Appendix B

Biological Resources and Agency Consultation

U.S. Department of Transportation
Federal Aviation Administration

Aviation Safety

800 Independence Ave., SW.
Washington, DC 20591

U.S. Fish and Wildlife Service

Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, Kansas 66502-2801
kansases@fws.gov

SUBJECT: Endangered Species Act Section 7 Consultation for Drone Commercial Package Delivery Operations in the greater Kansas City area

In accordance with Section 7 of the Endangered Species Act (ESA), the Federal Aviation Administration (FAA) is requesting U.S. Fish and Wildlife Service (USFWS) concurrence that the FAA's action of authorizing Amazon Prime Air (Prime Air) to conduct commercial drone package delivery operations from Prime Air Drone Delivery Centers (PADDCs) located in and around the Kansas City area (the Proposed Action), is ***not likely to adversely affect*** the tricolored bat (*Perimyotis subflavus*), gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Additionally, the Proposed Action would have ***no effect*** on the Pallid sturgeon (*Scaphirrhynchus albus*), monarch butterfly (*Danaus plexippus*), western regal fritillary (*Argynnis idalia*), and Mead's milkweed (*Asclepias meadii*).

Project Description

Prime Air is seeking authorization to conduct commercial package deliveries using drones throughout in and around the Kansas City metropolitan area. Prime Air intends to introduce its drone delivery capabilities in 2025 and has requested the FAA to authorize the operation of its MK30 drone, so it can provide drone package delivery services across its operating area. The proposed MK30 operating areas and PADDCs are depicted in **Attachment A**.

Prime Air anticipates flying up to approximately 1,000 MK30 drone flights per operating day from each of the 2 PADDCs, with each flight taking a package to a customer delivery address before returning to the PADDC. The number of flights per day would vary based on customer demand and weather conditions. Prime Air is taking an incremental approach to operations and expects to gradually ramp up to approximately 1,000 flights per day per PADDC as consumer demand increases over time. Drone flights could be conducted up to 365 days a year between 7 A.M. and 10 P.M.

Unmanned Aircraft

As pictured in **Attachment B**, the MK30 drone is a hybrid multicopter fixed-wing tail-sitter drone with six propulsors allowing it to take off and land vertically and transition to wing borne flight. Its airframe is composed of staggered tandem wings for stable wing borne flight. The drone weighs approximately 78 pounds and has a maximum takeoff weight of approximately 83 pounds, which includes a maximum package payload of 5 pounds. It has a maximum operating range of 7.5 miles (or about 15 minutes) and can fly up to 58 knots (67 miles per hour) during wing-borne flight. It uses electric power from

rechargeable lithium-ion batteries and is launched vertically using powered lift and converts to using wing lift during en route flight. The MK30 is equipped with collision avoidance technology to help avoid conflicts with other aircraft and drones; however, no effective technology exists that can be used to help avoid collisions with wildlife.

Flight Operations

The MK30 drone would generally be operated at an altitude between 180 and 377 feet above ground level (AGL). The outbound en route altitude to a delivery location is expected to be flown between 180 and 279 feet AGL. The inbound en route altitude is expected to be flown between 279 and 377 feet back to the PADDC. At a delivery location, the drone would descend vertically to a stationary hover and drop a package to the ground. Once a package has been delivered, the drone would ascend vertically to the inbound transition altitude and depart the delivery area while climbing to the en route altitude to return to the PADDC. The PADDC is a controlled area wherein drone flights are launched and recovered. The drone would fly a predefined flight path that is set prior to takeoff. Flight missions would be automatically planned by Prime Air's flight planning software, which assigns, deconflicts, and routes each flight. In accordance with FAA safety requirements, the drone would avoid operating over areas with dense human populations, such as over roadways, public gathering spots, etc.

Takeoff

Once a package is loaded onto the MK30 drone and the drone is cleared for departure from the PADDC, the drone takes off from the ground vertically to an altitude of about 115 feet AGL and then transitions and climbs to its en route altitude of about 200 feet AGL (ranges from 180 and 279 feet AGL). The takeoff phase of flight would last less than one minute.

En Route Outbound

The en route outbound phase is the part of flight in which the MK30 drone transits from the PADDC to a delivery point on a predefined flight path. During this flight phase, the drone will typically operate at a en route altitude of 200 feet AGL with a typical airspeed of 58 knots (67 miles per hour).

Delivery

The delivery phase consists of descent from the en route altitude to a delivery point to deliver a package. The MK30 drone transitions and descends to about 140 feet AGL and then vertically descends to about 13 feet AGL while maintaining position over the delivery point. The drone hovers while dropping the package and then proceeds to climb vertically back to the inbound transition altitude of 197 feet AGL. The MK30 then transitions and climbs to its en route inbound altitude of 345 feet AGL (ranges from 279 to 377 feet AGL). The delivery phase of flight would last approximately one minute.

En Route Inbound

The MK30 drone continues to fly at a typical en route altitude of about 345 feet AGL with a speed of 58 knots towards the PADDC.

Landing

The drone decelerates as it approaches the PADDC and descends to the transition altitude of 197 feet AGL and where it transitions from horizontal flight to vertical flight, coming to a zero-speed position over its assigned landing pad. The MK30 drone slowly descends over its assigned landing pad and lands on the pad.

Predicted Sound Levels

Based on a noise analysis using sound level measurement data for the MK30 drone, the estimated maximum sound exposure level (SEL) for the takeoff, delivery, and landing phases of flight is approximately 90.5 (at 20 feet), 92.1 (at 25 feet), and 91.8 dB (at 20 feet), respectively. Predicted sound

levels decrease as distances from the drone increase. The maximum SEL for the en route phase is approximately 63.7 dB when the drone at an altitude of 200 feet AGL and flying at approximately 58 knots (67 miles per hour). The detailed noise analysis is provided as **Attachment C**.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR § 402.02). For this Proposed Action, the action areas are defined as Prime Air's proposed MK30 operating areas, as depicted in Attachment A. These areas capture all possible flight routes to the delivery areas and where potential effects (e.g., visual, auditory, physical) to listed species could occur.

The action area is in the Osage Cuestas ecoregion, a transitional area, mostly tallgrass prairie in the west to a combination of tallgrass prairie and oak hickory woodland in the east within Johnson and Wyandotte Counties. The Osage Cuestas ecoregion is characterized by a mosaic of cropland, woodland, and grassland.

As indicated above, the Proposed Action would take place over high to medium density developed urban and commercial areas, and some rural and agricultural areas scattered throughout the action area. Therefore, wildlife habitats within the action area predominantly include parks, a few open spaces, waterways, and vacant lands. These areas provide habitat for many of the more common and ubiquitous bird and mammal species in the region, including white-tailed deer, eastern gray squirrels, eastern cottontails, raccoons, armadillos, mice, badgers, songbirds, raptors, waterfowl, and insects.

ESA-Listed Species and Critical Habitat in the Action Area

The FAA acquired the Official Species Lists (see **Attachment D**) from the USFWS Information for Planning and Conservation (IPaC) online system to identify ESA-listed, proposed-listed, and candidate species within the action area. Based on earlier coordination with USFWS, of the species identified in the IPaC review only four (4) species may be affected by the drone operations. These are listed below in **Table 1** by the USFWS Ecological Field Office. The remaining species have limited habitat within the action area and include aquatic, plant, and insect species which would not be affected. These species include: pallid sturgeon (*Scaphirhynchus albus*), Monarch butterfly (*Danaus plexippus*), Western regal fritillary (*Argynnis idalia*), and Mead's milkweed (*Asclepias meadii*).

Table 1. ESA-Listed Species, Species Proposed for Listing, and Candidate Species Potentially Present which may be affected in the Action Areas by USFWS Ecological Field Office

Kansas Ecological Services Field Office (MKC6)

Species	Common Name	Species Name	Federal Status	Critical Habitat
Mammals	Tricolored bat	*Perimyotis subflavus*	Proposed Endangered	N
	Gray bat	*Myotis grisescens*	Endangered	N
	Indiana bat	*Myotis sodalis*	Endangered	N
	Northern Long-eared bat	*Myotis septentrionalis*	Endangered	N
Insects	Monarch butterfly	*Danaus plexippus*	Proposed Threatened	N
	Western regal fritillary	*Argynnis idalia occidentalis*	Proposed Threatened	N
Fish	Pallid sturgeon	*Scaphirhynchus albus*	Endangered	N
Plants	Mead's milkweed	*Asclepias meadii*	Threatened	N

SOURCE: USFWS IPaC, accessed June 2025.

Potential Effects of the Proposed Action on ESA-Listed and Candidate Species

Drone noise, visual presence, and the potential for airborne strikes with flying species are the Proposed Action's potential stressors or threats to ESA-listed species. Flight operations would take place mostly in an urban environment, within airspace, and typically remain well above the tree line while en route to and from the PADDC. The duration of exposure by wildlife on the ground to visual or noise impacts from the drone would be of very short duration (approximately 30 seconds during takeoff/landing and delivery and a few seconds during the en route phase).

As noted above, the highest estimated SEL associated with Prime Air's proposed operations is 92.1 dB, which would occur during a delivery. For reference, the sound level of a diesel truck at 50 feet or a noisy urban environment during the day is approximately 80 to 90 dB. The SEL on the ground when the drone is at an altitude of 200 feet AGL is estimated to be around 63.7 dB, which is comparable to the sound of an air conditioning unit at 100 feet (60 dB). The MK30 drone is expected to operate at altitudes higher than 200 feet AGL during en route flight; as such, the en route sound level is expected to be less than 63.7 dB.

A descriptor for noise effects on wildlife has not been universally adopted, but some research indicates SEL is the most useful predictor of responses. Characteristic of the bulk of research to date has been lack of systematic documentation of the source noise event. Many studies report "sound levels" without specifying the frequency spectrum or duration. A notable exception is a study sponsored by U.S. Air Force that identifies SEL as the best descriptor for response of domestic turkey poults to low-altitude aircraft overflights (Bradley et al. 1990). This study identified a threshold of response for disturbance of domestic turkeys ("100 percent rate of crowding") as SEL 100 dB. None of the predicted sound levels for the different flight phases exceed SEL 92.1 dB.

The following paragraphs describe the anticipated effects of the Proposed Action on the ESA-listed and proposed threatened species, as listed in **Table 1**.

Tricolored bat (*Perimyotis subflavus*)

The tricolored bat is a federally protected species that could be located within the action area. The Proposed Action would occur during the dusk emergence of bat activity during the evening civil twilight hours; however, drone service would not affect the dawn civil twilight hours. Research suggests that drones have "minimal impact on bat and owl behavior" (Fu, Y., M. Kinniry, and L.N. Kloepper. 2018) and that bats do not appear to be disturbed by drones (August, T. and T. Moore. 2008). Also, the risk of

bat conflicts is only present for 3 to 6 months each year (i.e., when bats are not hibernating). Bats at roost or in flight could experience drone noise during the en route and delivery flight phases. When foraging at or near the tree line at the time a drone flies by, bats would experience the greatest sound levels. Roosting bats or bats foraging near the ground at the time a drone flies by would experience lower sound levels. Given the estimated sound levels of the drone, the drone's linear flight profile to and from PADDCs and delivery locations, the short period of time the drone would be in any particular location, and the low probability of encountering an individual bat in the action area, drone noise is not expected to adversely affect the above referenced bat species. Any increase in ambient sound levels caused by the drone's flight would only last a few seconds during the en route phase and approximately 49 seconds during a delivery.

Gray bat (*Myotis grisescens*)

The gray bat also has the potential to occur within the action areas. Key identifiers for the gray bat are the species' wings are attached to the ankle and not at the base of the toes, as well as a distinct notch on the inside curve of each claw. In Kansas, the known populations of gray bat are dependent upon storm sewers within the southeast corner of the state. Nearby streams and wooded areas provide critical foraging habitat. Like other bats, the gray bat is an evening feeder that eats insects including caddisflies, moths, or flying beetles; however, its favorite food in the Asiatic oak weevil, found in the summertime abundant in forested cliffs along rivers. The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the gray bat.

Indiana bat (*Myotis sodalis*)

The Indiana bat is a medium-sized brownish-gray bat with a distinct keel on its calcar. It requires cool caves with stable temperatures around 40 degrees Fahrenheit. They roost and forage throughout the summer along streams and rivers and hibernate throughout the winter. As with the other bat species, the Indiana bat feeds in the evening on night-flying insects. The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the Indiana bat.

Northern long-eared bat (*Myotis septentrionalis*)

The northern long-eared bat is a medium-sized dark brown bat that is distinguished by their long ears. In the summer, it can be found roosting under the bark of trees and in cavities. During the winter the bat can be found hibernating in caves or mines where temperatures are constant and little to no air movement occurs. The northern long-eared bat eats insects and its feeding habits begin at dusk in the understory of dense woodlands. In Kansas, the northern long-eared bat is labeled as a Species In Need of Conservation (SINC). The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the northern long-eared bat.

The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the above-listed bats based on:

1) operations occurring mostly in an urban environment,

2) the altitude at which the drone flies in the en route phase (180 to 377 feet AGL),

3) the expected low sound levels experienced by a bat,

4) the short duration of any increases in ambient sound levels,

5) the low probability of a listed bat species occurring in the action area, and

6) the low likelihood of the drone striking a bat.

Any effects would be discountable (extremely unlikely to occur) or insignificant (not able to be meaningfully measured, detected, or evaluated).

Monarch butterfly (*Danaus plexippus*)

The monarch butterfly, a proposed threatened species, has the potential to occur in the action areas. Information regarding drone impacts on insects is limited and there have been no widespread negative impacts identified in scientific literature. Some research shows that monarch butterflies are not commonly observed at higher altitudes (generally between 1 and 300 feet) and would not be expected to frequently occur at the altitudes where Prime Air is proposing to operate (Altitudes Attained by migrating Monarch Butterflies, 2024). Therefore, it is anticipated that the Proposed Action will have ***no effect*** on the monarch butterfly.

Conclusion

Based on the analysis above, the FAA has determined the following:

- There is no critical habitat located within the action areas for any species listed in Table 1 above,
- The action areas are mostly urbanized, with minimal suitable habitat for the ESA-listed species identified in them.
- Any increase in ambient sound levels would be short in duration.
- Drone dwell/hover time during takeoff and delivery would be less than one minute.
- Drones would generally operate at an altitude between 200 and 345 feet AGL.
- Drone activity would be highly concentrated over developed areas, where there is consumer demand for drone delivery service.
- Based on all of these factors, the probability of a drone/wildlife interaction would be low.

Accordingly, the FAA has determined the Proposed Action is ***not likely to adversely affect*** the tricolored bat (*Perimyotis subflavus*), gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Additionally, the Proposed Action would have ***no effect*** on the monarch butterfly (Danaus plexippus).

Because the delivery of commercial goods by drones is an emerging technology and its potential effects on wildlife are still not well understood, Prime Air is proposing to implement a "Biological Monitoring Program" for this project, which would include:

- Record and analyze daily maintenance and telemetry records to document any potential drone/wildlife interactions,
- If applicable, report wildlife movement / activity in and around airport property that may be obtained from operations or wildlife management staff from nearby airports.
- If applicable, recover and analyze potential biological materials (e.g., snarge, feathers, etc.), generally in accordance with existing protocols used in cases of aircraft bird strikes at airports, and
- Report findings to the USFWS on an annual basis.

The proposed Biological Monitoring Program would serve as a useful tool for Prime Air, the FAA, and USFWS to better understand the possible interactions between drones and wildlife.

The FAA appreciates your review of the proposed project and requests your concurrence with (1) our "may affect" determination as stated above and (2) implementation of the proposed Biological Monitoring Program within 30 days of receiving this letter. If you have any questions, please contact Christopher Hurst via email at 9-faa-drone-environmental@faa.gov.

Sincerely,

Derek Hufty
Manager, General Aviation and Commercial Branch (AFS-750)
Emerging Technologies Division
Office of Safety Standards, Flight Standards Service

Attachments:
Attachment A – Proposed MK30 Operating Areas
Attachment B – MK 30 Drone
Attachment C – Technical Noise Report
Attachment D – Official Species List

References

Altitudes attained by migrating monarch butterflies, Danaus p. plexippus (Lepidoptera: Danaidae), as reported by glider pilots. Available: https://cdnsciencepub.com/doi/abs/10.1139/z81-084. Accessed April 2022 and February 2024.

August, T. and T. Moore. 2008. Autonomous Drones Are a Viable Tool for Acoustic Bat Surveys. Available: https://www.biorxiv.org/content/10.1101/673772v1.full.pdf. Accessed July 2023 and February 2024.

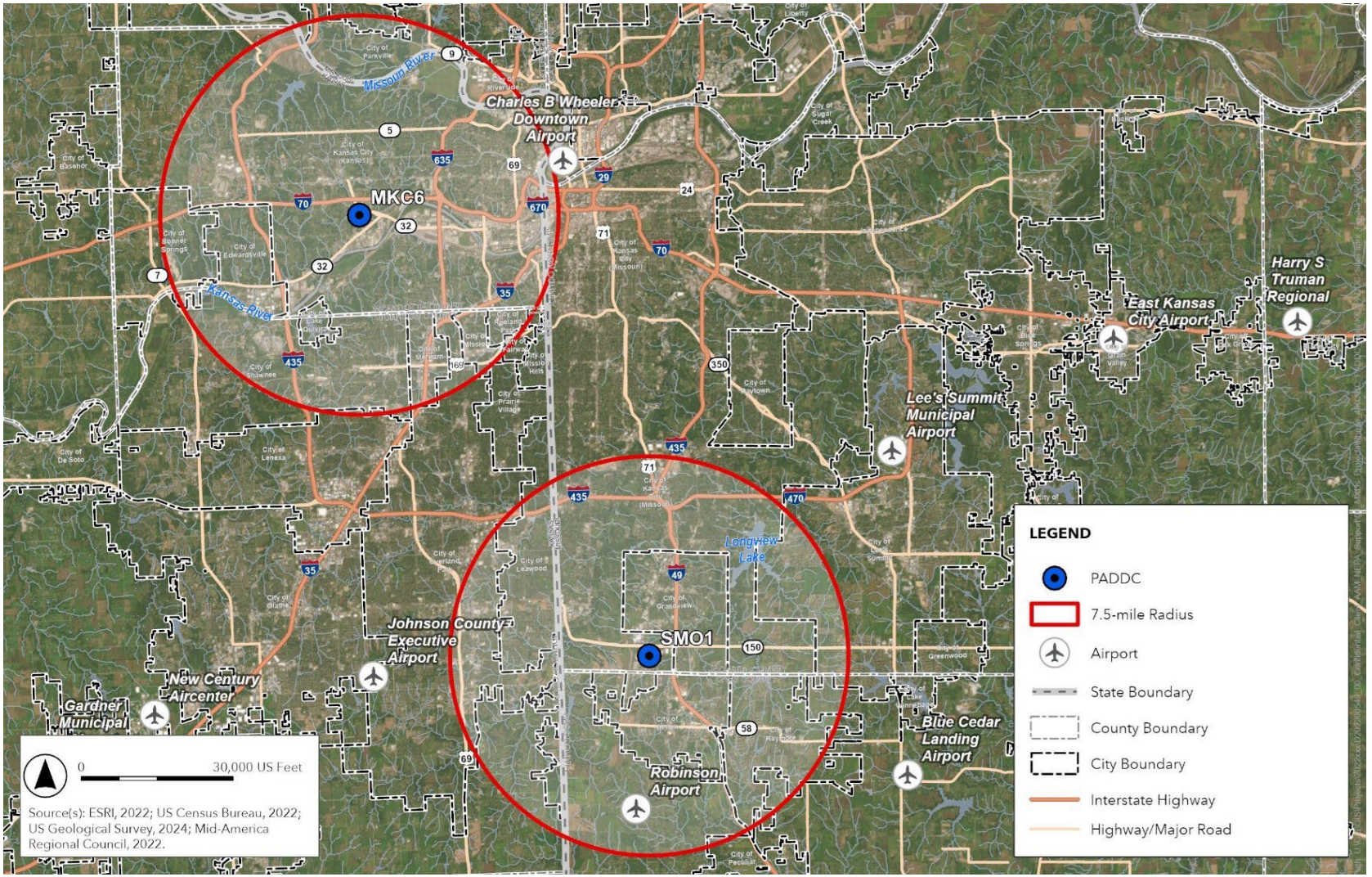
Fu, Y., M. Kinniry, and L.N. Kloepper. 2018. The Chirocopter: A UAV for Recording Sound and Video of Bats at Altitude. Methods in Ecology and Evolution 9(6):1531-1535. Available: https://doi.org/10.1111/2041-210x.12992

iNaturalist. Available at: https://www.inaturalist.org/places/united-states. Accessed November 2024.

The Ecoregions of Kansas. Kansas Native Plant Society. Available at: https://www.kansasnativeplantsociety.org/ecoregions/. Accessed November 2024.

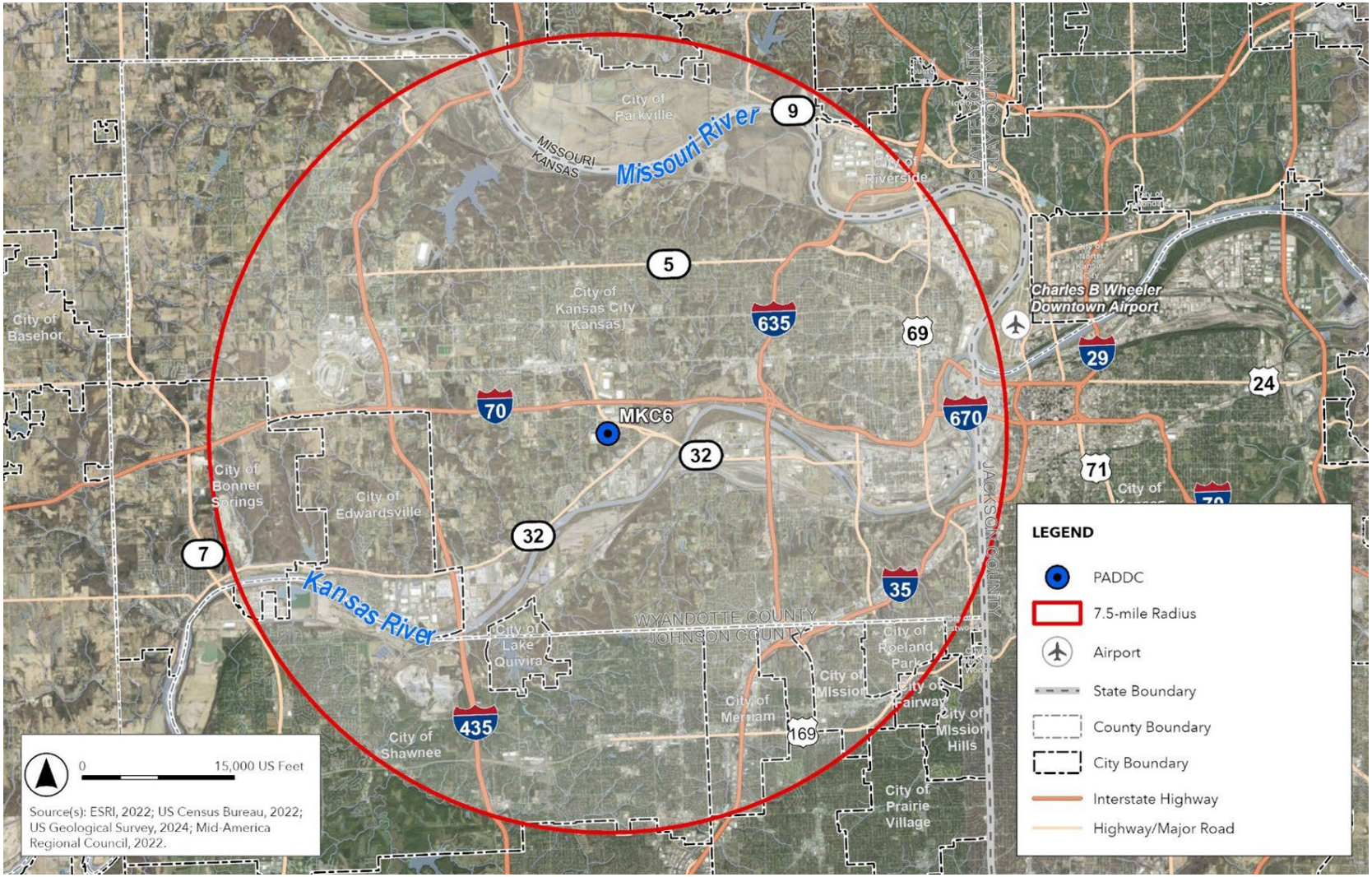
Attachment A

Proposed MK30 Operating Areas



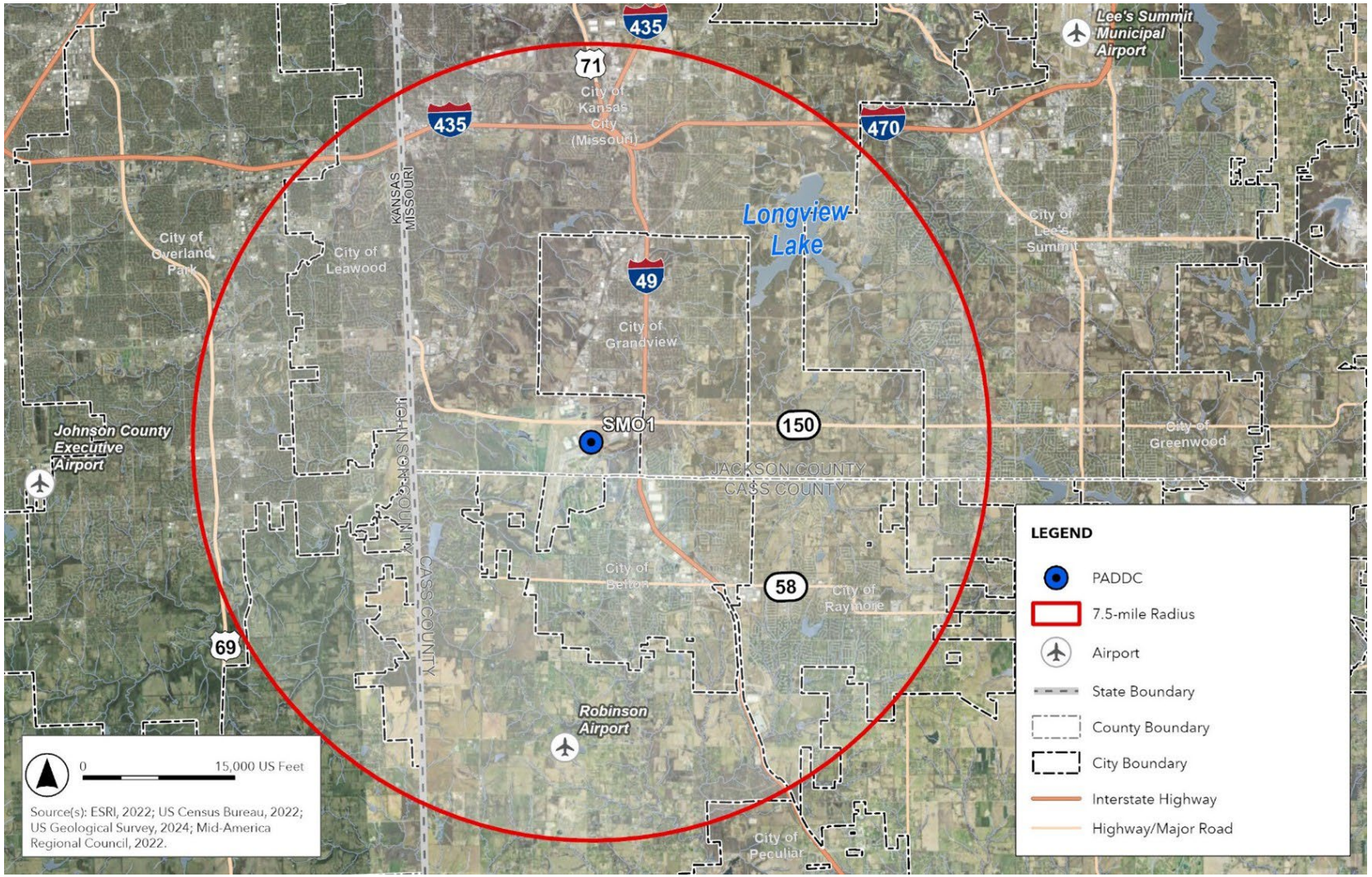
SOURCE: ESA, 2024; Maxar, 2022; US Census Bureau, 2021; US Geological Survey, 2022.

Figure 1
Action Areas – All PADDCs



SOURCE: ESA, 2024; Maxar, 2022; US Census Bureau, 2021; US Geological Survey, 2022.

Figure 2
MKC6 Drone Operation Action Area



SOURCE: ESA, 2024; Maxar, 2022; US Census Bureau, 2021; US Geological Survey, 2022.

Figure 3
SMO1 Drone Operation Action Area

Attachment B

MK30 Drone

MK30 Drone

Attachment C

Technical Noise Report

The Technical Noise Report included in the original agency consultation has been omitted from this appendix, but can be found in Appendix E.

Attachment D

Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801
Phone: (785) 539-3474 Fax: (785) 539-8567

In Reply Refer To: 06/02/2025 15:17:35 UTC
Project Code: 2025-0104038
Project Name: Kansas City SMO1_MKC6

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801
(785) 539-3474

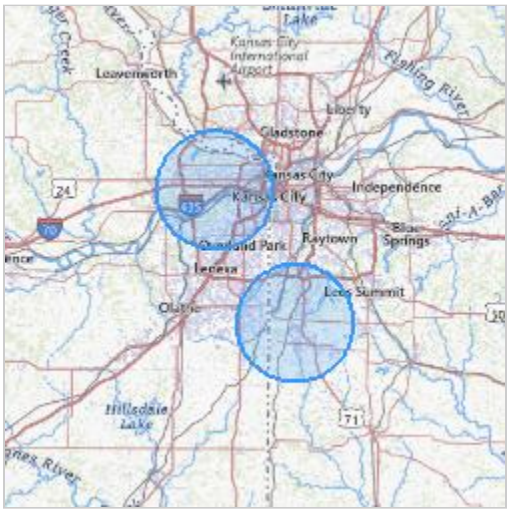
This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

PROJECT SUMMARY

Project Code: 2025-0104038
Project Name: Kansas City SMO1_MKC6
Project Type: Drones - Use/Operation of Unmanned Aerial Systems
Project Description: Drone project
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.0959567,-94.7359018,14z



Counties: Kansas and Missouri

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/4Z5BMAHDXRFB5CGALDIVCZT7R4/documents/generated/7280.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/4Z5BMAHDXRFB5CGALDIVCZT7R4/documents/generated/7280.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

FISHES

NAME	STATUS
Pallid Sturgeon *Scaphirhynchus albus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Mead's Milkweed *Asclepias meadii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8204	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

BALD & GOLDEN EAGLES INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit https://www.fws.gov/wetlands/data/mapper.HTML

RIVERINE

- R3UBG
- R5UBFx
- R3UBGx
- R5UBH
- R3USA
- R2USC
- R2UBG
- R4SBCx
- R4SBC
- R2USA
- R2UBGx
- R2UBFx

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PSS1A
- PFOA
- PFO1Ch
- PFO1Ah
- PSSC
- PFOC
- PSS1Ch

- PSS1C
- PFO1A
- PFO1Ax

FRESHWATER POND

- PUBFh
- PABF
- PABHh
- PUBF
- PUBGh
- PUBHh
- PUBGx
- PUBFx
- PUBKx
- PABGx
- PABFh
- PUBG
- PUBK
- PABGh

FRESHWATER EMERGENT WETLAND

- PEM1Cx
- PEM1Ad
- PEM1A
- PEM1Ah
- PEM1Ch
- PEM1Fx
- PEM1C
- PEM1Fh

LAKE

- L1UBHh
- L1UBK

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Sarah McAbee
Address: 1001 Virginia Avenue
City: Hapeville
State: GA
Zip: 30354
Email smcabee@esassoc.com
Phone: 4076006723

Dear Mr. Wolfe:

This is in response to your email requesting concurrence with a determination of effect on the gray bat *(Myotis grisescens)*, Indiana bat *(Myotis sodalis)*, and northern long-eared bat *(Myotis septentrionalis)* from the FAA's action of authorizing Amazon Prime Air (Prime Air) to conduct commercial drone package delivery operations for Prime Air Drone Delivery Centers (PADDCs) located in and around the Kansas City area.

Prime Air is seeking authorization to conduct commercial package deliveries using drones throughout in and around the Kansas City metropolitan area. Prime Air intends to introduce its drone delivery capabilities in 2025 and has requested the FAA to authorize the operation of its MK30 drone, so it can provide drone package delivery services across its operating area. Prime Air anticipates flying up to approximately 1,000 MK30 drone flights per operating day from each of the 2 PADDCs, with each flight taking a package to a customer delivery address before returning to the PADDC. The number of flights per day would vary based on customer demand and weather conditions. Prime Air is taking an incremental approach to operations and expects to gradually ramp up to approximately 1,000 flights per day per PADDC as consumer demand increases over time. Drone flights could be conducted up to 365 days a year between 7 A.M. and 10 P.M.

Pursuant to Section 7(a) (2) of the ESA, the Federal Aviation Administration has determined the proposed project may affect, but is not likely to adversely affect, the federally listed northern long-eared bat, gray bat, and Indiana bat. Given the project description, limited suitable habitats and proposed Biological Monitoring Program, we concur with these determinations. The FAA has also determined that the project will not jeopardize the continued existence of the proposed monarch and western regal fritillary butterflies or the tri-colored bat. The Proposed Action would have no effect on the Pallid sturgeon *(Scaphirrhynchus albus),* or Mead's milkweed *(Asclepias meadii).*

No further coordination with the Service is required pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.) for this project. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. Until the ongoing project is complete, we recommend that you contact this office every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.

Thank you for this opportunity to comment this proposed project. If we can be of any further assistance, please contact Ms. Michele McNulty, of this office, at michele_mcnulty@fws.gov.

Michele McNulty
Fish & Wildlife Biologist
US Fish & Wildlife Service
Kansas Ecological Services Office
2609 Anderson Avenue
Manhattan, KS 66502
michele_mcnulty@fws.gov

(785) 306-4279 Call me on TEAMS
Work Hours: generally, 6:30a-3:00pm CST

For a list of federally protected resources in your Action Area, use the ***Information for Planning and Consultation***

Learn more about the northern long-eared bat.

Learn more about the tri-colored bat

Recovery Permit Bat Application Tips

Migratory Bird Permitting Information

U.S. Department of Transportation
Federal Aviation Administration

Aviation Safety

800 Independence Ave., SW.
Washington, DC 20591

U.S. Fish and Wildlife Service

Missouri Ecological Services Field Office
101 Park Deville Drive Suite A
Columbia, Missouri 65203
John_S_Weber@fws.gov

SUBJECT: Endangered Species Act Section 7 Consultation for Drone Commercial Package Delivery Operations in the greater Kansas City area

In accordance with Section 7 of the Endangered Species Act (ESA), the Federal Aviation Administration (FAA) is requesting U.S. Fish and Wildlife Service (USFWS) concurrence that the FAA's action of authorizing Amazon Prime Air (Prime Air) to conduct commercial drone package delivery operations from Prime Air Drone Delivery Centers (PADDCs) located in and around the Kansas City area (the Proposed Action), will ***not jeopardize the continued existence of*** the tricolored bat (*Perimyotis subflavus*), and is ***not likely to adversely affect*** the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Additionally, the Proposed Action would have ***no effect*** on the Pallid sturgeon (*Scaphirrhynchus albus*), monarch butterfly (*Danaus plexippus*), western regal fritillary (*Argynnis idalia*), and Mead's milkweed (*Asclepias meadii*).

Project Description

Prime Air is seeking authorization to conduct commercial package deliveries using drones throughout in and around the Kansas City metropolitan area. Prime Air intends to introduce its drone delivery capabilities in 2025 and has requested the FAA to authorize the operation of its MK30 drone, so it can provide drone package delivery services across its operating area. The proposed MK30 operating areas and PADDCs are depicted in **Attachment A**.

Prime Air anticipates flying up to approximately 1,000 MK30 drone flights per operating day from each of the 2 PADDCs, with each flight taking a package to a customer delivery address before returning to the PADDC. The number of flights per day would vary based on customer demand and weather conditions. Prime Air is taking an incremental approach to operations and expects to gradually ramp up to approximately 1,000 flights per day per PADDC as consumer demand increases over time. Drone flights could be conducted up to 365 days a year between 7 A.M. and 10 P.M.

Unmanned Aircraft

As pictured in **Attachment B**, the MK30 drone is a hybrid multicopter fixed-wing tail-sitter drone with six propulsors allowing it to take off and land vertically and transition to wing borne flight. Its airframe is composed of staggered tandem wings for stable wing borne flight. The drone weighs approximately 78 pounds and has a maximum takeoff weight of approximately 83 pounds, which includes a maximum package payload of 5 pounds. It has a maximum operating range of 7.5 miles (or about 15 minutes) and

can fly up to 58 knots (67 miles per hour) during wing-borne flight. It uses electric power from rechargeable lithium-ion batteries and is launched vertically using powered lift and converts to using wing lift during en route flight. The MK30 is equipped with collision avoidance technology to help avoid conflicts with other aircraft and drones; however, no effective technology exists that can be used to help avoid collisions with wildlife.

Flight Operations

The MK30 drone would generally be operated at an altitude between 180 and 377 feet above ground level (AGL). The outbound en route altitude to a delivery location is expected to be flown between 180 and 279 feet AGL. The inbound en route altitude is expected to be flown between 279 and 377 feet back to the PADDC. At a delivery location, the drone would descend vertically to a stationary hover and drop a package to the ground. Once a package has been delivered, the drone would ascend vertically to the inbound transition altitude and depart the delivery area while climbing to the en route altitude to return to the PADDC. The PADDC is a controlled area wherein drone flights are launched and recovered. The drone would fly a predefined flight path that is set prior to takeoff. Flight missions would be automatically planned by Prime Air's flight planning software, which assigns, deconflicts, and routes each flight. In accordance with FAA safety requirements, the drone would avoid operating over areas with dense human populations, such as over roadways, public gathering spots, etc.

Takeoff

Once a package is loaded onto the MK30 drone and the drone is cleared for departure from the PADDC, the drone takes off from the ground vertically to an altitude of about 115 feet AGL and then transitions and climbs to its en route altitude of about 200 feet AGL (ranges from 180 and 279 feet AGL). The takeoff phase of flight would last less than one minute.

En Route Outbound

The en route outbound phase is the part of flight in which the MK30 drone transits from the PADDC to a delivery point on a predefined flight path. During this flight phase, the drone will typically operate at a en route altitude of 200 feet AGL with a typical airspeed of 58 knots (67 miles per hour).

Delivery

The delivery phase consists of descent from the en route altitude to a delivery point to deliver a package. The MK30 drone transitions and descends to about 140 feet AGL and then vertically descends to about 13 feet AGL while maintaining position over the delivery point. The drone hovers while dropping the package and then proceeds to climb vertically back to the inbound transition altitude of 197 feet AGL. The MK30 then transitions and climbs to its en route inbound altitude of 345 feet AGL (ranges from 279 to 377 feet AGL). The delivery phase of flight would last approximately one minute.

En Route Inbound

The MK30 drone continues to fly at a typical en route altitude of about 345 feet AGL with a speed of 58 knots towards the PADDC.

Landing

The drone decelerates as it approaches the PADDC and descends to the transition altitude of 197 feet AGL and where it transitions from horizontal flight to vertical flight, coming to a zero-speed position over its assigned landing pad. The MK30 drone slowly descends over its assigned landing pad and lands on the pad.

Predicted Sound Levels

Based on a noise analysis using sound level measurement data for the MK30 drone, the estimated maximum sound exposure level (SEL) for the takeoff, delivery, and landing phases of flight is

approximately 90.5 (at 20 feet), 92.1 (at 25 feet), and 91.8 dB (at 20 feet), respectively. Predicted sound levels decrease as distances from the drone increase. The maximum SEL for the en route phase is approximately 63.7 dB when the drone at an altitude of 200 feet AGL and flying at approximately 58 knots (67 miles per hour). The detailed noise analysis is provided as **Attachment C**.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR § 402.02). For this Proposed Action, the action areas are defined as Prime Air's proposed MK30 operating areas, as depicted in Attachment A. These areas capture all possible flight routes to the delivery areas and where potential effects (e.g., visual, auditory, physical) to listed species could occur.

The action area is in the Wooded Osage Plains ecoregion, a transitional area into open savannas as it heads east into the oak-hickory forests of the Ozarks, within Jackson and Cass Counties. The Wooded Osage Plains ecoregion is characterized by grasslands, sandstone glades, dolomitic rock outcroppings, sparse oak groves, and seasonal prairie streams.

As indicated above, the Proposed Action would take place over high to medium density developed urban and commercial areas, and some rural and agricultural areas scattered throughout the action area. Therefore, wildlife habitats within the action area predominantly include parks, a few open spaces, waterways, and vacant lands. These areas provide habitat for many of the more common and ubiquitous bird and mammal species in the region, including white-tailed deer, eastern gray squirrels, eastern cottontails, raccoons, armadillos, mice, badgers, songbirds, raptors, waterfowl, and insects.

ESA-Listed Species and Critical Habitat in the Action Area

The FAA acquired the Official Species Lists (see **Attachment D**) from the USFWS Information for Planning and Conservation (IPaC) online system to identify ESA-listed, proposed-listed, and candidate species within the action area. Based on earlier coordination with USFWS, of the species identified in the IPaC review only four (4) species may be affected by the drone operations. These are listed below in **Table 1** by the USFWS Ecological Field Office. The remaining species have limited habitat within the action area and include aquatic, plant, and insect species which would not be affected. These species include: pallid sturgeon (*Scaphirhynchus albus*), Monarch butterfly (*Danaus plexippus*), Western regal fritillary (*Argynnis idalia*), and Mead's milkweed (*Asclepias meadii*).

Table 1. ESA-Listed Species, Species Proposed for Listing, and Candidate Species Potentially Present which may be affected in the Action Areas by USFWS Ecological Field Office

Missouri Ecological Services Field Office (SMO1)

Species	Common Name	Species Name	Federal Status	Critical Habitat
Mammals	Tricolored bat	*Perimyotis subflavus*	Proposed Endangered	N
	Gray bat	*Myotis grisescens*	Endangered	N
	Indiana bat	*Myotis sodalis*	Endangered	N
	Northern Long-eared bat	*Myotis septentrionalis*	Endangered	N
Insects	Monarch butterfly	*Danaus plexippus*	Proposed Threatened	N
	Western regal fritillary	*Argynnis idalia occidentalis*	Proposed Threatened	N
Fish	Pallid sturgeon	*Scaphirhynchus albus*	Endangered	N
Plants	Mead's milkweed	*Asclepias meadii*	Threatened	N

SOURCE: USFWS IPaC, accessed June 2025.

Potential Effects of the Proposed Action on ESA-Listed and Candidate Species

Drone noise, visual presence, and the potential for airborne strikes with flying species are the Proposed Action's potential stressors or threats to ESA-listed species. Flight operations would take place mostly in an urban environment, within airspace, and typically remain well above the tree line while en route to and from the PADDC. The duration of exposure by wildlife on the ground to visual or noise impacts from the drone would be of very short duration (approximately 30 seconds during takeoff/landing and delivery and a few seconds during the en route phase).

As noted above, the highest estimated SEL associated with Prime Air's proposed operations is 92.1 dB, which would occur during a delivery. For reference, the sound level of a diesel truck at 50 feet or a noisy urban environment during the day is approximately 80 to 90 dB. The SEL on the ground when the drone is at an altitude of 200 feet AGL is estimated to be around 63.7 dB, which is comparable to the sound of an air conditioning unit at 100 feet (60 dB). The MK30 drone is expected to operate at altitudes higher than 200 feet AGL during en route flight; as such, the en route sound level is expected to be less than 63.7 dB.

A descriptor for noise effects on wildlife has not been universally adopted, but some research indicates SEL is the most useful predictor of responses. Characteristic of the bulk of research to date has been lack of systematic documentation of the source noise event. Many studies report "sound levels" without specifying the frequency spectrum or duration. A notable exception is a study sponsored by U.S. Air Force that identifies SEL as the best descriptor for response of domestic turkey poults to low-altitude aircraft overflights (Bradley et al. 1990). This study identified a threshold of response for disturbance of domestic turkeys ("100 percent rate of crowding") as SEL 100 dB. None of the predicted sound levels for the different flight phases exceed SEL 92.1 dB.

The following paragraphs describe the anticipated effects of the Proposed Action on the ESA-listed and proposed threatened species, as listed in **Table 1**.

Tricolored bat (*Perimyotis subflavus*)

The tricolored bat is a federally protected species that could be located within the action area. The Proposed Action would occur during the dusk emergence of bat activity during the evening civil twilight hours; however, drone service would not affect the dawn civil twilight hours. Research suggests that drones have "minimal impact on bat and owl behavior" (Fu, Y., M. Kinniry, and L.N. Kloepper. 2018) and that bats do not appear to be disturbed by drones (August, T. and T. Moore. 2008). Also, the risk of

bat conflicts is only present for 3 to 6 months each year (i.e., when bats are not hibernating). Bats at roost or in flight could experience drone noise during the en route and delivery flight phases. When foraging at or near the tree line at the time a drone flies by, bats would experience the greatest sound levels. Roosting bats or bats foraging near the ground at the time a drone flies by would experience lower sound levels. Given the estimated sound levels of the drone, the drone's linear flight profile to and from PADDCs and delivery locations, the short period of time the drone would be in any particular location, and the low probability of encountering an individual bat in the action area, drone noise is not expected to adversely affect the above referenced bat species. Any increase in ambient sound levels caused by the drone's flight would only last a few seconds during the en route phase and approximately 49 seconds during a delivery. The FAA has determined that the Proposed Action will ***not jeopardize the continued existence of*** the tricolored bat.

Gray bat (*Myotis grisescens*)

The gray bat also has the potential to occur within the action areas. The largest of all Missouri's bats, the gray bat is uniformly brownish gray most of the year changing to a rusty brown during summer months. Key identifiers for the gray bat are the species' wings are attached to the ankle and not at the base of the toes, as well as a distinct notch on the inside curve of each claw. It prefers limestone caves, especially those within two miles of rivers, streams, or lakes. Most of the known gray bat caves are south of the Missouri River, particularly in the Ozarks. Like other bats, the gray bat is an evening feeder that eats insects including caddisflies, moths, or flying beetles; however, its favorite food in the Asiatic oak weevil, found in the summertime abundant in forested cliffs along rivers. The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the gray bat.

Indiana bat (*Myotis sodalis*)

The Missouri Department of Conservation (MDC) lists the Indiana bat as a Species of Conservation Concern as well. The Indiana bat is a medium-sized brownish-gray bat with a distinct keel on its calcar. It requires cool caves with stable temperatures around 40 degrees Fahrenheit. More than 85% of the known population of Indiana bats hibernate in caves and abandoned mines in eight specific areas including Shannon, Washington, and Iron Counties of Missouri. They roost and forage throughout the summer along streams and rivers in northern Missouri and hibernate throughout the winter. As with the other bat species, the Indiana bat feeds in the evening on night-flying insects. The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the Indiana bat.

Northern long-eared bat (*Myotis septentrionalis*)

The northern long-eared bat is a medium-sized dark brown bat that is distinguished by their long ears. In the summer, it can be found roosting under the bark of trees and in cavities. During the winter the bat can be found hibernating in caves or mines where temperatures are constant and little to no air movement occurs. The northern long-eared bat eats insects and its feeding habits begin at dusk in the understory of dense woodlands. The FAA has determined that the Proposed Action is ***not likely to adversely affect*** the northern long-eared bat.

The FAA has determined that the Proposed Action will ***not jeopardize the continued existence of*** the tricolored bat and is ***not likely to adversely affect*** the gray bat, Indiana bat, and northern long-eared bat based on:

1) operations occurring mostly in an urban environment,

2) the altitude at which the drone flies in the en route phase (180 to 377 feet AGL),

3) the expected low sound levels experienced by a bat,

4) the short duration of any increases in ambient sound levels,

5) the low probability of a listed bat species occurring in the action area, and

6) the low likelihood of the drone striking a bat.

Any effects would be discountable (extremely unlikely to occur) or insignificant (not able to be meaningfully measured, detected, or evaluated).

Monarch butterfly (*Danaus plexippus*)

The monarch butterfly, a proposed threatened species, has the potential to occur in the action areas. Information regarding drone impacts on insects is limited and there have been no widespread negative impacts identified in scientific literature. Some research shows that monarch butterflies are not commonly observed at higher altitudes (generally between 1 and 300 feet) and would not be expected to frequently occur at the altitudes where Prime Air is proposing to operate (Altitudes Attained by migrating Monarch Butterflies, 2024). Therefore, it is anticipated that the Proposed Action will have ***no effect*** on the monarch butterfly.

Conclusion

Based on the analysis above, the FAA has determined the following:

- There is no critical habitat located within the action areas for any species listed in Table 1 above,
- The action areas are mostly urbanized, with minimal suitable habitat for the ESA-listed species identified in them.
- Any increase in ambient sound levels would be short in duration.
- Drone dwell/hover time during takeoff and delivery would be less than one minute.
- Drones would generally operate at an altitude between 200 and 345 feet AGL.
- Drone activity would be highly concentrated over developed areas, where there is consumer demand for drone delivery service.
- Based on all of these factors, the probability of a drone/wildlife interaction would be low.

Accordingly, the FAA has determined the Proposed Action will ***not jeopardize the continued existence of*** the tricolored bat (*Perimyotis subflavus*), and is ***not likely to adversely affect*** the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Additionally, the Proposed Action would have ***no effect*** on the monarch butterfly (Danaus plexippus).

Because the delivery of commercial goods by drones is an emerging technology and its potential effects on wildlife are still not well understood, Prime Air is proposing to implement a "Biological Monitoring Program" for this project, which would include:

- Record and analyze daily maintenance and telemetry records to document any potential drone/wildlife interactions,
- If applicable, report wildlife movement / activity in and around airport property that may be obtained from operations or wildlife management staff from nearby airports.

- If applicable, recover and analyze potential biological materials (e.g., snarge, feathers, etc.), generally in accordance with existing protocols used in cases of aircraft bird strikes at airports, and
- Report findings to the USFWS on an annual basis.

The proposed Biological Monitoring Program would serve as a useful tool for Prime Air, the FAA, and USFWS to better understand the possible interactions between drones and wildlife.

The FAA appreciates your review of the proposed project and requests your concurrence with (1) our "may affect" determination as stated above and (2) implementation of the proposed Biological Monitoring Program within 30 days of receiving this letter. If you have any questions, please contact Christopher Hurst via email at 9-faa-drone-environmental@faa.gov.

Sincerely,

Derek Hufty
Manager, General Aviation and Commercial Branch (AFS-750)
Emerging Technologies Division
Office of Safety Standards, Flight Standards Service

Attachments:
Attachment A – Proposed MK30 Operating Areas
Attachment B – MK 30 Drone
Attachment C – Technical Noise Report
Attachment D – Official Species List

References

Altitudes attained by migrating monarch butterflies, Danaus p. plexippus (Lepidoptera: Danaidae), as reported by glider pilots. Available: https://cdnsciencepub.com/doi/abs/10.1139/z81-084. Accessed April 2022 and February 2024.

August, T. and T. Moore. 2008. Autonomous Drones Are a Viable Tool for Acoustic Bat Surveys. Available: https://www.biorxiv.org/content/10.1101/673772v1.full.pdf. Accessed July 2023 and February 2024.

Fu, Y., M. Kinniry, and L.N. Kloepper. 2018. The Chirocopter: A UAV for Recording Sound and Video of Bats at Altitude. Methods in Ecology and Evolution 9(6):1531-1535. Available: https://doi.org/10.1111/2041-210x.12992

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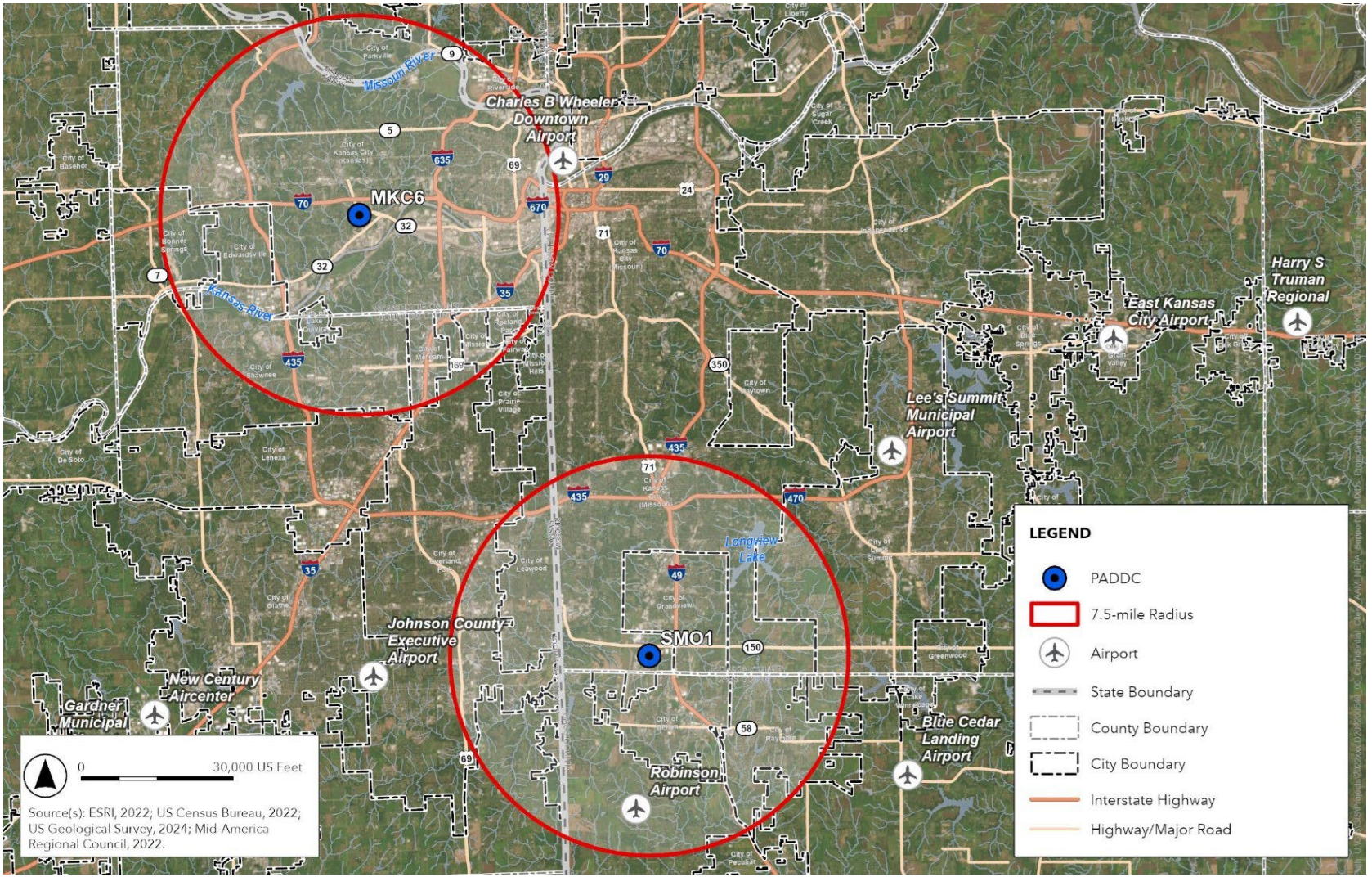
Upper Osage Grasslands. Missouri Department of Conservation. Available at: https://mdc.mo.gov/your-property/priority-geographies/upper-osage-grasslands. Accessed November 2024.

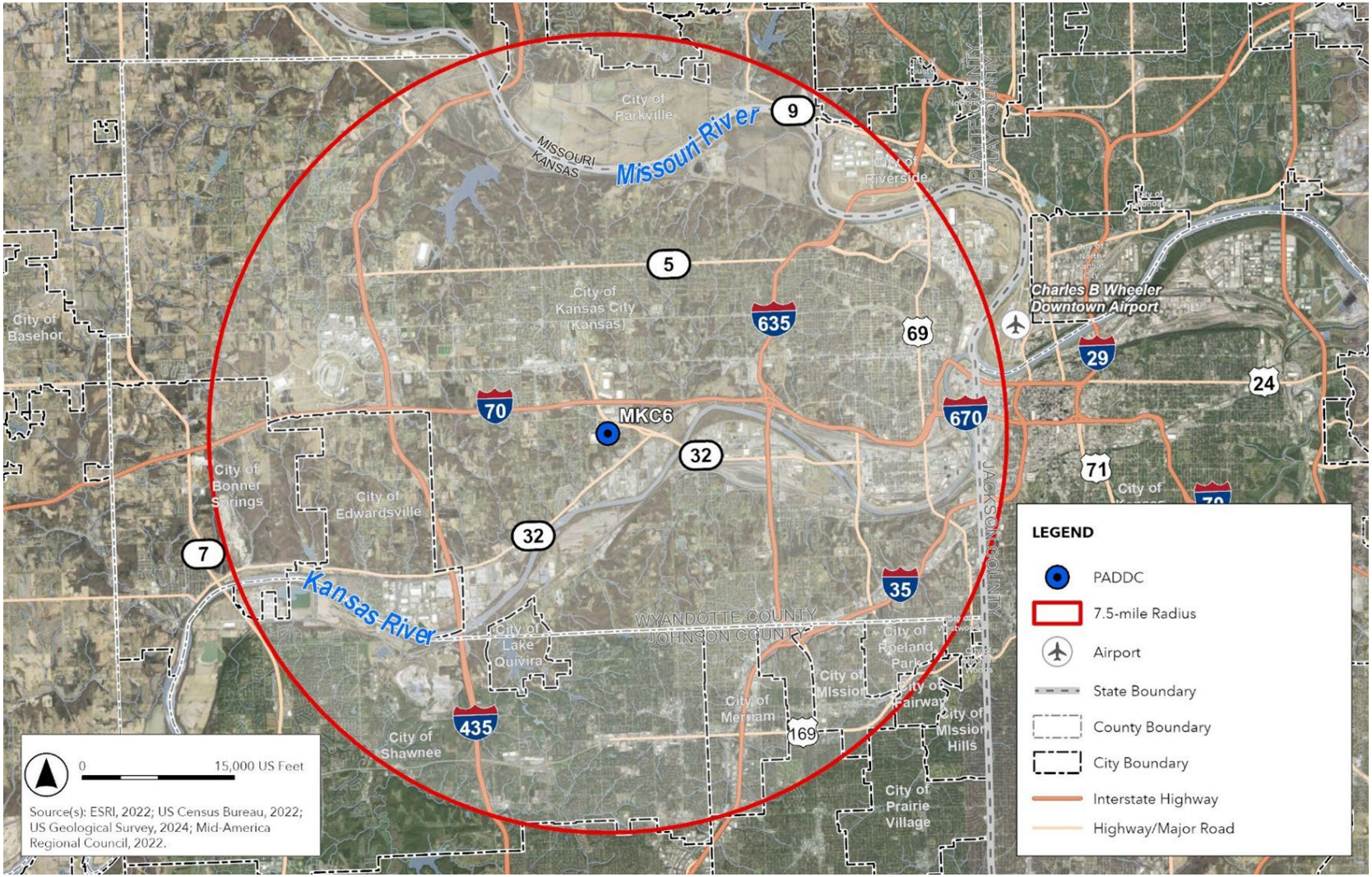
Attachment A

Proposed MK30 Operating Areas



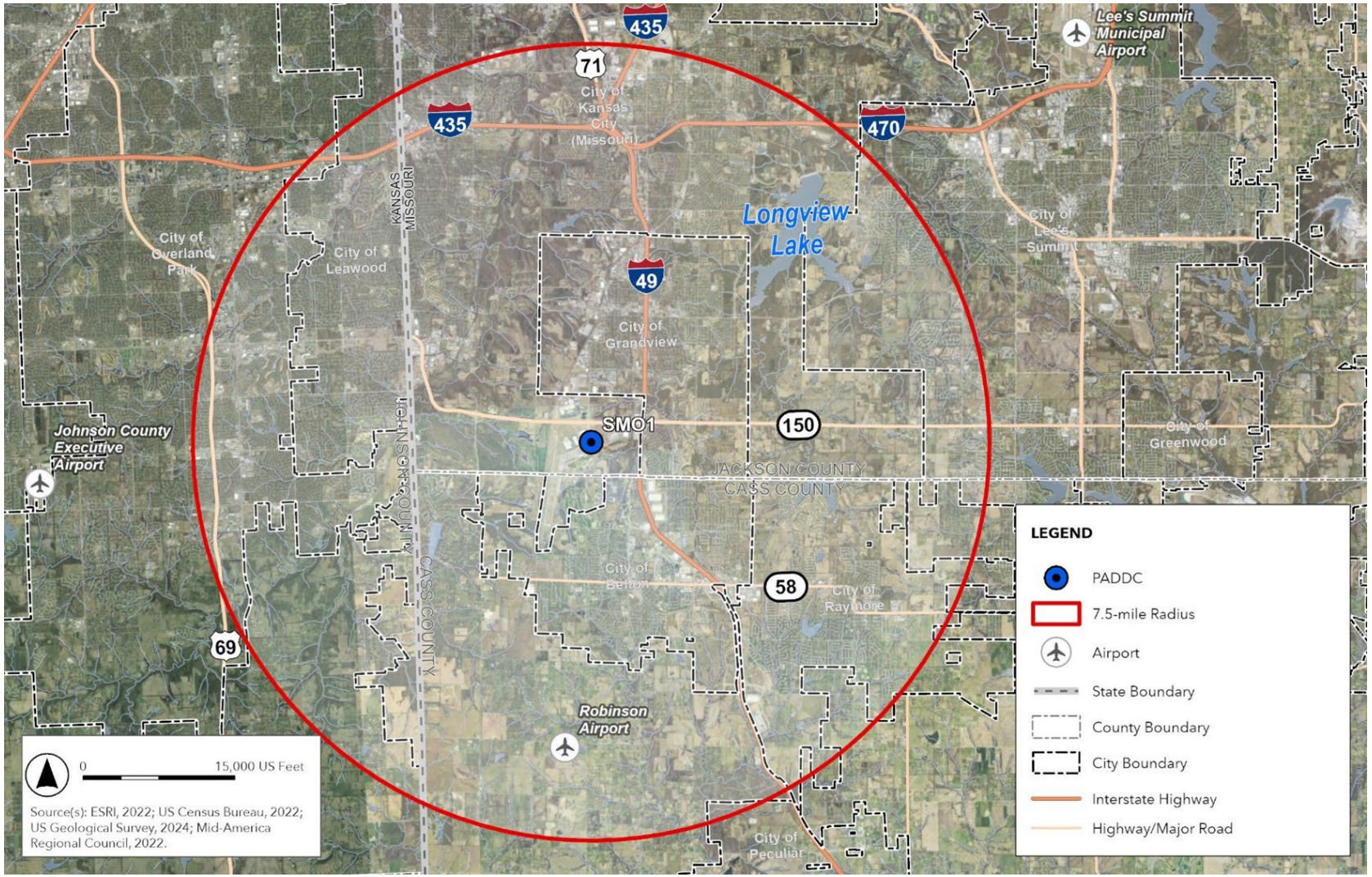
SOURCE: ESA, 2024; Maxar, 2022; US Census Bureau, 2021; US Geological Survey, 2022.

Figure 1
Action Areas – All PADDCs



SOURCE: ESA, 2024; Maxar, 2022; US Census Bureau, 2021; US Geological Survey, 2022.

Figure 2
MKC6 Drone Operation Action Area



SOURCE: ESA, 2024; Maxar, 2022; US Census Bureau, 2021; US Geological Survey, 2022.

Figure 3
SMO1 Drone Operation Action Area

Attachment B

MK30 Drone

MK30 Drone

Attachment C

Technical Noise Report

The Technical Noise Report included in the original agency consultation has been omitted from this appendix, but can be found in Appendix E.

Attachment D

Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801
Phone: (785) 539-3474 Fax: (785) 539-8567

In Reply Refer To: 06/02/2025 15:17:35 UTC
Project Code: 2025-0104038
Project Name: Kansas City SMO1_MKC6

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801
(785) 539-3474

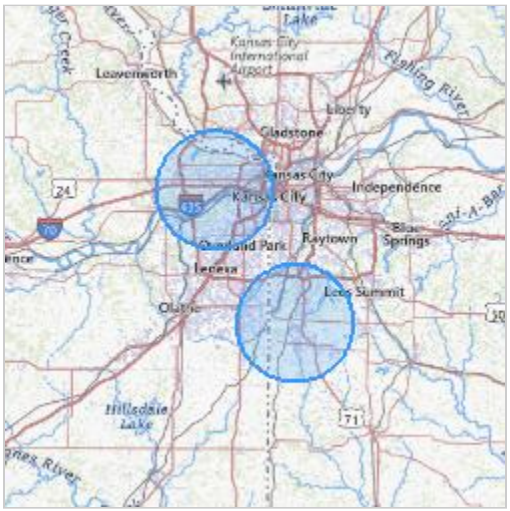
This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

PROJECT SUMMARY

Project Code: 2025-0104038
Project Name: Kansas City SMO1_MKC6
Project Type: Drones - Use/Operation of Unmanned Aerial Systems
Project Description: Drone project
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.0959567,-94.7359018,14z



Counties: Kansas and Missouri

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/4Z5BMAHDXRFB5CGALDIVCZT7R4/documents/generated/7280.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/4Z5BMAHDXRFB5CGALDIVCZT7R4/documents/generated/7280.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

FISHES

NAME	STATUS
Pallid Sturgeon *Scaphirhynchus albus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Mead's Milkweed *Asclepias meadii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8204	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

BALD & GOLDEN EAGLES INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit https://www.fws.gov/wetlands/data/mapper.HTML

RIVERINE

- R3UBG
- R5UBFx
- R3UBGx
- R5UBH
- R3USA
- R2USC
- R2UBG
- R4SBCx
- R4SBC
- R2USA
- R2UBGx
- R2UBFx

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PSS1A
- PFOA
- PFO1Ch
- PFO1Ah
- PSSC
- PFOC
- PSS1Ch

- PSS1C
- PFO1A
- PFO1Ax

FRESHWATER POND

- PUBFh
- PABF
- PABHh
- PUBF
- PUBGh
- PUBHh
- PUBGx
- PUBFx
- PUBKx
- PABGx
- PABFh
- PUBG
- PUBK
- PABGh

FRESHWATER EMERGENT WETLAND

- PEM1Cx
- PEM1Ad
- PEM1A
- PEM1Ah
- PEM1Ch
- PEM1Fx
- PEM1C
- PEM1Fh

LAKE

- L1UBHh
- L1UBK

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Sarah McAbee
Address: 1001 Virginia Avenue
City: Hapeville
State: GA
Zip: 30354
Email smcabee@esassoc.com
Phone: 4076006723

From:	Weber, John S
To:	Hurst, Christopher A (FAA)
Cc:	Neal Wolfe; Susan D. Shaw; Fitzpatrick, Jim; 9-FAA-Drone-Environmental (FAA)
Subject:	Re: [EXTERNAL] FAA: Amazon Application for Package Delivery utilizing Drones in Kansas City
Date:	Tuesday, June 24, 2025 10:57:44 AM
Attachments:	image002.png image001.png

Hello Chris,

Thank you for making that modification. With the changes incorporated to your request, we are happy to concur.

The U.S. Fish and Wildlife Service has reviewed your June 17, 2025, email and enclosures requesting consultation on the proposed Amazon Application for Drone Delivery Services in the Kansas City Missouri area and submits these comments pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544).

Based on the information provided, the Service concurs with your determination that the proposed project is not likely to adversely affect federally listed species and is not likely to jeopardize the continued existence of the tricolored bat or the monarch butterfly. Should the scope, timing, or manner of activity change, please contact this office.

Thank you for the opportunity to review the proposed project.

John Weber
Field Supervisor
U.S. Fish & Wildlife Service
Missouri Ecological Services Field Office
Cell: 573-825-6048

From: Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>
Sent: Tuesday, June 17, 2025 7:47 AM
To: Weber, John S <John_S_Weber@fws.gov>
Cc: Neal Wolfe <NWolfe@esassoc.com>; Susan D. Shaw <SShaw@esassoc.com>; Fitzpatrick, Jim <fitzpkja@amazon.com>; 9-FAA-Drone-Environmental (FAA) <9-FAA-Drone-Environmental@faa.gov>
Subject: RE: [EXTERNAL] FAA: Amazon Application for Package Delivery utilizing Drones in Kansas City

John,
Please see attached revised letter.
Thanks,
Chris

Chris Hurst
REM/CEA/CESCO
Environmental Protection Specialist

AFS-752
General Aviation and Commercial Branch
Emerging Technologies Division
Office of Safety Standards, Flight Standards Service
christopher.a.hurst@FAA.gov
CST

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Monday, June 16, 2025 1:36 PM
To: 9-FAA-Drone-Environmental (FAA) <9-FAA-Drone-Environmental@faa.gov>
Cc: Neal Wolfe <NWolfe@esassoc.com>; Susan D. Shaw <SShaw@esassoc.com>; Fitzpatrick, Jim <fitzpkja@amazon.com>; Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>
Subject: Re: [EXTERNAL] FAA: Amazon Application for Package Delivery utilizing Drones in Kansas City

Hi Chris,

Your consultation request looks great. I have one small correction to request for your determinations.

The tricolored bat is currently proposed for listing under the ESA as endangered, but is not yet listed under the ESA. The only determination that a project proponent has to make for a proposed species is whether or not the proposed action will "jeopardize the continued existence" of the species. In this case, I would suggest that your drone operations would not "jeopardize the continued existence" of the tricolored bat.

Once you make that small correction, we will be happy to concur with your entire package.

Best regards,

John Weber
Field Supervisor
U.S. Fish & Wildlife Service
Missouri Ecological Services Field Office
Cell: 573-825-6048

From: 9-FAA-Drone-Environmental (FAA) <9-FAA-Drone-Environmental@faa.gov>
Sent: Friday, June 13, 2025 1:56 PM
To: Weber, John S <John_S_Weber@fws.gov>
Cc: Neal Wolfe <NWolfe@esassoc.com>; Susan D. Shaw <SShaw@esassoc.com>; Fitzpatrick, Jim <fitzpkja@amazon.com>; Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>

Subject: [EXTERNAL] FAA: Amazon Application for Package Delivery utilizing Drones in Kansas City

Good afternoon John,

Please see attached consultation. It has taken us a little while to get back to you.
Please do not hesitate to reach out with any questions or concerns. Neal or I can schedule a meeting if you want/need.
We're very aware of the recent staffing transitions across the federal government, we completely understand if you are currently working several high priority taskers simultaneously with the potential of extended review times.

Best regards,
Chris
Chris Hurst
REM/CEA/CESCO
Environmental Protection Specialist

AFS-752
General Aviation and Commercial Branch
Emerging Technologies Division
Office of Safety Standards, Flight Standards Service
christopher.a.hurst@FAA.gov
CST

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Friday, December 13, 2024 11:32 AM
To: Neal Wolfe <NWolfe@esassoc.com>
Cc: Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>; Limburg, Mike <limburgm@amazon.com>; Susan D. Shaw <SShaw@esassoc.com>; Luginbill, Jason S <jason_luginbill@fws.gov>; Kuczynska, Vona <vona_kuczynska@fws.gov>
Subject: Re: [EXTERNAL] Amazon Drone Project - Kansas City

Yessir—I'll let you know when I hear back from them.

Best regards,

John Weber
Field Office Supervisor
U.S. Fish & Wildlife Service
Missouri Ecological Services Field Office
Cell: 573-825-6048

FWS VALUES
STEWARDSHIP – INTEGRITY – RESPECT – COLLABORATION – INNOVATION

From: Neal Wolfe <NWolfe@esassoc.com>
Sent: Friday, December 13, 2024 11:13 AM
To: Weber, John S <John_S_Weber@fws.gov>
Cc: Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>; Limburg, Mike <limburgm@amazon.com>; Susan D. Shaw <SShaw@esassoc.com>; Luginbill, Jason S <jason_luginbill@fws.gov>; Kuczynska, Vona <vona_kuczynska@fws.gov>
Subject: RE: [EXTERNAL] Amazon Drone Project - Kansas City

Hi John,

Thanks for the great call yesterday! Just wanted to follow up on the eagle issue—I believe you were going to check with an (internal?) resource you have at the Region?

Neal

Neal Wolfe JD, CEM
Director of Aviation Sustainability and Resilience

ESA | Environmental Science Associates
859.757.5317 **cell**
407-403-6300 **direct**

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Friday, November 22, 2024 8:10 PM
To: Neal Wolfe <NWolfe@esassoc.com>
Cc: Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>; Limburg, Mike <limburgm@amazon.com>; Susan D. Shaw <SShaw@esassoc.com>; Luginbill, Jason S <jason_luginbill@fws.gov>; Kuczynska, Vona <vona_kuczynska@fws.gov>
Subject: Re: [EXTERNAL] Amazon Drone Project - Kansas City

Hello Neal,

We'd love to hear from you. I have some time on December 9 from 9a-12p, Dec 10 from 10a-12p, and Dec 12 from 2-4 pm (CT).

My counterpart in Kansas is Jason Luginbill, who is cc'ed here.

Best regards,

John Weber
Field Office Supervisor
U.S. Fish & Wildlife Service
Missouri Ecological Services Field Office
Cell: 573-825-6048

FWS VALUES
STEWARDSHIP – INTEGRITY – RESPECT – COLLABORATION – INNOVATION

From: Neal Wolfe <NWolfe@esassoc.com>
Sent: Friday, November 22, 2024 12:04 PM
To: Weber, John S <John_S_Weber@fws.gov>
Cc: Hurst, Christopher A (FAA) <Christopher.A.Hurst@faa.gov>; Limburg, Mike <limburgm@amazon.com>; Susan D. Shaw <SShaw@esassoc.com>
Subject: [EXTERNAL] Amazon Drone Project - Kansas City

Hi John,

Chris Hurst from FAA forwarded me your email. I'm the NEPA PM contracted by Amazon to help with the project environmental approvals. Based on our experience with other USFWS offices, I'd like to suggest we have an "Amazon Drone 101" call where we can help you get acquainted with the proposed project, drone operations, in general, and share information we picked up from our other projects. We've found an early coordination call is especially useful on the back-end, when we might be reaching out for formal consultation.

If you wouldn't mind throwing out a few dates/times over the next few weeks, I'm sure we can get something on the calendar.

One important note: Amazon's proposed project covers both the Kansas and Missouri sides of Kansas City. Chris has reached out to the Manhattan Office, as well, but has heard nothing back, yet. Seems like it would make sense to have both offices on the call to be efficient and also to

help determine who the lead office might be? Not sure how y'all have handled cross-border projects in the past, but I will certainly defer to your advice on how best to proceed.

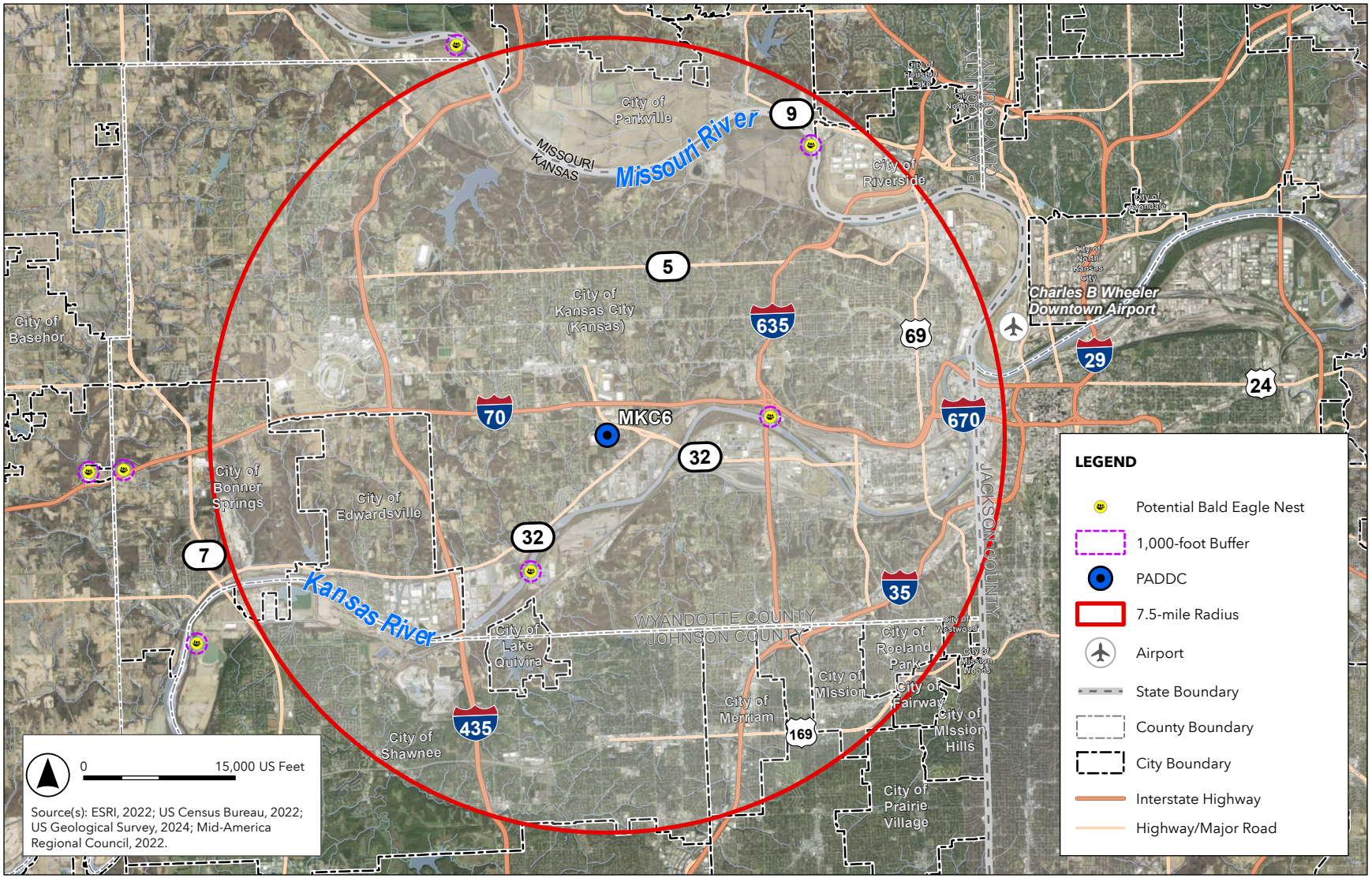
Thanks!

Neal

Neal Wolfe JD, CEM
Director of Aviation Sustainability and Resilience

ESA | **Environmental Science Associates**
Atlanta, GA

859.757.5317 **cell**
407-403-6300 **direct**
NWolfe@esassoc.com | esassoc.com



Potential Bald Eagle Nest Locations
PADDC MKC6