF has been working under various FAA programs, including the UAS Integration Pilot Program (IPP)² and the BEYOND program,³ as well as FAA's established processes to bring certificated commercial UA delivery into practice. Participants in these programs are among the first to prove their concepts, including package delivery by UA, through the use of current regulations and exemptions and waivers from some of these regulatory requirements.

UPS FF was one of the first to obtain an FAA Part 135 certificate, which allows it to carry the property of another for compensation or hire beyond visual line of sight. UPS FF has a standard Part 135 air carrier certificate and that certificate contains a stipulation that operations must be conducted in accordance

¹ 49 U.S.C. 44802; FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, Sec. 332. 126 Stat. 11, 73 (2012).

² The UAS IPP was announced on October 25, 2017 via a Presidential Memorandum, which has the force and effect of law on executive agencies. https://www.faa.gov/uas/programs_partnerships/completed/integration_pilot_program/

³ https://www.faa.gov/uas/programs_partnerships/beyond/

with the provisions and limitations specified in its OpSpecs. UPS FF's current request for an amended OpSpec to add the LSL route to its existing flight network, in conjunction with other related FAA approvals, would enable expanded commercial delivery operations to community members in The Villages. The location of The Villages within Florida is shown in Figure 1 below.

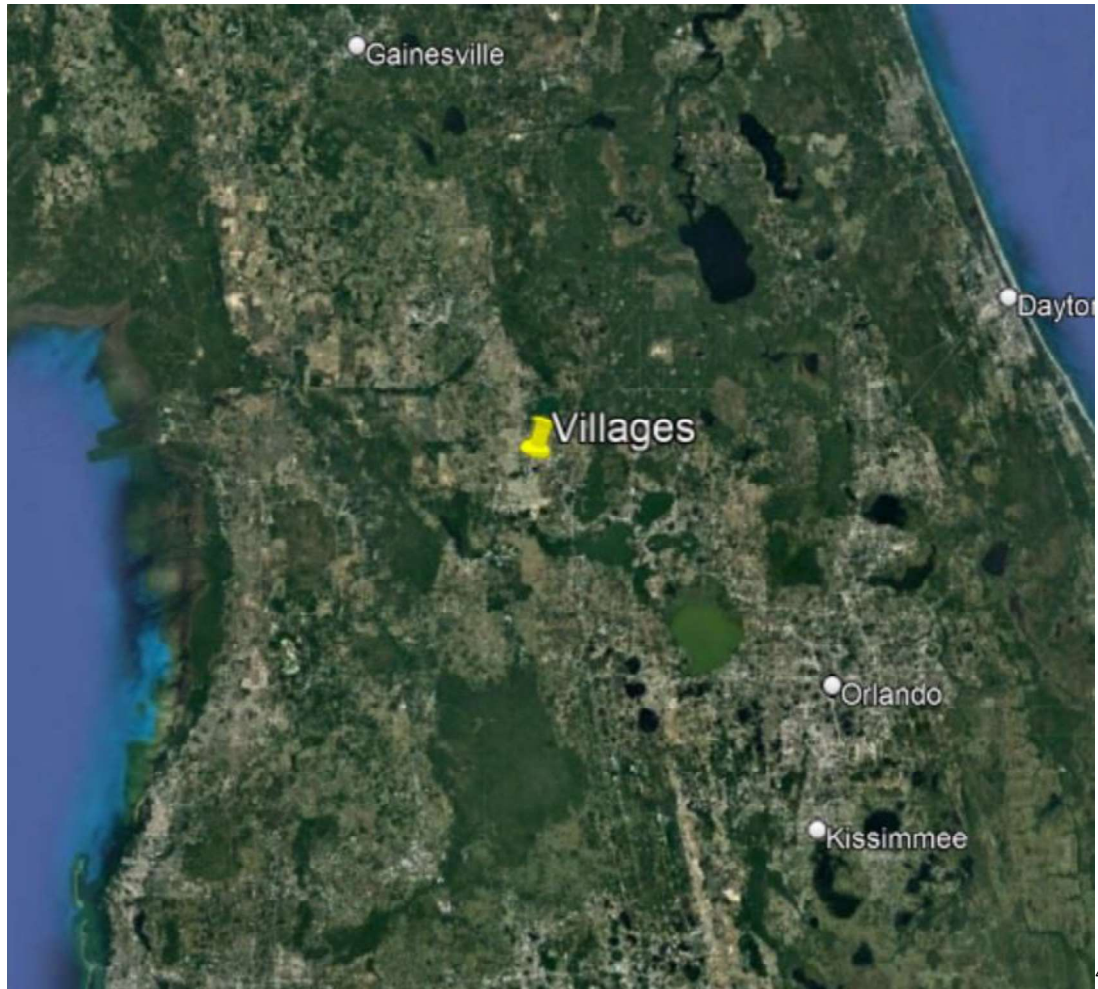


Figure 1 Location of The Villages in the State of Florida

The study area is shown in Figure 2 below. The LSL route is shown in white, with LSL in the lower right-hand corner and Elan in the center-left. The UA will be carrying packages from LSL to Elan, and returning to LSL along the same route. UPS FF's existing flight network is shown in red.

⁴ Image: Google Earth, as modified by the FAA

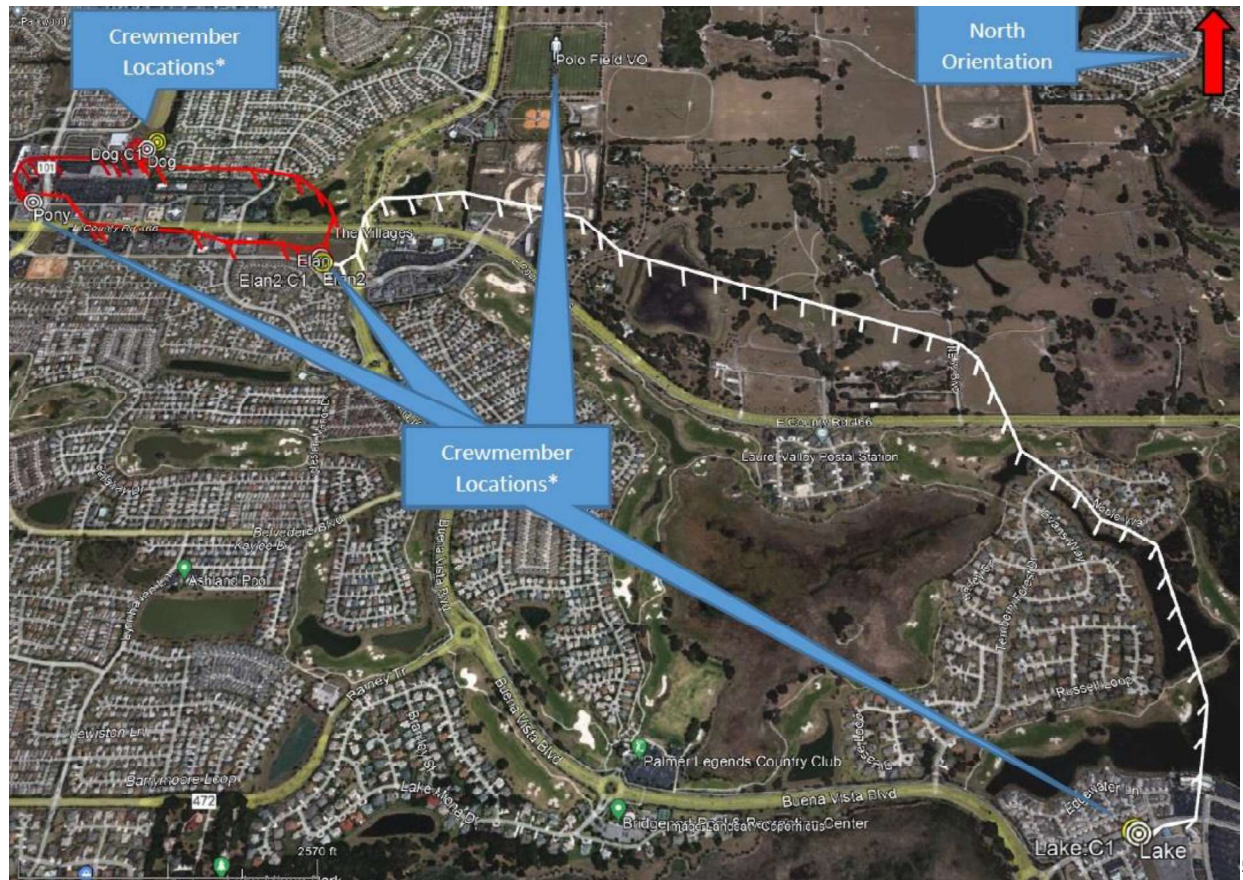


Figure 2 View of The Villages LSL Route (white) and existing flight network (red)

1.2.1 LSL Location

The location at LSL is on private property owned by The Villages, and is zoned for commercial use. The location is immediately west of a commercial district where restaurants and other businesses are located. See Figure 3. UPS FF is planning to establish partnerships with multiple businesses in this commercial area. This location would allow UPS FF's to deliver its partners' products to customers by UA. Packages would fly from LSL to the Elan DC using UPS FF's UA. Once packages arrive at the Elan DC, UPS FF will distribute them to customers via hand or electronic cart.

⁵ Image: UPS FF

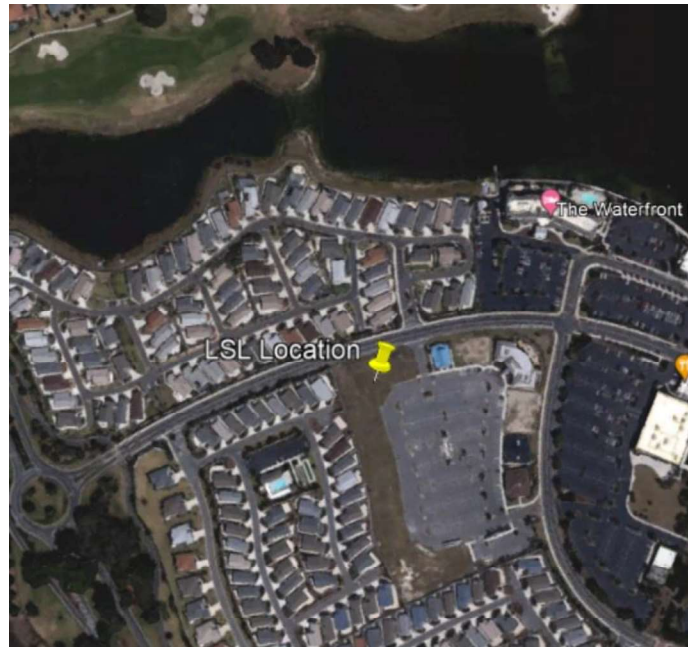


Figure 3 UPS FF's Location at Lake Sumter Landing

1.2.2 Elan Location

The location at Elan is on private property owned by The Villages, and is zoned for commercial use. The location is just to the west of a community center where customers would like to receive packages from LSL. UPS FF currently has an operating DC at this location as part of its existing flight network in The Villages. The Elan location is shown in Figure 4.

⁶ Image: Google Earth, as modified by the FAA

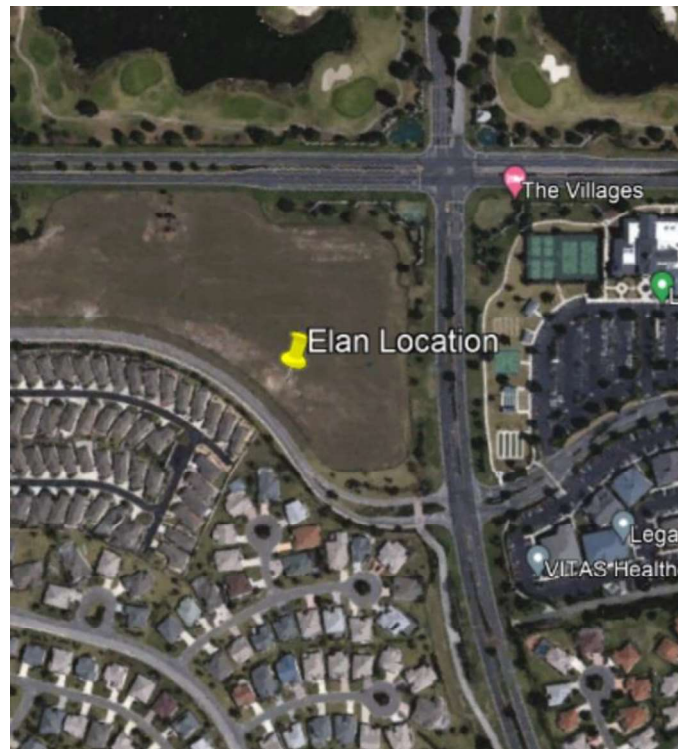


Figure 4 UPS FF's Location at Elan

1.3 Purpose and Need

As described in the FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, the Purpose and Need section of an EA briefly describes the underlying purpose and need for the proposed federal action. It presents the problem being addressed and describes what the FAA is trying to achieve with the proposed action.

1.3.1 FAA Purpose and Need

The FAA issuance of the amendment to the OpSpecs is the approval that will ultimately enable UA commercial delivery operations on the LSL route. UPS FF's request to amend its OpSpecs to add the new route within its existing area of operations requires FAA review and approval.

The FAA has a statutory obligation to review UPS FF's request to amend its OpSpecs and determine whether the amendment would affect safety in air transportation or air commerce, and the public interest requires the amendment. In general, Congress has charged FAA to encourage the development of civil aeronautics and the safety of air commerce in the United States. 49 U.S.C. §40104.

In addition, the FAA has specific statutory and regulatory obligations related to its issuance of a Part 135 certificate and the related OpSpecs. The FAA is required to issue an operating certificate to an air carrier when it "finds, after investigation, that the person properly and adequately is equipped and able to operate safely under this part and regulations and standards prescribed under this part." 49 U.S.C. §44705. An operating certificate also specifies "terms necessary to ensure safety in air transportation; and (2)...the places to and from which, and the airways of the United States over which, a person may

⁷ Image: Google Earth, as modified by the FAA

operate as an air carrier.” *Id.* Also included in air carrier certificates is a stipulation that the air carrier’s operations must be conducted in accordance with the provisions and limitations specified in OpSpecs. 14 CFR §119.5 (g), (l). The regulations also specify that a Part 135 certificate holder may not operate in a geographical area unless its OpSpecs specifically authorize the certificate holder to operate in that area. 14 CFR 119.5(j). The regulations implementing Section 44705 specify that an air carrier’s approved OpSpecs must include, among other things, “authorization and limitations for routes and areas of operations.” 14 CFR §119.49(a)(6). An air carrier’s OpSpecs may be amended at the request of an operator if the FAA “determines that safety in air transportation or air commerce is affected and the public interest requires the amendment.” 14 CFR §119.51(a); see also 49 U.S.C. §44709. After making this determination, FAA must take an action on the OpSpec amendment.

1.3.2 UPS FF’s Purpose and Need

The purpose of UPS FF’s request is to expand its area of operations for UA commercial delivery service in The Villages, which, in its business judgment, UPS FF has determined is an appropriate market for expansion. UPS FF’s requested amendment is needed so UPS FF can gradually expand its limited UA commercial delivery operations in The Villages. This expansion could help UPS FF gauge public demand for UA delivery services and evaluate whether scalable and cost-effective UA delivery expansion is possible in the area. Within the next year, UPSFF will be considering whether to operate a UAS home delivery network in the Villages, FL, delivering packages directly to residences in addition to its existing DCs. The LSL route could provide an opportunity to assess community response to commercial delivery operations in the area.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

UPS FF has requested that the FAA amend the OpSpecs in its Part 135 air carrier certificate. The OpSpec amendment is the FAA approval that would enable operations on the LSL route. The proposed UA commercial delivery operations would take place in the community of The Villages in north-central Florida. The drone has a maximum takeoff weight of 28 pounds, including a payload of 4.4 pounds. It is a quadcopter that uses electric power from rechargeable lithium ion batteries. The aircraft includes a parachute safety system that can be deployed in cases of emergency.

The B050 OpSpec, *Authorized Areas of En Route Operations, Limitations, and Provisions*, includes a reference section titled Limitations, Provisions, and Special Requirements. The amendment to this reference section – to add a new paragraph with descriptive language about the LSL route, including the specific location and operational profile proposed in UPS FF’s request – is the proposed federal action for this EA. The OpSpecs amendment will restrict UPS FF to this particular location; any future expansion beyond the authorization and limitations for routes and areas of operations described in the amended OpSpecs will require additional OpSpec amendments from the FAA and will receive appropriate NEPA review at that time.

UPS FF projects operating 22 roundtrip flight operations per day from LSL, which would result in an average of two flights per hour over a 10-hour work day. For the first one to two years, UPS FF projects that operations could increase to 100 flight operations per day from this location. The operations would occur during daylight hours between Monday and Friday, with no flights on holidays. Night operations would not be conducted under the proposed action.

2.2 No Action Alternative

The alternative to the proposed action is the no action alternative, where FAA would not issue the approvals necessary, including the amendment to the OpSpecs, to enable UPS FF to conduct UA commercial package delivery operations on the LSL route. This alternative does not support the stated purpose and need. However, it was retained as required by CEQ regulations (40 CFR 1502.14(c)).

3.0 AFFECTED ENVIRONMENT and ENVIRONMENTAL CONSEQUENCES

This chapter provides a description of the environmental resources that would be affected by the proposed action as required by the CEQ regulations and FAA Order 1050.1F. The level of detail provided in this chapter is commensurate with the importance of the impact on these resources (40 CFR § 1502.15). The general study area for each resource is the entire area within Figure 2 in this EA. As required by FAA Order 1050.1F, this EA presents an evaluation of impacts for the environmental impact categories listed below.

- Air Quality
- Biological Resources (including Fish, Wildlife, and Plants)
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f) Resources
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archaeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomic, Environmental Justice, and Children’s Environmental Health and Safety Risks
- Visual Effects (including Light Emissions)
- Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

For each of the resources covered in this chapter, the following information is provided:

- Regulatory Setting
- Affected Environment
- Environmental Consequences

3.1 Resources Not Analyzed in Detail

This EA does not analyze potential impacts on the following environmental impact categories in detail, for the reasons explained below:

- **Air Quality and Climate** – The drone is battery-powered will not generate emissions that could result in air quality impacts or climate impacts.

- **Coastal Resources** –The proposed operation would not directly affect any shorelines or change the use of shoreline zones and be inconsistent with any NOAA-approved state Coastal Zone Management Plan (CZMP) since there are no shorelines in the area of operations.
- **Farmlands** –The proposed action will not involve the development or disturbance of any land regardless of use, nor would it have the potential to convert any farmland to non-agricultural uses.
- **Hazardous Materials, Solid Waste, and Pollution Prevention** –The proposed action will not result in any construction or development, or any physical disturbances of the ground. Therefore, the potential for impact in relation to hazardous materials, pollution prevention, and solid waste is not anticipated. Additionally, each UPS FF drone is made from recyclable materials, and UPS FF has stated that all aircraft and associated equipment, including the battery, will be returned to the manufacturer at their respective end of life for proper disposition in accordance with 14 CFR Part 43.
- **Land Use** – The proposed action will not involve any changes to existing, planned, or future land uses within the area of operations.
- **Natural Resources and Energy Supply** – The proposed action will not require the need for unusual natural resources and materials, or those in short supply. UPS FF’s aircraft will be battery powered and will not consume fuel resources.
- **Environmental Justice, Socioeconomic Impacts, and Children’s Environmental Health and Safety Risks** – The proposed action will not result in significant impacts to any of the environmental impact categories as discussed in the next sections, and will not result in disproportionate impacts to any EJ populations that may occur in the study area. The proposed action will not involve acquisition of real estate, relocation of residents or community businesses, disruption of local traffic patterns, loss in community tax base, or changes to the fabric of the community. Executive Order (EO) 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires Federal agencies to ensure that children do not suffer disproportionately from environmental or safety risks. The proposed action will not affect products or substances that a child would be likely to come into contact with, ingest, use, or be exposed to, and would not result in environmental health and safety risks that could disproportionately affect children. Additionally, UPS FF’s ability to avoid flying near schools, day care centers, parks, or playgrounds at certain times will help reduce any potential environmental health or safety impacts to children.
- **Visual Effects (Light Emissions Only)** – The proposed action will not result in significant light emission impacts because flights will be limited to daytime flights only.
- **Water Resources (Wetlands, Floodplains, Groundwater, and Wild and Scenic Rivers)** –The proposed operation will not result in the construction of facilities and would therefore not encroach upon areas designated as navigable waters or wetlands. The proposed operation will not encroach upon areas designated as a 100-year flood event area as described by the Federal Emergency Management Agency (FEMA). The proposed action will not result in any changes to existing discharges to water bodies, create a new discharge that would result in impacts to surface waters, or modify a water body. The proposed action does not involve land acquisition or ground disturbing activities that would withdraw groundwater from underground aquifers or reduce infiltration or recharge to ground water resources through the introduction of new

impervious surfaces. The proposed action would not foreclose or downgrade the Wild, Scenic, or Recreational river status of a river or river segment included in the Wild and Scenic River System. There are no river segments within the study area.

3.2 Biological Resources (Including Fish, Wildlife, and Plants)

3.2.1 Regulatory Setting

Biological resources include plant and animal species and their habitats, including special status species (federally listed or state-listed threatened or endangered species, species proposed for listing, species that are candidates for federal listing, marine mammals, and migratory birds) and environmentally sensitive or critical habitat. Biological resources provide aesthetic, recreational, and economic benefits to society.

The Endangered Species Act (ESA) of 1973 [16 U.S.C. § 1531 et seq.] requires the evaluation of all federal actions to determine whether a proposed action is likely to jeopardize any proposed, threatened, or endangered species or proposed or designated critical habitat. Critical habitat includes areas that will contribute to the recovery or survival of a listed species. Federal agencies are responsible for determining if an action “may affect” listed species, which determines whether formal or informal consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) is needed. If the FAA determines that the action will have no effect on listed species, consultation is not required. If the FAA determines that the action may affect listed species, consultation with the USFWS must be initiated.

A significant impact to federally-listed threatened and endangered species would occur when the USFWS or NMFS determines that the proposed action would be likely to jeopardize the continued existence of a federally-listed threatened or endangered species, or would be likely to result in the destruction or adverse modification of federally-designated critical habitat. An action need not involve a threat of extinction to federally listed species to meet the NEPA standard of significance. Lesser impacts including impacts on non-listed or special status species could also constitute a significant impact.

The Migratory Bird Treaty Act (16 U.S.C. §§ 703-712) protects migratory birds, including their nests, eggs, and parts, from possession, sale, purchase, barter, transport, import, export, and take. The USFWS is the federal agency responsible for the management of migratory birds as they spend time in habitats of the U.S. For purposes of the Migratory Bird Treaty Act, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect” (50 CFR § 10.12). The Migratory Bird Treaty Act applies to migratory birds identified in 50 CFR § 10.13 (defined hereafter as “migratory birds”).

The Bald and Golden Eagle Protection Act prohibits anyone from “taking” a bald or golden eagle, including their parts, nests, or eggs, without a permit issued by the USFWS. Implementing regulations (50 CFR § 22), and USFWS guidelines as published in the National Bald Eagle Management Guidelines, provide for additional protections against “disturbances.” Similar to take, “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, injury to an eagle or causes either a decrease in its productivity or nest abandonment due to a substantial interference with breeding, feeding, or sheltering. A permitting process provides limited exceptions to the Bald and Golden Eagle Protection Act’s prohibitions. The USFWS has issued regulations for the permitting process in 50 CFR § 22. The National Bald Eagle Management Guidelines state that aircraft should remain at least 1,000 feet from known bald eagle nests during the breeding season unless operated by a trained wildlife biologist.

3.2.2 Affected Environment

This section describes the existing biological environment of the Villages LSL route area. There will be no ground construction or habitat modification associated with the proposed action. The aircraft takeoff and landing locations are in lots that are already developed. UPS FF's aircraft will not touch the ground in any other place than the nest and DC (except during emergency landings).

The proposed action would take place over mostly suburban and commercially-developed properties. These areas provide habitat for the smaller, more common and ubiquitous bird and mammal species of the southern U.S., and though suitable to support many migratory bird species passing through, are too close to roads and human activity centers for this habitat to be considered a place where "quiet" is a unique attribute of the habitat.

The potential for impacts to federally-listed species was assessed using the USFWS Information for Planning and Consultation (IPaC) map tool and reports. The study area for federally-listed species covered the same study area shown in Figure 2 of this EA. The IPaC report is included as Appendix A.

Based on the IPaC report, there are three ESA-listed bird species that could occur near the flight path: Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*); Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*); and Wood Stork (*Mycteria americana*). There is no critical habitat identified in the Villages study area.

The Everglade Snail Kite has the potential to nest near wetland areas in the study area. The USFWS Snail Kite Management Guidelines state that a 500-foot no-entry buffer zone should be established around any active kite nests that are discovered.⁸ The no-entry buffer is meant to prevent any direct disturbance that may affect their nesting. UPS FF has been provided with a copy of the Snail Kite Management Guidelines, and has stated that they will ensure that no flights will occur within 500 feet of any active kite nests that may be discovered in the study area.

In order to learn more about the potential for impacts to Everglade Snail Kites that may nest in the study area, the FAA initiated consultation with USFWS under ESA Section 7 (50 CFR § 402). The FAA sent a letter describing the project to the USFWS North Florida Ecological Services Field Office, and followed up with a telephone discussion. On November 8, 2021, the USFWS sent an e-mail concluding that snail kites would not be impacted by the drone operations. Additionally, the USFWS said that while the project falls within the snail kite consultation area, they have no known species data to support snail kites in the study area.

Migratory bird species found within the operating area will vary throughout the year. Many dozens of resident bird species – also protected under the Migratory Bird Treaty Act – will inhabit the fragmented woodlands and waterways in the study area all year long. During certain weeks in the spring and fall, hundreds of species of songbirds, raptors, and waterfowl from the northern U.S. and Canada may potentially pass through the operating area, mostly traveling at night. Some of these migratory birds could have winter territories in the operating area. However, occasional drone overflights at 150-250 feet are not expected to impact any critical lifecycle of these birds or their ability to survive.

The IPaC report identifies Birds of Conservation Concern (BCC) that could occur in the operating area, along with information on the likelihood that they may be nesting in the area. Two special status bird species may potentially nest in the operating area. The Bald Eagle (*Haliaeetus leucocephalus*) is not a

⁸ U.S. Fish and Wildlife Service. 2006. Snail Kite Management Guidelines. Available: <https://www.fws.gov/verobeach/BirdsPDFs/20060221SnailKiteManagementGuidelines2.pdf>. Accessed: July 15, 2021

BCC in the operating area, but it could establish nests in forested areas near Lewisville Lake along the western side of the operating area. As stated in the National Bald Eagle Management Guidelines⁹, aircraft should stay at least 1,000 feet from Bald Eagle nests during its breeding season from September 1 through July 31, unless the aircraft is operated by a trained wildlife biologist.

The Red-headed Woodpecker (*Melanerpes erythrocephalus*) is a BCC within the operating area. Red-headed Woodpeckers typically nest in tall, dead trees near marshes and open bodies of water between May 10 and September 10. It is possible that Red-headed Woodpeckers may be nesting within the operating area. Red-headed Woodpecker nest locations should not be disturbed during the breeding period so as to avoid any potential impacts to the nest activity, such as nest abandonment. Additional information on the Red-headed Woodpecker and Bald Eagle can be found in the IPaC report for this proposed action (Appendix A).

3.2.3 Environmental Consequences

The effects of the proposed action on wildlife would be low. The operations will be taking place within airspace, and typically well above the tree line and away from sensitive habitats. The low number of daily operations and nature of the flights are not expected to significantly influence wildlife in the area. If UPS FF learns of any active Everglade Snail Kite nests within the operating area, UPS FF has indicated it can keep aircraft at least 500 feet from the nest during its breeding season. If UPS FF learns of any active Bald Eagle nests within the operating area, UPS FF has indicated it can keep aircraft at least 1,000 feet from the nest during its breeding season. And, if UPS FF learns of any active Red-headed Woodpecker nests within the operating area, it has indicated it would plan to keep aircraft a reasonable distance from the nesting tree to avoid any disturbance during its breeding season.

There were no ESA-listed bat species identified on the IPaC report; however, bats may occur within the operating area. Information regarding the impact of drones on bats is limited. Some bat studies have concluded that drones have “minimal impact on bat behavior”¹⁰ and do not appear to be disturbed by drones.¹¹ Another study suggested that bats may avoid drones thus altering bat behavior.¹² Based on the information available, the FAA has determined that the proposed action will cause no significant impact to bats. Information regarding drone impacts on insects is limited and there have been no widespread negative impacts identified in the scientific literature. Therefore, based on the information available, the action is not expected to have significant impacts to insect populations.

The FAA’s analysis finds that the proposed action is not expected to cause any of the following impacts:

- A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area;

⁹ U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. Available: <https://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf>. Accessed: October 19, 2021.

¹⁰ The Chirocopter: A UAV for recording sound and video of bats at altitude. Methods in Ecology and Evolution. Available: <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/2041-210X.12992>. Accessed: October 21, 2021

¹¹ Autonomous drones are a viable tool for acoustic bat surveys. Available: <https://www.biorxiv.org/content/10.1101/673772v1.full.pdf> Accessed: October 21, 2021

¹² Fewer bat passes are detected during small, commercial drone flights. Available: <https://www.nature.com/articles/s41598-021-90905-0>. Accessed: October 21, 2021

- Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats; or
- Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or
- Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required.

3.3 Department of Transportation Act, Section 4(f) Resources

3.3.1 Regulatory Setting

Section 4(f) of the DOT Act [codified at 49 U.S.C. § 303(c)] protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Section 4(f) states that, subject to exceptions for de minimis impacts: "The Secretary may approve a transportation program or project requiring the use of [4(f) resources]...only if—(1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

The term "use" includes both direct or physical and indirect or "constructive" impacts to Section 4(f) resources. Direct use is the physical occupation or alteration of a Section 4(f) property or any portion of a Section 4(f) property. A constructive use does not require direct physical impacts or occupation of a Section 4(f) resource. A constructive use would occur when a proposed action would result in substantial impairment of a resource to the degree that the protected activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. The determination of use must consider the entire property and not simply the portion of the property used for a proposed project.¹³

Section 4(f) resources where a quiet setting is a generally recognized feature or attribute receive special consideration. In assessing constructive use, FAA Order 1050.1F, Appendix B, page B-11, requires that the FAA "...must consult all appropriate federal, state, and local officials having jurisdiction over the affected Section 4(f) properties when determining whether project-related impacts would substantially impair the resources." Parks, recreation areas, and wildlife refuges that are privately owned are not subject to Section 4(f) provisions.

A significant impact would occur pursuant to NEPA when a proposed action either involves more than a minimal physical use of a section 4(f) property or is deemed a "constructive use" based on an FAA determination that the proposed action would substantially impair the 4(f) property, and mitigation measures do not eliminate or reduce the effects of the use below the threshold of significance.

3.3.2 Affected Environment

The FAA used data from federal, state, and other public-access sources to identify Section 4(f) resources within the operating area. The FAA identified no properties within the LSL study area that meet the

¹³ Federal Highway Administration (FHWA) Section 4(f) Policy Paper. (Note: FHWA regulations are not binding on the FAA; however, the FAA may use them as guidance to the extent relevant to aviation projects.) Available: <https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.pdf>. Accessed: February 2, 2021

definition of a Section 4(f) resource, such as public parks, recreation areas, and historic sites. There are no wildlife refuges within the operating area.

While there are no Section 4(f) resources within the study area, the FAA consulted with the Florida SHPO to determine whether historic and traditional cultural properties would be affected by the proposed action, as discussed in the next section devoted to Historical, Architectural, Archaeological, and Cultural Resources.

3.3.3 Environmental Consequences

The FAA has determined that infrequent UAS overflights as described in the proposed action will 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. There will be no physical use of Section 4(f) resources. Noise and visual effects from UPS FF's occasional overflights are not expected to diminish the activities, features, or attributes of any resources in the study area.

3.4 Historical, Architectural, Archaeological, and Cultural Resources

3.4.1 Regulatory Setting

Section 106 of the National Historic Preservation Act (NHPA) of 1966 [54 U.S.C. § 306108] requires federal agencies to consider the effects of their undertakings on properties listed or eligible for listing in the National Register of Historic Places (NRHP). This includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meets the NRHP criteria. Regulations related to this process are contained in 36 CFR Part 800, Protection of Historic Properties. Compliance with Section 106 requires consultation with the State Historic Preservation Officer (SHPO) and applicable other parties, including Indian tribes.

Major steps in the Section 106 process include identifying the Area of Potential Effects (APE), identifying historic and cultural resources within the APE, and consulting with the SHPO and any Tribal Historic Preservation Office (THPO) that is identified as potentially having traditional cultural interests in the area. A factor to consider in assessing significant impact is when an action would result in a finding of adverse effect through the Section 106 process.

3.4.2 Affected Environment

The APE for the proposed action is the same as the LSL study area where UPS FF is planning to conduct drone package deliveries, as shown in Figure 2 in this EA. The FAA identified no historic sites within the APE that could be affected by the overflight of UPS FF drones. The FAA consulted the Florida SHPO website to search for historic properties.

In accordance with 36 CFR § 800.4(a)(1), the FAA consulted with the Florida SHPO and with three THPOs who may potentially attach religious or cultural significance to resources in the area the APE.¹⁴ The three tribes are, respectively: (1) The Coushatta Tribe of Louisiana; (2) Miccosukee Tribe of Indians; and (3) Muscogee (Creek) Nation Apache Tribe of Oklahoma.

The FAA sent consultation letters to the three tribes on July 14, 2021, and did not receive any responses or objections from the tribes. No traditional cultural resources were identified by the FAA during the analysis for this project. The FAA sent a consultation letter to the Florida SHPO on July 14, 2021, and

¹⁴ FAA utilized the Housing and Urban Development (HUD) Tribal Directory Assessment Tool (TDAT) to identify tribes with ancestral ties or other interests within the Frisco and Little Elm APE.

received a response from the SHPO on July 22, 2021 stating that they have no objections to the proposed action and that no historic or cultural resources would be affected by the proposed action covered within this EA. The FAA's tribal and historic outreach letters are included as Appendix B.

3.4.2 Environmental Consequences

The nature of UAS effects on historic properties is limited to non-physical, reversible impacts (i.e., the introduction of audible and/or visual elements). The number of daily flights that UPS FF is proposing from this location – 22 operations per day – means that any historic or cultural resource would be subject to only a small number of overflights per day, if any.

Based on the information available, we have determined that this undertaking will not affect historic properties. Additionally, there would be no known effect on known cultural resources from this action.

3.5 Noise and Noise-Compatible Land Use

3.5.1 Regulatory Setting

Aircraft noise is often the most noticeable environmental effect associated with any aviation project. Several federal laws, including the Aviation Safety and Noise Abatement Act of 1979, as amended (49 U.S.C. §§ 47501-47507) regulate aircraft noise. Through 14 CFR Part 36, the FAA regulates noise from aircraft.

FAA Order 1050.1F, Appendix B, Paragraph B-1.3 requires the FAA to identify the location and number of noise sensitive areas that could be significantly impacted by noise. As defined in Paragraph 11-5b of Order 1050.1F, page 11-3, a noise sensitive area is “[a]n area where noise interferes with normal activities associated with its use. Normally, noise sensitive areas include residential, educational, health, and religious structures and sites, and parks, recreational areas, areas with wilderness characteristics, wildlife refuges, and cultural and historical sites.”

Sound is measured in terms of the decibel (dB), which is the ratio between the sound pressure of the sound source and 20 micropascals, which is nominally the threshold of human hearing. Various weighting schemes have been developed to collapse a frequency spectrum into a single dB value. The A-weighted decibel, or dBA, corresponds to human hearing accounting for the higher sensitivity in the mid-range frequencies.

To comply with NEPA requirements, the FAA has issued requirements for assessing aircraft noise in FAA Order 1050.1F, Appendix B. FAA's primary noise metric for aviation noise analysis is the yearly Day-Night Average Sound Level (DNL) metric. The DNL metric is a single value representing the logarithmically average aircraft sound level at a location over a 24-hour period, with a 10 dB adjustment added to those noise events occurring from 10:00 p.m. and up to 7:00 a.m. the following morning. A significant noise impact is defined in Order 1050.1F as an increase in noise of DNL 1.5 dB or more at or above 65 dB DNL noise exposure or a noise exposure at or above the 65 dB level due to a DNL 1.5 dB or greater increase.

3.5.2 Affected Environment

Human perception of noise depends on a number of factors, including overall noise level, number of noise events, the extent of audibility above the background ambient noise level, and frequency content (pitch). UAS noise generally has high frequency content which can be described as a lawnmower-type pitch.

Existing noise levels in the Villages operating area are expected to be well below 65 DNL. The ambient noise environment throughout the operating area is affected mainly by automobile traffic. Occasional general aviation (GA) aircraft operations or overflights of commercial aircraft may be perceptible to people on the ground. However, existing aviation noise is very limited within the operating area, which is all Class G (unregulated) airspace.

3.5.3 Environmental Consequences

In April 2020, the FAA conducted an analysis to determine the estimated maximum noise emissions from the Matternet M2-V9 UA by using noise emissions from a similar small UAS quadcopter. Based on this analysis, and the limited number of operations being proposed by UPS FF, the FAA determined that noise levels along the Villages LSL route will be well below the 45 DNL threshold minimum change-in-exposure discussed in the 1050.1F Desk Reference.

3.6 Visual Effects (Visual Resources and Visual Character)

3.6.1 Regulatory Setting

Visual resources and visual character impacts deal with the extent to which the proposed action would result in visual impacts to resources in the Villages study area. Visual impacts can be difficult to define and evaluate because the analysis is generally subjective, but are normally related to the extent that the proposed action would contrast with, or detract from, the visual resources and/or the visual character of the existing environment. In this case, visual effects would be limited to the introduction of a visual intrusion – a UAS in flight – which could be out of character with the suburban or natural landscapes.

The FAA has not developed a visual effects threshold of significance similar to noise impacts. Factors FAA considers in assessing significant impacts include the degree to which the action would have the potential to: (1) affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources; (2) contrast with the visual resources and/or visual character in the study area; or (3) block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

3.6.2 Affected Environment

The proposed action would take place over mostly suburban and commercially-developed properties. As noted in Section 3.3, *DOT Act Section 4(f) Resources*, there are no public parks, recreation areas, or historic properties that could be valued for aesthetic attributes within the study area.

Overflights will mostly take place over water or non-populated properties. Once a package is loaded and the flight plan has been confirmed by UPS FF's Remote Pilot in Command (RPIC), the drone takes off from its designated pad. The aircraft quickly rises to its cruising altitude between 150-250 feet above ground level (AGL) for its en route flight. The aircraft may fly up to 400 feet AGL when needed.

3.6.3 Environmental Consequences

The proposed action makes no changes to any landforms, or land uses, thus there would be no effect to the visual character of the area. The proposed action involves airspace operations that could result in visual impacts on sensitive areas such as Section 4(f) properties where the visual setting is an important resource of the property. However, no Section 4(f) properties are located in the study area. Moreover, any visual effects are expected to be similar to existing air traffic in the vicinity of the operating area.

3.7 Water Resources (Surface Waters)

3.7.1 Regulatory Setting

Surface water resources generally consist of oceans, wetlands, lakes, rivers, and streams. Surface water is important for its contribution to the economic, ecological, recreational, and human health of a community. The Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) program, which regulates the discharge of point sources of water pollution into waters of the United States and requires a permit under Section 402 of the Clean Water Act. Waters of the United States are defined by the Clean Water Act and are protected by various regulations and permitting programs administered by the EPA and the U.S. Army Corps of Engineers. An action would be considered significant when it adversely affects wetland functions or the maintenance of natural systems that support wildlife and fish habitat.

3.7.2 Affected Environment

There are some surface waters within the Villages study area. The only large surface water subject to overflights is Lake Sumter, a man-made reservoir immediately to the north of the LSL location. The lake and its tributary streams are protected by the Clean Water Act.

3.7.3 Environmental Consequences

UPS FF has conducted several thousand UAS flight operations with a good safety record, and the FAA does not anticipate any accidents or incidents under the proposed action. While it is highly unlikely for one of UPS FF's aircraft to crash, and even less likely for a crash to happen within Lake Sumter or one of its tributary streams, this EA considers the potential effects of a drone crashing into surface waters covered by the Clean Water Act.

UPS FF is a certificated air carrier and complies with all applicable regulatory requirements. This includes compliance with requirements to notify the FAA and/or National Transportation Safety Board (NTSB) in accordance with regulatory requirements in the event of an aircraft accident. UPS FF's FAA-accepted checklists include procedures to notify local emergency services in the event of an accident or incident. In accordance with 14 CFR Part 135.23(d), UPS FF is required to locate and secure any downed aircraft pending guidance from the FAA or NTSB. The Lithium-ion battery packs are not expected to detach from the aircraft or become lost, as the UA is equipped with an emergency safety parachute that will deploy in the event of an incident.

There will be no construction activities associated with the proposed action that could impact surface waters. For this reason, and for the reasons described above relating to potential crashes, the proposed action would not have the potential to adversely affect natural and beneficial water resource values to a degree that substantially diminishes or destroys such values, or to adversely affect surface waters such that the beneficial uses and values of such waters are appreciably diminished or can no longer be maintained and such impairment cannot be avoided or satisfactorily mitigated. Therefore, the potential for impacts to surface waters is not significant.

4.0 LIST of PREPARERS and CONTRIBUTORS

Table 4-1 lists the principal preparers, reviewers, and contributors to this EA.

Table 4-1. List of Preparers and Contributors

Name and Affiliation	Years of Industry Experience	EA Responsibility
Mike Millard, Flight Standards, FAA Aviation Safety	40	Flight Standards Environmental Specialist and Document Review
Christopher Couture, FAA Aviation Safety	15	Program Management, Environmental Analysis, and Document Review
Contractor Preparers		
Jodi Jones, FAA Aviation Safety, Marton Technologies, Inc.	12	NEPA SME, Research, and Document Review
Brad Thompson, FAA Aviation Safety, Science Applications International Corporation, Inc. (SAIC)	7	NEPA SME, Research, and Document Review

5.0 PREPARER'S CERTIFICATION

After careful and thorough consideration of this EA and the facts contained herein, I find that the action is consistent with existing national environmental policies and objectives as set forth in Section 101 of NEPA and other applicable environmental requirements and is not a major federal action that will significantly affect the quality of human environment, or otherwise include any condition requiring consideration pursuant to Section 102(2)(c) of NEPA.

Michael Millard

11-15-2021

Mike Millard, Flight Standards Environmental Specialist
General Aviation Operations Section
General Aviation and Commercial Division
Office of Safety Standards, Flight Standards Service

Reviewing Official:

Christopher A. Couture

11-15-2021

Christopher Couture, Environmental Protection Specialist
Aviation Safety Environmental Management Representative
External Audits, Inspections, and Reports Branch
Office of Quality, Integration, and Executive Services

Approving Official:

KEVIN A. RAYMOND

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Date: 2021.11.15 11:41:35 -06'00'

Kevin Raymond
Acting Manager, General Aviation Operations Section
General Aviation and Commercial Division
Office of Safety Standards, Flight Standards Service

Appendix A
Villages LSL IPaC Report

Document can be provided by emailing 9-FAA-Drone-Environmental@faa.gov

Appendix B
Tribal and Historic Resource Outreach Letters



U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Safety

800 Independence Ave., S.W.
Washington, DC 20591

State Historic Preservation Officer
Compliance and Review Section
Division of Historical Resources
Florida Department of State
500 S. Bronough Street – 4th Floor
Tallahassee, FL 32399-0250

Via electronic submission to compliancepermits@dos.myflorida.com

To whom it may concern:

The purpose of this letter is to inform you of a proposal under consideration by the Federal Aviation Administration (FAA) for the approval of a Certificate of Waiver and/or Exemption for an Unmanned Aircraft System (UAS) delivery operations in and around The Villages, FL in Sumter and Lake Counties. The FAA has determined that this proposed action is a Federal undertaking as defined in 36 CFR § 800.16 (y). Therefore, the FAA is initializing consultation with the State Historic Preservation Officer (SHPO) pursuant to § 800.11 (d). Previous consultation was conducted for the operations but was for 6 separate routes within The Villages, FL. This new consultation will be for a larger area in The Villages, FL.

Proposed Activity Description

The Federal Aviation Administration (FAA) has been asked to approve waivers and/or exemptions to aeronautical regulations, thereby approving the UAS operation in the area depicted below. FAA approval of the UAS operation in the area is an undertaking subject to regulations pursuant to the National Historic Preservation Act.

The UAS operation will be flown by a small unmanned aircraft with a 3.9 lbs. payload, at approximately 300 feet Above Ground Level (AGL) in The Villages, FL. The unmanned aircraft will quickly rise to an approximate cruising altitude of 300 feet AGL, fly to the delivery locations and descend to land. The estimated distance of the delivery loop is approximately 3 statute miles or less within Visual Line of Sight (VLOS) and with an estimated total flight time of between 3 to 7 minutes. The purpose is to deliver medical or other essential supplies, consisting of approximately 88 flights per day for an estimated 4.22 hours of total flying time per day. Flights will occur primarily Mon-Fri, no holidays, with operating hours from 9 am until 4:30 pm, daylight hours. The dimension of the UAS area defines the Area of Potential Effect (APE). According to the National Park Service online database of the

National Register of Historic Places, there are no registered historical places within the proposed APE. The UAS operation will have no affects to the ground.

Consultation

The FAA seeks concurrence from the SHPO of its no historic properties affected [§ 800.11 (d)] determination for the proposed UAS operation area. Your response over the next 30 days will greatly assist us in incorporating your concerns into our environmental review of the operation.

If you have any comments or questions or need additional information regarding the proposed operation, please do not hesitate to contact Mr. Mike Millard, in writing at: FAA, AFS-800, 800 Independence Ave., S.W., Washington, D.C. 20591; by telephone: (202) 267-7906; or by email: 9-AWA-AVS-AFS-ENVIRONMENTAL@faa.gov.

Sincerely,

**David M.
Menzimer**

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M. Menzimer

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David Menzimer
Aviation Safety
Manager, General Aviation Operations Branch,
Flight Standards Service

Enclosure



U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Safety

800 Independence Ave., S.W.
Washington, DC 20591

Chairman David Sickey
Coushatta Tribe of Louisiana
P.O. Box 818
Elton, LA 70532

Dear Chairman Sickey:

The purpose of this letter is to inform you of a proposal under consideration by the Federal Aviation Administration (FAA) for the approval of a Certificate of Waiver and/or Exemption for an Unmanned Aircraft System (UAS) delivery operations in and around The Villages, FL in Sumter and Lake Counties. We wish to solicit your views regarding potential effects on tribal interests in the area. Previous consultation was conducted for the operations but was for 6 separate routes within The Villages, FL. This new consultation will be for a larger area in The Villages, FL.

Proposed Activity Description

The Federal Aviation Administration (FAA) has been asked to approve waivers and/or exemptions to aeronautical regulations, thereby approving the UAS operation in the area depicted below. FAA approval of the UAS operation in the area is an undertaking subject to regulations pursuant to the National Historic Preservation Act.

The UAS operation will be flown by a small unmanned aircraft with a 3.9 lbs. payload, at approximately 300 feet Above Ground Level (AGL) in The Villages, FL. The unmanned aircraft will quickly rise to an approximate cruising altitude of 300 feet AGL, fly to the delivery locations and descend to land. The estimated distance of the delivery loop is approximately 3 statute miles or less within Visual Line of Sight (VLOS) and with an estimated total flight time of between 3 to 7 minutes. The purpose is to deliver medical or other essential supplies, consisting of approximately 88 flights per day for an estimated 4.22 hours of total flying time per day. Flights will occur primarily Mon-Fri, no holidays, with operating hours from 9 am until 4:30 pm, daylight hours. The dimension of the UAS area defines the Area of Potential Effect (APE). The UAS operation will have no affects to the ground.

Consultation

The FAA is soliciting the opinion of the tribe(s) concerning any tribal lands, or sites of religious or cultural significance that may be affected by the proposed operation area. Your response over the next 30 days will greatly assist us in incorporating your concerns into our environmental review of the operation.

If you have any comments or questions or need additional information regarding the UAS operation, please do not hesitate to contact Mr. Mike Millard, in writing at: FAA, AFS-800, 800 Independence Ave., S.W., Washington, D.C. 20591; by telephone: (202) 267-7906; or by email: 9-AWA-AVS-AFS-ENVIRONMENTAL@faa.gov.

Sincerely,

**David M.
Menzimer**

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David Menzimer
Aviation Safety
Manager, General Aviation Operations Branch,
Flight Standards Service

Enclosure



U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Safety

800 Independence Ave., S.W.
Washington, DC 20591

Chairman Billy Cypress
Miccosukee Tribe of Indians
P.O. Box 440021
Miami, FL 33144

Dear Chairman Cypress:

The purpose of this letter is to inform you of a proposal under consideration by the Federal Aviation Administration (FAA) for the approval of a Certificate of Waiver and/or Exemption for an Unmanned Aircraft System (UAS) delivery operations in and around The Villages, FL in Sumter and Lake Counties. We wish to solicit your views regarding potential effects on tribal interests in the area. Previous consultation was conducted for the operations but was for 6 separate routes within The Villages, FL. This new consultation will be for a larger area in The Villages, FL.

Proposed Activity Description

The Federal Aviation Administration (FAA) has been asked to approve waivers and/or exemptions to aeronautical regulations, thereby approving the UAS operation in the area depicted below. FAA approval of the UAS operation in the area is an undertaking subject to regulations pursuant to the National Historic Preservation Act.

The UAS operation will be flown by a small unmanned aircraft with a 3.9 lbs. payload, at approximately 300 feet Above Ground Level (AGL) in The Villages, FL. The unmanned aircraft will quickly rise to an approximate cruising altitude of 300 feet AGL, fly to the delivery locations and descend to land. The estimated distance of the delivery loop is approximately 3 statute miles or less within Visual Line of Sight (VLOS) and with an estimated total flight time of between 3 to 7 minutes. The purpose is to deliver medical or other essential supplies, consisting of approximately 88 flights per day for an estimated 4.22 hours of total flying time per day. Flights will occur primarily Mon-Fri, no holidays, with operating hours from 9 am until 4:30 pm, daylight hours. The dimension of the UAS area defines the Area of Potential Effect (APE). The UAS operation will have no affects to the ground.

Consultation

The FAA is soliciting the opinion of the tribe(s) concerning any tribal lands, or sites of religious or cultural significance that may be affected by the proposed operation area. Your response over the next 30 days will greatly assist us in incorporating your concerns into our environmental review of the operation.

If you have any comments or questions or need additional information regarding the UAS operation, please do not hesitate to contact Mr. Mike Millard, in writing at: FAA, AFS-800, 800 Independence Ave., S.W., Washington, D.C. 20591; by telephone: (202) 267-7906; or by email: 9-AWA-AVS-AFS-ENVIRONMENTAL@faa.gov.

Sincerely,

**David M.
Menzimer**



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Date: 2021.07.14 10:31:50 -07'00'

David Menzimer
Aviation Safety
Manager, General Aviation Operations Branch,
Flight Standards Service

Enclosure



U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Safety

800 Independence Ave., S.W.
Washington, DC 20591

Principal Chief David Hill
Muscogee Nation
P.O. Box 580
Okmulgee, OK 74447

Dear Chief Hill:

The purpose of this letter is to inform you of a proposal under consideration by the Federal Aviation Administration (FAA) for the approval of a Certificate of Waiver and/or Exemption for an Unmanned Aircraft System (UAS) delivery operations in and around The Villages, FL in Sumter and Lake Counties. We wish to solicit your views regarding potential effects on tribal interests in the area. Previous consultation was conducted for the operations but was for 6 separate routes within The Villages, FL. This new consultation will be for a larger area in The Villages, FL.

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Sincerely,

**David M.
Menzimer**

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M. Menzimer
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David Menzimer
Aviation Safety
Manager, General Aviation Operations Branch,
Flight Standards Service

Enclosure