



Federal Aviation
Administration

Draft Environmental Assessment for Amazon Prime Air Package Delivery Operations in Chicago, Illinois

July 2026

**DEPARTMENT OF TRANSPORTATION | Federal Aviation Administration
Washington, D.C.**

Notice of Availability, Notice of Public Comment Period, and Request for Comment on the Draft Environmental Assessment for Amazon Prime Air Package Delivery Operations in Chicago, IL

The Federal Aviation Administration (FAA) provides notice that a Draft Environmental Assessment (EA), prepared pursuant to the National Environmental Policy Act (NEPA) (42 United States Code §§ 4321–4355), to assess Amazon Prime Air’s proposed commercial drone delivery service in Chicago, IL, is available for review and comment.

Amazon Prime Air is seeking to amend its air carrier Operations Specifications (OpSpec) and other FAA approvals necessary to expand commercial drone delivery operations in Chicago, IL. The FAA’s approval of the amended OpSpec is considered a major federal action under NEPA and requires a NEPA review. The Draft EA is submitted for review pursuant to NEPA, FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*, Section 4(f) of the Department of Transportation Act (49 U.S.C. § 303), and Section 106 of the National Historic Preservation Act (16 U.S.C. § 470). The Draft EA will be available for a 30-day public review beginning on July 15, 2026, and ending on August 14, 2026.

The Draft EA is available for online review at https://www.faa.gov/uas/advanced_operations/nepa_and_drones

Comments on the Draft EA may be submitted electronically to 9-faa-drone-environmental@faa.gov. Written comments may be submitted via U.S. Mail to the address below. Please ensure adequate time for receipt. All comments must be received by 5 p.m. Central time on August 14, 2026.

Federal Aviation Administration, Suite 802W
c/o AVS Environmental
800 Independence Ave SW
Washington, DC 20591

All substantive comments received will be responded to in the Final EA.

PRIVACY NOTICE: Before including your address, phone number, email address, or other personal identifying information in your comment, be advised that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Responsible FAA Official:

Derek Hufty
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Office of Safety Standards, Flight Standards Service

**DEPARTAMENTO DE TRANSPORTACIÓN | Administración Federal de Aviación
Washington, D.C.**

Aviso de Disponibilidad, Aviso de Período de Comentarios Públicos, y Solicitud de Comentarios sobre el Borrador de la Evaluación Ambiental para las Operaciones de Entrega de Paquetes de Amazon Prime Air en Chicago IL.

La Administración Federal de Aviación (FAA, por sus siglas en inglés) notifica que el Borrador de Evaluación Ambiental (EA, por sus siglas en inglés), elaborado conforme a la Ley Nacional de Política Ambiental (NEPA, por sus siglas en inglés) (Título 42 del Código de los Estados Unidos, §§ 4321–4355), para evaluar el servicio propuesto de entrega comercial de paquetes mediante drones de Amazon Prime Air en Chicago, IL, está disponible para revisión y comentarios.

Amazon Prime Air solicita enmendar sus Especificaciones de Operación (OpSpec, por sus siglas en inglés) como transportista aéreo, así como otras aprobaciones de la FAA necesarias para expandir las operaciones de entrega comercial de paquetes mediante drones en Chicago, IL. La aprobación por parte de la FAA de las OpSpec enmendadas se considera una acción federal importante conforme a NEPA y, por ende, requiere una revisión en virtud de dicha ley. El Borrador de EA se presenta para revisión de conformidad con NEPA, la Orden 1050.1G de la FAA, Procedimientos de Implementación de la Ley Nacional de Política Ambiental, la Sección 4(f) de la Ley del Departamento de Transportación (49 U.S.C. § 303) y la Sección 106 de la Ley Nacional de Preservación Histórica (16 U.S.C. § 470). El Borrador de EA estará disponible para revisión pública durante 30 días, comenzando el 15 de julio de 2026 y terminando el 14 de agosto de 2026.

El Borrador de EA está disponible para revisión en línea en:

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

Puede someter sus comentarios al Borrador de EA mediante vía electrónica a: 9-faa-drone-environmental@faa.gov. También pueden someter comentarios escritos enviándolos por correo postal a la dirección que figura más abajo. Por favor, permita tiempo suficiente para su recepción. Todos los comentarios deben ser recibidos antes de las 5:00 p.m. (hora central) del 14 de agosto de 2026.

Federal Aviation Administration, Suite 802W
c/o AVS Environmental
800 Independence Ave SW
Washington, DC 20591

Todos los comentarios sustantivos recibidos serán considerados y se dará respuesta en la EA Final.

AVISO DE PRIVACIDAD: Antes de incluir su dirección, número de teléfono, correo electrónico u otra información de identificación personal (PII, por sus siglas en inglés) en su comentario, tenga en cuenta que todo el texto—including el PII—podría divulgarse públicamente en cualquier momento. Aunque en su comentario puede solicitarnos que su PII no se divulgue durante la revisión pública, no podemos garantizar que podamos atender dicha solicitud.

Funcionario responsable de la FAA:

Derek Hufty

Gerente, Rama de Aviación General y Comercial (AFS-750)

División de Tecnologías Emergentes

Oficina de Estándares de Seguridad, Servicio de Normas de Vuelo de la FAA (Flight Standards Service)

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CHAPTER 1

Purpose and Need

1.1 Introduction

Amazon.com Services LLC, doing business as Amazon Prime Air (Prime Air), is seeking to amend its current Operations Specifications (OpSpec) and other Federal Aviation Administration (FAA) authorizations needed to integrate the MK30 drone and commence commercial drone package delivery operations from three new Prime Air Drone Delivery Centers (PADDC) located in the Chicago, IL area.

This Draft Environmental Assessment (EA) is being prepared by the FAA to evaluate the potential environmental impacts that may result from the FAA's approval of the Proposed Action, and the amendment of Prime Air's OpSpec to grant airspace access to the MK30 drone in the proposed operating areas. For purposes of this Draft EA, the MK30 drone operating areas serve as the Study Areas and are further defined in Chapter 2.

The issuance or amendment of OpSpec is considered a major federal action subject to environmental review requirements. The FAA has prepared this Draft EA pursuant to the National Environmental Policy Act of 1969 (NEPA). Under NEPA, federal agencies are required to consider the environmental effects of proposed federal actions and disclose to decision-makers and the public a clear and accurate description of the potential environmental impacts of proposed major federal actions. Additionally, under NEPA, federal agencies are required to consider the environmental effects of a proposed action, 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 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*, and the FAA Order 1050.1 Desk Reference.

1.2 Proposed Operations

The 78-pound (lb.), MK30 drone carries packages weighing up to 5 lbs. and has a maximum takeoff weight of approximately 83.2 lbs. Prime Air proposes to operate up to 1,000 MK30 drone delivery flights per operating day at each PADDC over the course of 365 operating days per year, resulting in roughly 365,000 annual delivery operations at each PADDC location. Commercial delivery operations from each PADDC would occur between 6 a.m. and 10:30 p.m., up to seven days per week, with up to 100 of the 1,000 daily delivery flights (10%) expected to occur during the period from 6 a.m. to 7 a.m. and 10 p.m. to 10:30 p.m. The MK30 drone's proposed operating range is 7.5 miles (mi) from the PADDC, with a potential operating area of 174 square (sq) mi.

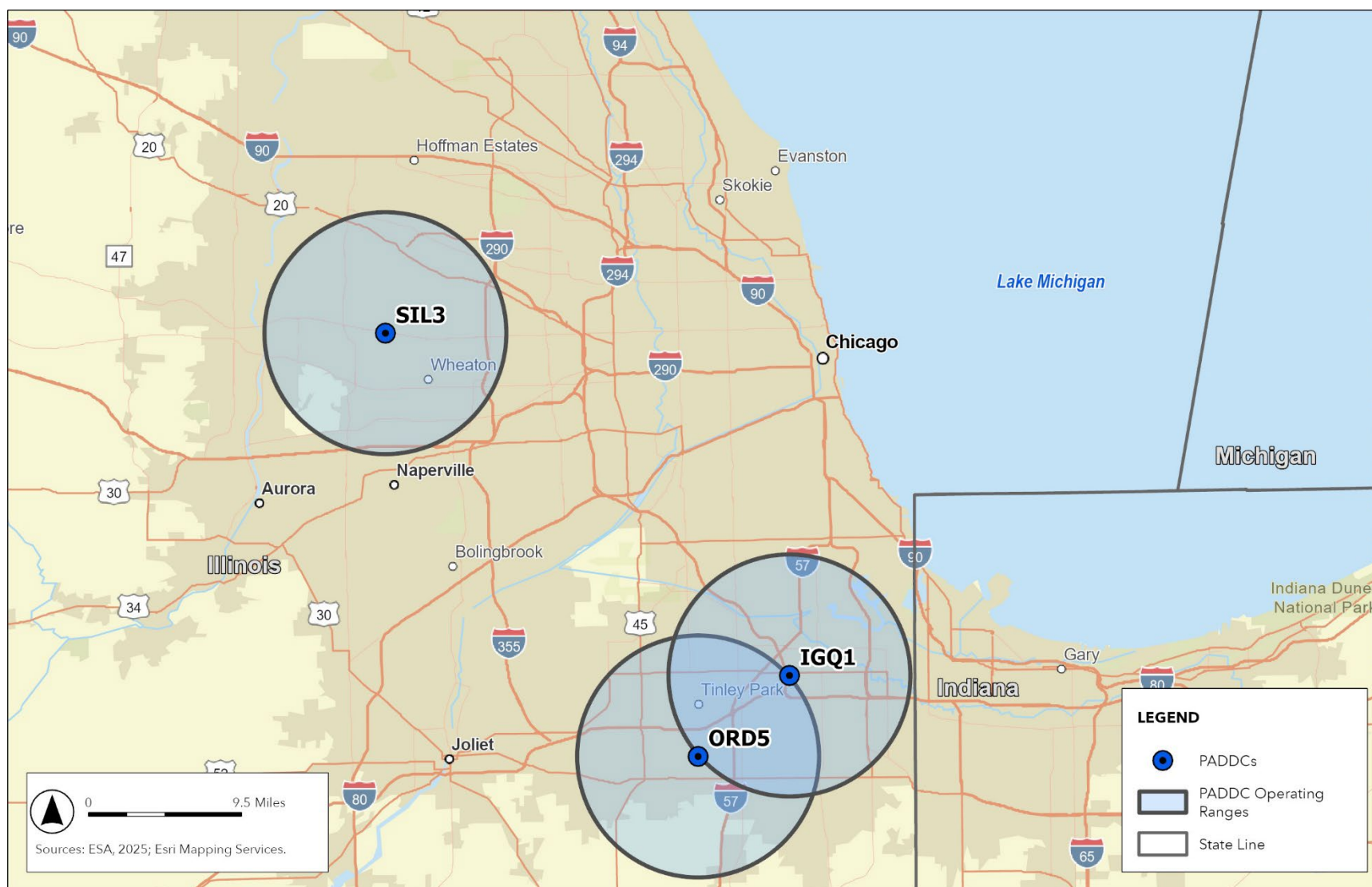
The general locations of the three proposed PADDs are depicted in **Figure 1-1**. Each proposed PADD facility would be located on the same property as and adjacent to an existing Amazon warehouse building with office space, a ground control station, an aircraft maintenance area, a battery storage area, paved departure and arrival pads, and perimeter fencing. All drone operations would originate from and terminate at one of the following three PADD locations:

- **IGQ1** – IGQ1 is an existing Amazon Robotics Fulfillment Center located at 2201 W. 159th Street, Markham, IL 60428, shown in **Figure 1-2**. The site is located within the L-3 Motor Freight Terminal District and falls within the City of Markham’s jurisdiction.¹ The site is isolated within the jurisdiction and does not sit adjacent to or border residential developments. The City of Markham executed a zoning confirmation letter on November 4, 2025, affirming that drone delivery is a use permitted by right in the L-3 zone within the City of Markham. The properties adjacent to the proposed IGQ1 PADD are a mix of privately-owned commercial, industrial, and residential. The closest residential neighborhood is approximately 1,900 feet (ft) northwest of the site.
- **ORD5** – ORD5 is an existing Amazon Robotics Fulfillment Center located at 7001 Vollmer Road, Matteson, IL 60443, as shown in **Figure 1-3**. The site is located within the Village of Matteson’s I-3 Industrial Zoning District, which allows for more intensive industrial uses.² The Village of Matteson executed a zoning confirmation letter on June 24, 2025, affirming that drone delivery operations were permitted by right in the I-3 Industrial Zoning District. The closest residential neighborhood is approximately 2,000 ft northwest of the site.
- **SIL3** – Located at 27W501 North Avenue, Ste. 100, West Chicago, IL. The proposed SIL3 PADD is zoned for SC-PD St. Charles Road Corridor Planned Development District³ and is located immediately between North Avenue and St Charles Road, as shown in **Figure 1-4**. The properties adjacent to the proposed SIL3 PADD are a mix of privately-owned commercial, industrial, and residential. The closest residential neighborhood is approximately 1,200 ft south of the site.

¹ City of Markham, City of Markham, Illinois Zoning District Map, March 29, 2012.
<https://www.cityofmarkham.net/DocumentCenter/View/138/City-of-Markham-Zoning-and-Ward-Map-PDF?bidId=>. Accessed March 31, 2026.

² Village of Matteson, Village of Matteson Municipal Viewer.
<https://experience.arcgis.com/experience/703a7bf78e5048849db807c40664f557>. Accessed March 31, 2026.

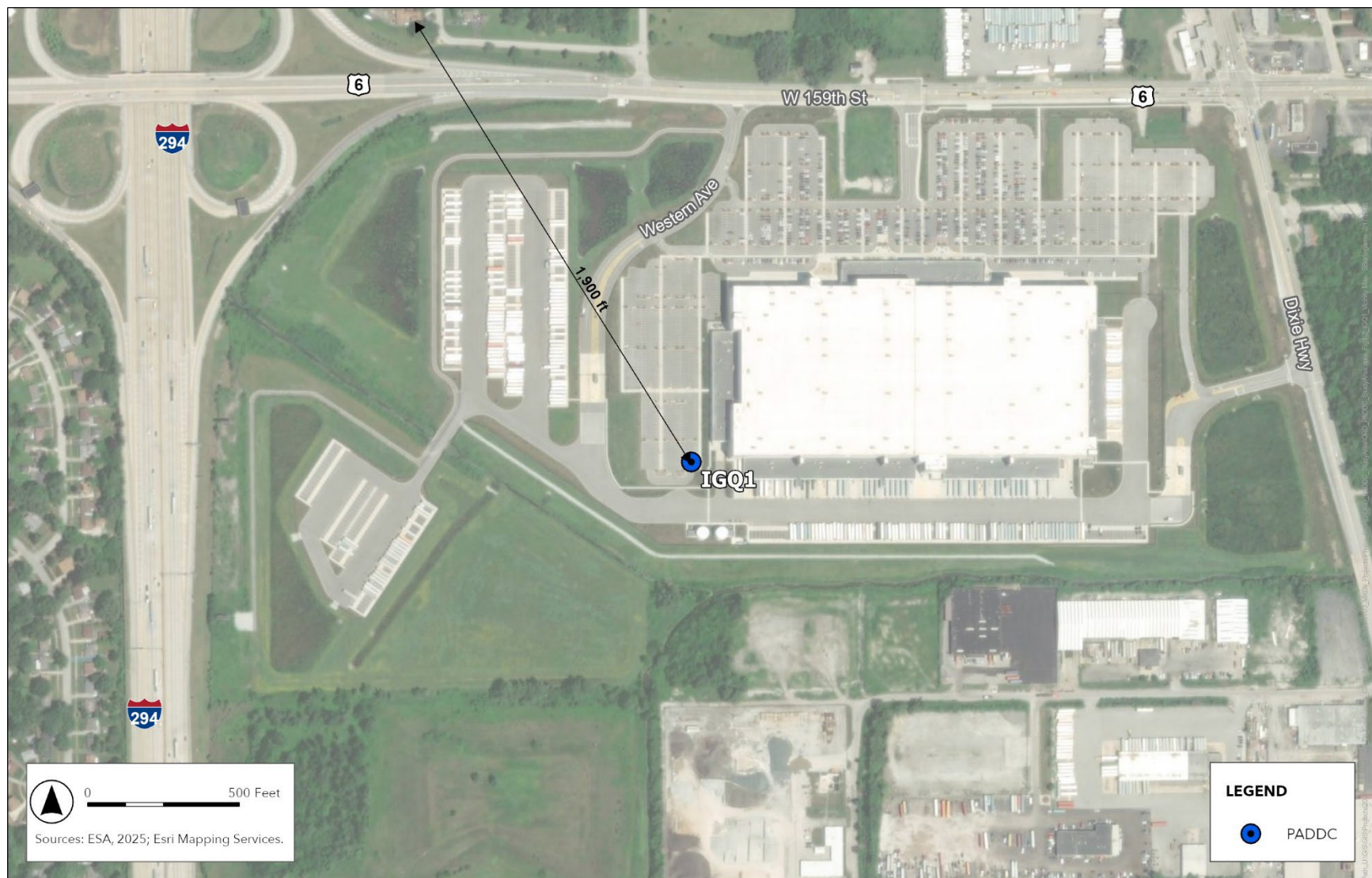
³ Village of Winfield, Winfield Zoning Map, April 2021.
<https://www.villageofwinfield.com/DocumentCenter/View/14299/2021-Zoning-Map-PDF>. Accessed March 31, 2026.



Source: ESA, 2025; Esri Mapping Services.

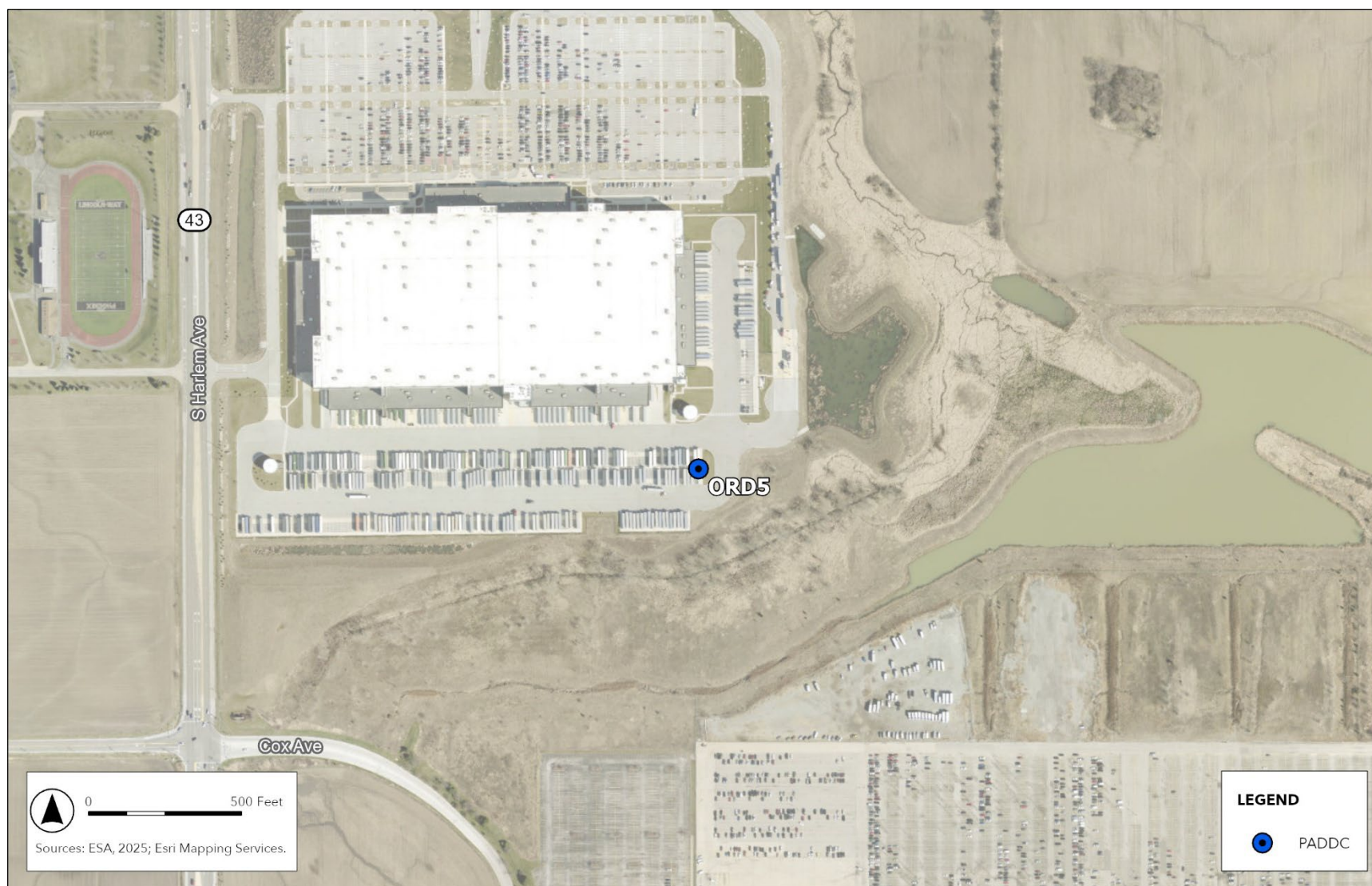
Figure 1-1

Prime Air's Proposed PADDCC Locations in Chicago, IL



Source: ESA, 2025; Esri Mapping Services.

Figure 1-2
Close-Up View of the IGQ1 PADD



Source: ESA, 2025; Esri Mapping Services.

Figure 1-3
Close-Up View of the ORD5 PADD



Source: ESA, 2025; Esri Mapping Services.

Figure 1-4
Close-Up View of the SIL3 PADD

1.3 FAA Role and Federal Action

The FAA has a statutory obligation to review Prime Air's request to amend the OpSpec and determine whether the amendment would affect safety in air transportation or air commerce, and to determine whether the public interest requires the amendment. In general, Congress has charged the FAA with the safety of air commerce in the United States.⁴

In addition, the FAA has specific statutory and regulatory obligations related to its issuance of a Part 135 certificate and the related OpSpec. 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.”⁵ 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 operate as an air carrier.”⁶ 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 the OpSpec.⁷

The regulations also specify that a Part 135 certificate holder may not operate in a geographical area unless its OpSpec specifically authorizes the certificate holder to operate in that area.⁸ The regulations specify that an air carrier's approved OpSpec must include, among other things, “authorization and limitations for routes and areas of operations.”⁹ An air carrier's OpSpec may be amended at the request of an operator if the FAA “determines that safety in air commerce and the public interest allows the amendment.”¹⁰ After making this determination, the FAA must take an action on the OpSpec amendment.

1.4 Purpose and Need

The **purpose** of Prime Air's request is to begin commercial drone delivery service in Chicago, IL, which, in its business judgment, Prime Air has determined is an appropriate market for expanded commercial delivery operations. The requested OpSpec amendments are **needed** so that Prime Air can begin MK30 drone delivery operations from its three proposed PADD locations. The approval will offer Prime Air an opportunity to further assess the viability of commercial drone delivery options under real world conditions and demonstrate its ability to operate safely while meeting its compliance obligations. Furthermore, it could assist Prime Air in gauging the public demand for commercial drone delivery services and provide an opportunity to assess community response to commercial delivery operations in this area.

⁴ 49 U.S.C. § 40104.

⁵ 49 U.S.C. § 44705.

⁶ Id.

⁷ 14 CFR § 119.5 (g), (l).

⁸ 14 CFR § 119.5(j).

⁹ 14 CFR § 119.49(a)(6).

¹⁰ 14 CFR § 119.51(a); see also 49 U.S.C. § 44709.

1.5 Public Involvement

The FAA provided a Notice of Availability (NOA) of the Draft EA on July 15, 2026, to local interest groups, local government officials, public park authorities, the State Historic Preservation Office (SHPO), and Federally Recognized Indian Tribes and Tribal Historic Preservation Offices (THPOs). A complete NOA distribution list and documentation of Prime Air's overall public outreach efforts can be found in **Appendix A**. On the same date, the FAA made the Draft EA available to the general public on the FAA website.

English- and Spanish-language copies of the NOA can be found in **Appendix A**. The NOA provides information about the Proposed Action and requested review and comments on the Draft EA, which will be available on the FAA website for a 30-day comment period (July 15, 2026, to August 14, 2026). Interested parties are invited to submit comments on any environmental concerns relating to the Proposed Action to a specifically assigned email address. All submitted public comments and associated FAA responses will be included in **Appendix F** of the Final EA.

CHAPTER 2

Proposed Action and Alternatives

In accordance with the guidance outlined in Section 102 of NEPA (42 U.S.C. § 4332), the FAA has not identified any unresolved conflicts concerning alternative uses of available resources associated with Prime Air's proposal. Therefore, this Draft EA only considers the No Action and the Proposed Action alternatives.

2.1 No Action Alternative

The FAA considered the No Action alternative and the Proposed Action in its analysis; thus, the No Action alternative serves as a baseline against which to compare the impacts of the Proposed Action. Under the No Action alternative, the FAA would not issue the approvals necessary (e.g., the OpSpec amendment) and Prime Air would not be authorized to conduct commercial drone package delivery flights from the three proposed PADDCs in the Chicago area. This alternative does not support the stated purpose and need.

2.2 Proposed Action

Prime Air has requested that the FAA approve its OpSpec amendment so that it can begin drone commercial delivery operations in this new operating area (Chicago, IL). The B050 OpSpec, Authorized Areas of En Route Operations, Limitations, and Provisions, includes a reference section titled Limitations, Provisions, and Special Requirements. The FAA's approval of this OpSpec amendment—including the paragraph in the B050 reference section with descriptive language about the operating area boundaries, including the specific locations, and operational profile proposed in Prime Air's request—is the proposed federal action for this Draft EA. The B050 OpSpec will restrict Prime Air to these three locations; any future expansion beyond the authorization and limitations for the area of operations described in the B050 OpSpec may require additional OpSpec amendments from the FAA, and may be subject to appropriate NEPA review, as necessary.

2.2.1 Description of Proposed Operations

As described in **Section 1.2**, Prime Air anticipates operating up to 1,000 delivery flights per operating day, up to 7 days per week, from each of the three PADDCs. These operational levels would result in a projected total of approximately 365 operating days and 365,000 delivery operations per year for each PADDC, based on the scope of the Proposed Action. The operations would occur between 6 a.m. and 10:30 p.m., with up to 100 of the 1,000 daily delivery operations (10%) occurring during the period from 6 a.m. to 7 a.m. and 10 p.m. to 10:30 p.m. and are expected to be distributed evenly across each operating area. The MK30 drone's operating range is 7.5 mi from the PADDC, with a potential operating area of

174 sq mi. The MK30 drone departure and arrival paths from and to each PADDCC would generally correspond to the geographical location of the package delivery address.

The proposed operating areas for the IGQ1, ORD5, and SIL3 PADDCCs, which also serve as the Study Areas for the Draft EA, are depicted in **Figures 2-1** and **2-2**.

2.2.2 Drone Specifications

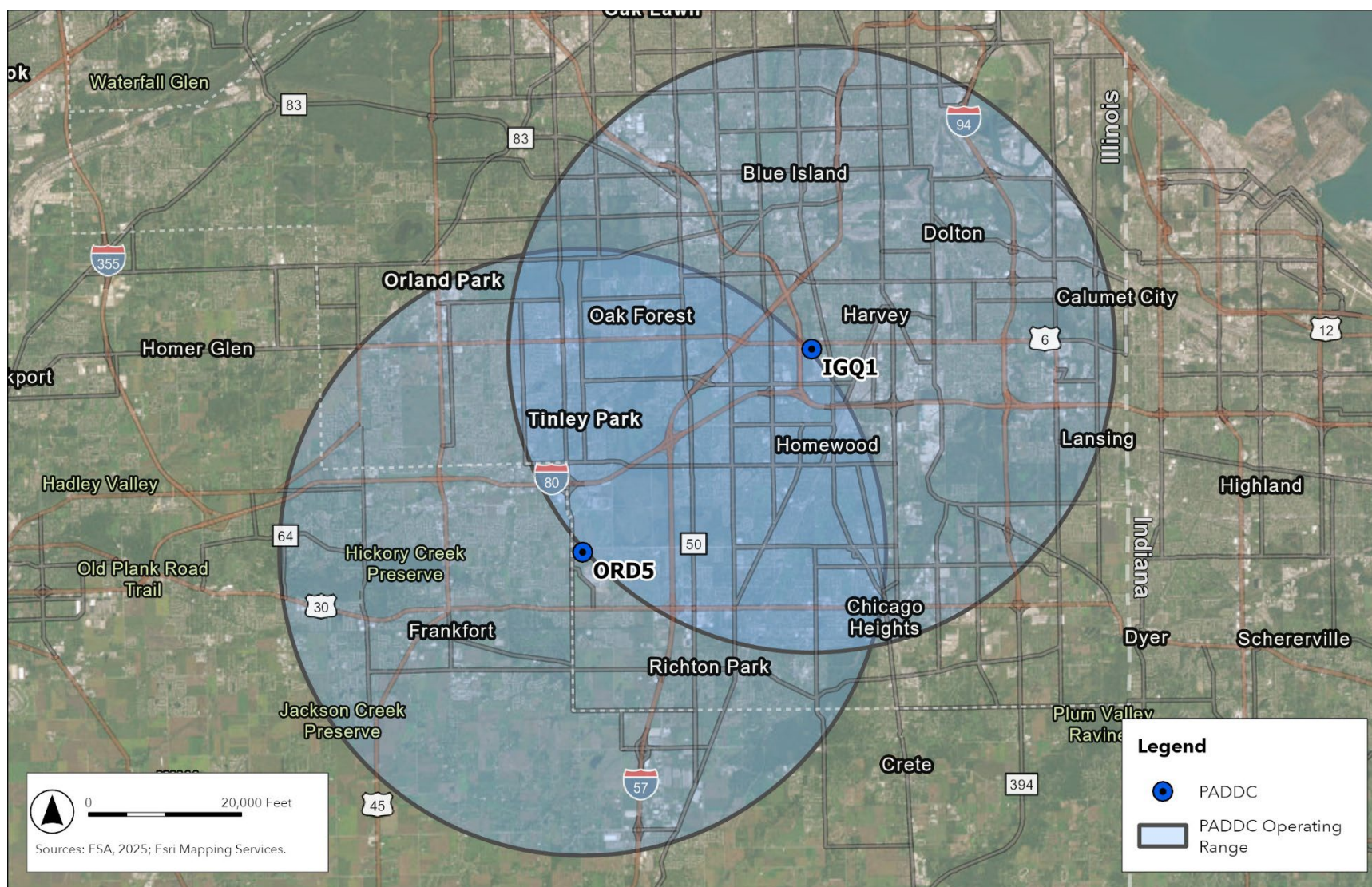
As shown in **Figure 2-3**, the MK30 drone is an electric powered drone that has a vertical take-off and landing, and transitions to wing-borne flight using wing lift during *en route* flight. The MK30 drone systems include hardware and software designed for safety and efficiency. The airframe is composed of staggered wings; the propulsion system includes a rechargeable lithium-ion battery and six (6) motors that include propellers designed for noise reduction; the package delivery system contains the package in a two-door interior receptacle; and a camera and avionics system that has redundancy for critical systems. The MK30 drone weighs approximately 78 lbs. and has a maximum takeoff weight of 83.2 lbs., which includes a maximum payload of 5 lbs. It has a maximum operating range of 7.5 mi and can fly up to 400 ft above ground level (AGL) at a maximum cruise speed of 73 mph (64 knots) during horizontal flight.

2.2.3 Flight Operations

As shown in **Figure 2-4**, a typical flight profile can be broken into the following general flight phases: launch, *en route* outbound, delivery, *en route* inbound, and landing. After launch, Prime Air's MK30 drone would rise to an altitude of less than 400 ft AGL and follow a predefined route to its delivery site.¹¹ Drones would typically fly *en route* at between approximately 205 and 370 ft AGL, except when descending to drop a package. Packages would be carried internally in the drone's fuselage. When making a delivery, the drone descends, opens a set of payload doors, and drops the package to the ground from approximately 13 ft AGL. Prime Air restricts items deliverable by drone to those which can safely be dropped from this height. Prime Air's MK30 drone would not touch the ground in any place other than the PADDCC (except during safe contingent landings) and will remain airborne throughout the operation including the delivery stage.¹² After the package is dropped, the MK30 drone climbs vertically and follows its predefined route back to the PADDCC at its assigned altitude.

¹¹ Prime Air may modify operations, if warranted, to avoid or minimize any negative impacts.

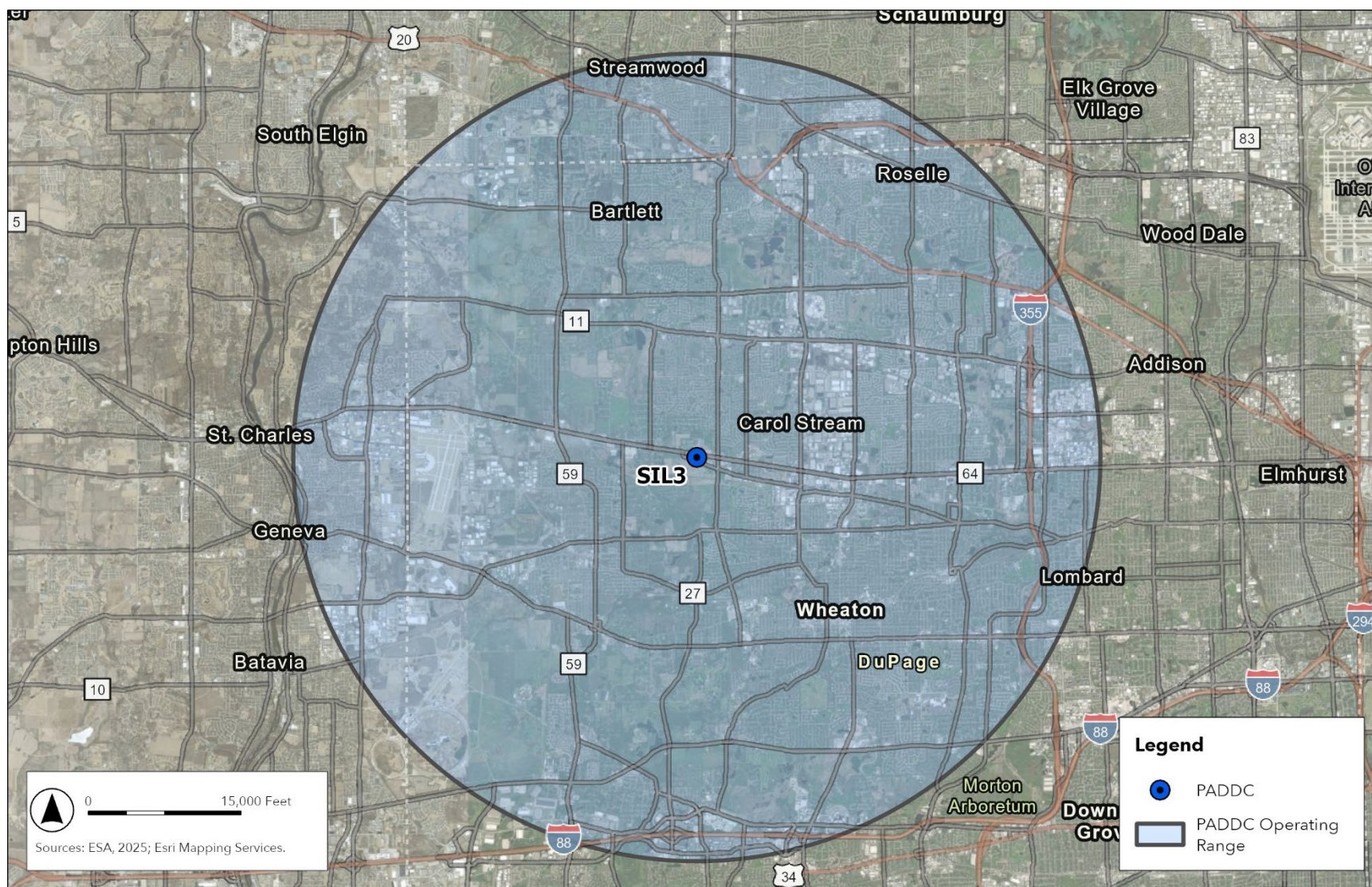
¹² The MK30 drone is built with multiple redundant safety features and "detect and avoid" technology. The drone is designed to handle contingencies and will react accordingly without operator input.



Source: ESA, 2025; Esri Mapping Services.

Figure 2-1

IGQ1 and ORD5 PADDCC Drone Operation Study Areas



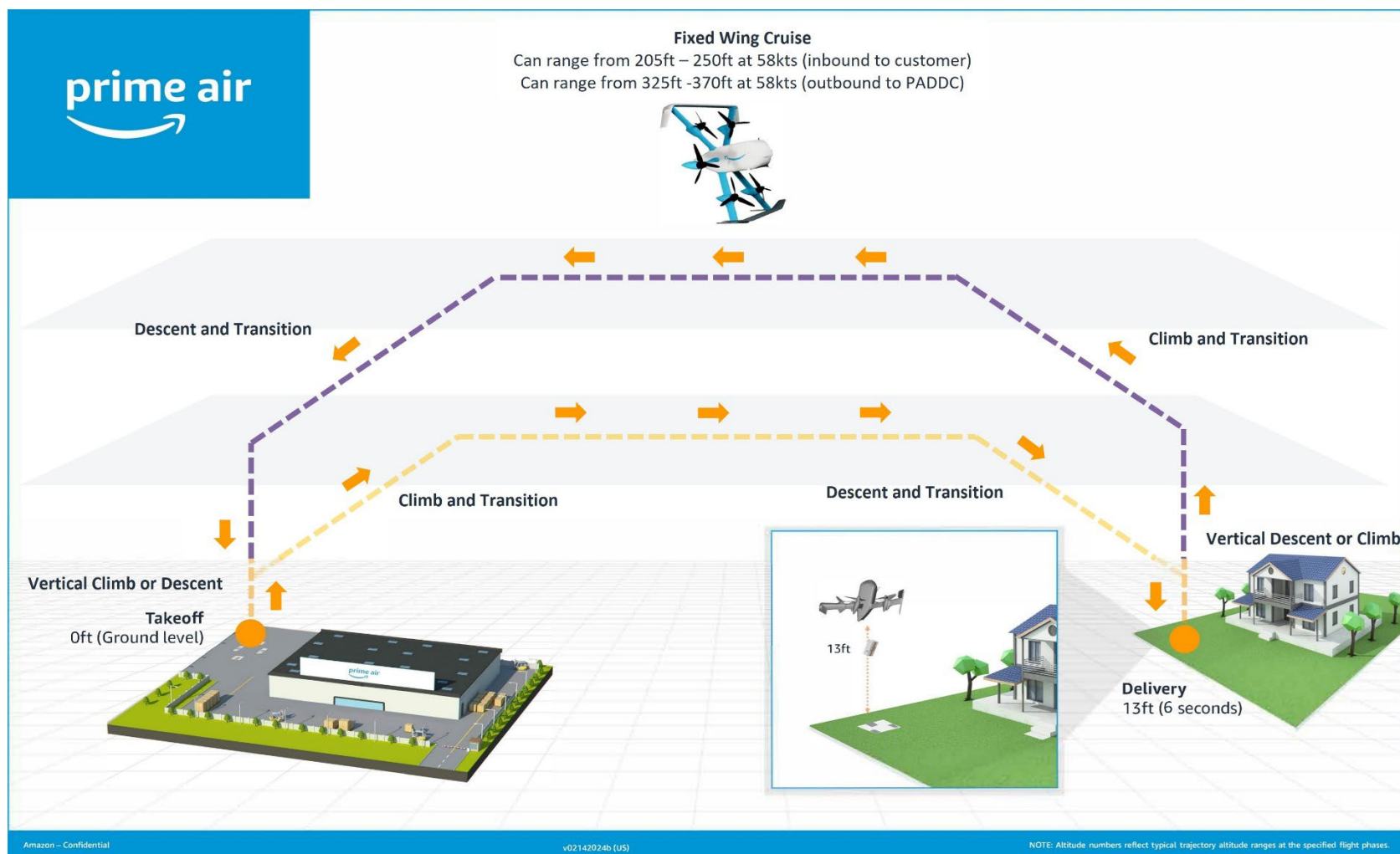
Source: ESA, 2025; Esri Mapping Services.

Figure 2-2
SIL3 PADD Drone Operation Study Area



Source: Amazon Prime Air, 2023.

Figure 2-3
MK30 Drone



Source: Amazon Prime Air, 2026.

Figure 2-4
 MK30 Drone Flight Profile

CHAPTER 3

Affected Environment and Environmental Consequences

3.1 Introduction

This chapter provides a description of the affected environment and potential environmental consequences for the environmental impact categories that have the potential to be affected by the No Action and Proposed Action alternatives, as required by FAA Order 1050.1G, for the environmental impact categories listed below.

- Aviation emissions and air quality
- Biological resources (including fish, wildlife, and plants)
- Coastal resources
- Department of Transportation Act, Section 303 (referred to as “Section 4(f)”) and Land and Water Conservation Fund (referred to as “Section 6(f)”)
- Farmlands
- Hazardous materials, solid waste, and pollution prevention
- Historical, architectural, archaeological, and cultural resources
- Land use
- Natural resources and energy supply
- Noise and noise-compatible land use
- Socioeconomics and children’s health and safety risks
- Visual effects (including light emissions)
- Water resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

The study area evaluated for potential impacts is defined as Prime Air’s proposed operating areas shown in **Figures 2-1** and **2-2**. The level of detail provided in this chapter is commensurate with the importance of the potential impacts. EAs are intended to be concise documents that focus on aspects of the human environment that may be affected by the Proposed Action.

3.2 Environmental Impact Categories Not Analyzed in Detail

This Draft EA did not analyze potential impacts on the following environmental impact categories in detail because the Proposed Action would not affect the resources included in the category (see FAA Order 1050.1G). Furthermore, these impact categories were not analyzed in detail for potentially “reasonably foreseeable” effects. Under FAA Order 1050.1G, “reasonably foreseeable” means sufficiently likely to occur such that a person of ordinary prudence would take it into account in reaching a decision. Since these impact categories are unaffected by the Proposed Action, they would not contribute to reasonably foreseeable effects that could occur when combined with the introduction of other drones or aviation activity.

- **Aviation Emissions and Air Quality:** The MK30 drone is battery-powered and does not generate emissions that could result in air quality impacts. Electricity consumed for battery charging at the PADDC would be minimal. The electricity consumed for the Proposed Action would come from the power grid. The three proposed drone operating areas are located over a four-county area (Cook, DuPage, Kane, and Will) in the vicinity of Chicago, IL, which are designated as nonattainment for ozone by the US Environmental Protection Agency. However, the minimal emissions associated with charging the drone batteries are unlikely to contribute to any exceedance of National Ambient Air Quality Standards.
- **Biological Resources (Fish and Plants):** The Proposed Action would not result in impacts to fish and plant species as the action is launched from developed/industrial areas, transported by drone, and delivered to residential houses and communities.
- **Coastal Resources:** The Proposed Action would not directly affect any shorelines, or change the use of shoreline zones, or be inconsistent with any National Oceanic and Atmospheric Administration–approved state Coastal Zone Management Plan. A portion of the drone operating areas of the IGQ1 PADDC overlaps coastal management areas (see **Figure 2-2**). However, this PADDC is located at an existing facility and package deliveries along the shoreline would be restricted to developed areas of land and would not extend beyond the residential properties on the shoreline; as such, the Proposed Action is expected to be consistent with the Illinois Coastal Management Program. The FAA submitted a request for a consistency finding to the Illinois Department of Natural Resources (IDNR) on April 23, 2026. On May 28, 2026, the IDNR issued a concurrence that the “*proposed activity complies with the enforceable policies of the ICMP and will be conducted in a manner consistent with the ICMP*” (see **Appendix G**).
- **Farmlands:** The Proposed Action would 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. The Proposed Action would not affect designated prime or unique farmlands.
- **Hazardous Materials, Solid Waste, and Pollution Prevention:** The Proposed Action would not result in any construction, development, or any physical disturbances of the ground. Therefore, the potential for impacts related to hazardous materials, pollution prevention, and solid waste is not anticipated. The drones are made of common aircraft-related materials, such as steel, aluminum, and composite materials. Each drone/battery would be properly managed at the end of its operating life in accordance with applicable 14 CFR Part 10, *Disposition of life-limited aircraft parts*, and any

hazardous materials would be disposed of in accordance with all applicable federal, tribal, state, and local laws, including 40 CFR Part 273, *Standards for Universal Waste Management*.

- **Land Use:** The Proposed Action would not involve any changes to existing, planned, or future land uses within the area of operations. Prime Air would use existing facilities to conduct its MK30 drone operations. The PADDs must conform with all applicable local or state land use ordinances and zoning requirements, as described in **Section 1.2**.
- **Natural Resources and Energy Supply:** The Proposed Action would not require the need for unusual amounts of natural resources and materials, or those in scarce supply. The MK30 drone is powered by a rechargeable battery which does not consume fossil fuel (e.g., gasoline or aviation fuel) resources. The battery is charged by an electric charger which can leverage the local grid to charge the batteries. The MK30 drone would be used to replace personal vehicle trips to stores for urgently needed items; thus, the MK30 drone is expected to reduce consumption of fossil fuel resources.
- **Socioeconomics and Children's Health and Safety Risks:** The Proposed Action would 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 would not introduce products or substances 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. It is not anticipated that the Proposed Action would pose a greater health and safety risk to children than package delivery by other means (i.e., truck, mail, personal automobile).
- **Visual Effects (Light Emissions Only):** Although a portion of the drone operations could occur during nighttime hours, the Proposed Action is not expected to result in significant light emission impacts because the drones are equipped with only the minimal lighting required by the FAA for any aircraft conducting night operations. The drones are not equipped with concentrated-beam type "landing lights".¹³
- **Water Resources (Wetlands, Floodplains, Surface Water, Groundwater, Wild and Scenic Rivers):** The Proposed Action would not result in any further construction of facilities and does not include any new facilities in areas identified as flood hazard areas according to the 1% annual chance (100-year) floodplain (non-critical actions) and 0.2% annual chance (500-year) floodplain (critical actions) that are currently used to determine the floodplain impacts for the Proposed Action.¹⁴ The Proposed Action would not result in any changes to existing discharges to water bodies, create new discharge that would result in impacts to surface waters, or modify any 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 affect any river segments in the Wild and Scenic River System (WSRS) as there are no WSRS river segments nearby.

¹³ The FAA defines nighttime between the hours 10 p.m. and 7 a.m.

¹⁴ Executive Order 14030, *Climate-Related Financial Risk*, May 2021.

3.3 Biological Resources (Wildlife)

3.3.1 Definition of Resource and 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 habitats. In addition to their intrinsic values, biological resources provide aesthetic, recreational, and economic benefits to society.

3.3.1.1 Threatened and Endangered Species

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 may affect listed species, consultation with the USFWS must be initiated. Conversely, if the FAA determines the action would have *no effect* on listed species or critical habitat, consultation is not required.

Impacts considered significant 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 pose 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.

3.3.1.2 Migratory Birds

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”).

3.3.1.3 Bald and Golden Eagles

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 Part 22), and USFWS guidelines as published in the National Bald Eagle Management Guidelines, provide for additional protections against “*disturbances*.” Like 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 Part 22, which include permits for the incidental take of Bald Eagles. Such permits are only needed when avoidance of incidental take is not possible. According to the USFWS National Bald Eagle Management Guidelines, to avoid Bald Eagle disturbance resulting from new or intermittent activities, the implementation of conservation measures to avoid operating aircraft within 1,000 ft of a nest during the breeding season should be implemented.¹⁵ However, a Bald Eagle Disturbance Take General Permit may be offered if disturbance (range of 330 to 1,000 ft) to an in-use eagle nest is unavoidable.¹⁶

3.3.2 Affected Environment

This section describes the existing biological environment of the operating areas. The operating area is located within the Central Corn Belt Plains (54) Level III Ecoregion over portions of the Chicago Lake Plain and Valparaiso–Wheaton Morainal Complex Level IV ecoregions. The Chicago Lake Plain includes nearly all of the City of Chicago except its far western edge, and extends north into Lake County, Illinois, and eastward into northwest Indiana. The majority of the IGQ1 PADDC operating area is located within this ecoregion. Formed by glacial Lake Michigan, the plain is underlain by sand and gravel soils. Today it is heavily urbanized, though it was once a landscape of prairie, wetlands, and dune–swale complexes. The Valparaiso–Wheaton Morainal Complex arcs through the western and southern portions of the Action Area, crossing DuPage, Will, Kane, and Lake Counties. The southwestern portion of the IGQ1 PADDC operating area as well as the entire operating areas for the ORD5 and SIL3 PADDCs occur within this ecoregion. This ecoregion is characterized by rolling moraines of glacial till, scattered kettle lakes, and poorly drained depressions. Although much of the land is now developed or farmed, remnant oak savannas, prairies, and wetlands persist in forest preserves and natural areas.^{17 18 19}

3.3.2.1 Federally Listed Species

This project was evaluated for impacts to wildlife and habitat resources, including protected species, in accordance with 50 CFR Part 402 of the Endangered Species Act (ESA) of 1973, as amended. Wildlife agencies with jurisdiction in the project area include the USFWS and the Illinois Department of Natural Resources (IDNR) Office of Resource Conservation.

The potential for impacts to federally listed species was assessed using the USFWS Information for Planning and Consultation (IPaC) map tool and resource. The Action Area covers operating areas for PADDC's IGQ1, ORD5, and SIL5 as outlined in red in **Figures 2-1, 2-2, and 2-3**. The USFWS official species lists obtained through IPaC, are included with this EA (accessed January 2026, see **Appendix B**).

¹⁵ National Bald Eagle Management Guidelines, US Fish and Wildlife Service, May 2007.

¹⁶ Department of the Interior, USFWS, Federal Register, Vol. 89, No 29 Rules and Regulations, 50 CFR Parts 13 and 22. Available at: <https://www.endangeredspecieslawandpolicy.com/assets/htmldocuments/NewBlogs/EndangeredSpecies/2024-02182.pdf>, accessed April 2024.

¹⁷ Woods, A.J., Omernik, J.M., Moran, B.C., et al. *Ecoregions of Illinois* (U.S. EPA/USGS/IDNR, 2006)

¹⁸ U.S. Department of Agriculture, Natural Resources Conservation Service. *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin* (USDA Handbook 296, 2006).

¹⁹ U.S. Environmental Protection Agency (EPA) and U.S. Geological Survey (USGS). 2001. *Ecoregions of Illinois and Indiana*. Compiled by Alan J. Woods, James M. Omernik, and Brian C. Moran, in collaboration with the Illinois Environmental Protection Agency, Illinois State Geological Survey, and Illinois Natural History Survey. U.S. EPA, National Health and Environmental Effects Research Laboratory, Corvallis, Oregon.

Based on the official species lists, there are 12 federally listed endangered, threatened, proposed endangered species, proposed threatened species, and non-essential, experimental population species that have the potential to occur within the Action Area. These species are included in **Table 3-1**. Bald Eagles are not included within **Table 3-1**; however, they are addressed in the Migratory Birds section.

TABLE 3-1
IPAC RESULTS

Species	Common Name	Species Name	Federal Status	Critical Habitat	PADCC
Mammals	Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered	N	IGQ1 ORD5 SIL5
	Tricolored bat	<i>Perimyotis subflavusIndiana</i>	Proposed Endangered	N	IGQ1 ORD5 SIL5
Reptiles	Eastern massasauga	<i>Sistrurus catenatus</i>	Threatened	N	IGQ1 ORD5 SIL5
Birds	Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened	N	IGQ1 ORD5 SIL5
	Whooping Crane	<i>Grus americana</i>	Experimental Population, Non-Essential	N	IGQ1 ORD5 SIL5
Clams	Salamander mussel	<i>Simpsoniaiais ambigua</i>	Proposed Endangered	N	ORD5
Insects	Hine's emerald dragonfly	<i>Somatochlora hineana</i>	Endangered	N	IGQ1 ORD5 SIL5
	Monarch butterfly	<i>Danaus plexippus</i>	Proposed Threatened	N	IGQ1 ORD5 SIL5
	Rusty patched bumble bee	<i>Bombus affinis</i>	Endangered	N	IGQ1 ORD5 SIL5
	Western regal fritillary	<i>Argynnis idalia occidentalis</i>	Proposed Threatened	N	IGQ1 ORD5 SIL5
Plants	Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	Threatened	N	IGQ1 ORD5 SIL5
	Leafy prairie-clover	<i>Dalea feliosa</i>	Endangered	N	IGQ1 ORD5 SIL5

Source: USFWS IPaC, accessed January 2026.

Based on the IPaC review, there are two mammal species, one reptile, two birds, one clam, four insects, and two plants, identified on the official species list. Descriptions of the species, their habitats, and likelihood of occurring within the Action Area are provided in the paragraphs below.

Mammals

A total of two mammalian species (bats) were identified by the IPaC report as likely to occur in the Action Area. Due to the nature of the Proposed Action, there is potential for bat species to be impacted by drones.

The northern long-eared bat (*Myotis septentrionalis*) is listed as an endangered species under the jurisdiction of the USFWS. No critical habitat has been designated for the species at this time. Northern long-eared bats typically roost in tree cavities, under bark, and in foliage during the summer, and forage within forest interiors, forest edges, and riparian zones.²⁰ In winter, they hibernate in caves and mines, which do not occur in the Action Area. Within the Action Area, suitable summer habitats are present in wooded preserves, riparian corridors, and urban green spaces, although the overall landscape is highly fragmented and dominated by urban and agricultural uses.²¹

The tricolored bat (*Perimyotis subflavus*) is a proposed candidate for listing under the jurisdiction of the USFWS. As of September 14, 2022, USFWS proposed to list the tricolored bat as an endangered species under the ESA. Designated critical habitat is not proposed for the tricolored bat at this time. Tricolored bats occur in forested habitats and are known to roost in tree foliage, cavities, and occasionally in manmade structures. They forage in woodlands, riparian corridors, wetlands, and agricultural areas where small flying insects are abundant. They hibernate in caves and abandoned mines, though these features are absent in the Action Area. Similar to northern long-eared bats, forest preserves, riparian greenways, and remnant natural areas within Cook, DuPage, and Will Counties may provide limited potential habitat.

Birds

Two avian species were identified in the IPaC reports: Rufa Red Knot (*Calidris canutus rufa*) and Whooping Crane (*Grus americana*). Due to the nature of the Proposed Action, there is potential for avian species to be impacted by drones during flight.

The Rufa Red Knot, a medium-sized migratory shorebird, is listed as threatened under the jurisdiction of the USFWS. This species uses open sandy beaches and dune shorelines along Lake Michigan as stopover habitat during spring and fall migration, foraging on small invertebrates found along the water's edge. Habitat for the species is minimal within the Action Area since there will be no overlap with the Lake Michigan shoreline.

The Whooping Crane, an endangered species under the jurisdiction of USFWS, is listed as Experimental Population, Non-Essential within the Action Area. The Whooping Crane is a large migratory bird that occasionally uses wetlands, shallow marshes, and open shorelines along Lake Michigan and the broader Midwest as stopover or foraging habitat during migration.

²⁰ Smith, P.W. 2004. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 2 – Animals*

²¹ Woods, A.J., Omernik, J.M., Moran, B.C., et al. 2006. *Ecoregions of Illinois* (US EPA/USGS/IDNR)

Reptiles

One reptile species, the eastern massasauga rattlesnake (*Sistrurus catenatus*), a threatened species under the jurisdiction of USFWS, was identified by the IPaC report as likely to occur in the Action Area. This is the only venomous snake found naturally occurring in the Great Lakes region. It occurs primarily in wet prairie, sedge meadow, and fen habitats that provide both hibernation and foraging sites but may also be found in adjacent upland areas.²²

Clams

One clam species, salamander mussel (*Simpsonaias ambigua*) was identified by the IPaC report as likely to occur in the Action Area. The salamander mussel is a small thin-shelled mussel that is found in swift-flowing streams and rivers. This species is currently proposed for listing as endangered. Critical Habitat has been proposed; however, these areas do not overlap the Action Area.

Insects

Four insect species were identified in the IPaC report as likely to occur within the Action Area: the Hine's emerald dragonfly (*Somatochlora hineana*), the rusty patched bumble bee (*Bombus affinis*), the western regal fritillary (*Speyeria idalia occidentalis*), and the monarch butterfly (*Danaus plexippus plexippus*).

The Hine's emerald dragonfly is a federally listed endangered species which inhabits groundwater-fed wetlands such as calcareous fens, sedge meadows, and wet prairies that overlie dolomitic or limestone bedrock, often with shallow, slow-moving water flowing through dense vegetation. Larvae develop in seepage wetlands and crayfish burrows, where they can survive dry periods, while adults forage in adjacent open areas for small flying insects.²³ Within the Chicago metropolitan Action Area, the species is known from Cook, DuPage, and Will Counties, primarily along the Des Plaines River, where critical habitat has been established.²⁴ The Project Area avoids any overlap with Critical Habitat for the species.

The rusty patched bumble bee is listed as an endangered species under the jurisdiction of USFWS. The rusty patched bumble bee was once broadly distributed across the eastern United States and upper Midwest but has experienced a range-wide decline of approximately 87 percent since the late 1990s, primarily due to habitat loss, disease, and pesticide exposure.²⁵ Within the Chicago metropolitan Action Area, the rusty patched bumble bee has been recently documented in Cook, DuPage, Kane, and Lake Counties, including urban green spaces, residential gardens, forest preserves, and prairie restorations. The USFWS IPaC database confirms that there is proposed critical habitat for the species. However, these areas do not overlap portions Action Area.²⁶ Active from April through October, foraging habitat for the rusty patched bumblebee includes native prairie remnants, flower-rich parks, and urban pollinator

²² Kingsbury, B.A. & Gibson, J. 2012. *Habitat Management Guidelines for the Eastern Massasauga Rattlesnake*. U.S. Fish and Wildlife Service and Midwest Partners in Amphibian and Reptile Conservation.

²³ Illinois Department of Natural Resources (IDNR). 2024. *Hine's Emerald Dragonfly Species Status Assessment*.

²⁴ U.S. Fish and Wildlife Service. 2010. *Final Revised Critical Habitat for Hine's Emerald Dragonfly (Somatochlora hineana)*. 75 FR 21394.

²⁵ U.S. Fish and Wildlife Service. 2017. *Endangered and Threatened Wildlife and Plants; Endangered Species Status for Rusty Patched Bumble Bee*. Federal Register, Vol. 82, No. 10, pp. 3186–3209 (January 11, 2017)

²⁶ U.S. Fish and Wildlife Service. 2025. *IPaC: Explore Location Resources – Federally Listed Species and Critical Habitat in Illinois, Indiana, and Michigan*. Accessed October 2025.

gardens. Nests are typically in abandoned rodent burrows/cavities about 1–4 ft below ground, and nests are thought to be typically within 0.6 mi of summer foraging areas.²⁷

The western regal fritillary is proposed for listing as a threatened species under the ESA and is under the jurisdiction of the USFWS. This butterfly historically ranged across the central Great Plains and Midwest, including Illinois, Indiana, and Iowa, but has undergone severe population declines due to prairie habitat loss, fire regime changes, pesticide use, and habitat fragmentation. The species is now primarily restricted to remnant tallgrass prairies, dry-mesic grasslands, and prairie preserves in the central United States. Within the Action Area, the western regal fritillary may occur rarely or as a transient individual, as most historical prairie habitats in the region have been lost or heavily fragmented. Suitable remnant prairie habitat persists in Cook, Will, and DuPage Counties, primarily within protected prairie preserves, railroad prairie remnants, and restoration sites that maintain abundant native violets (*Viola spp.*)—the larval host plants—and summer-blooming nectar sources for adults. Adult flight activity occurs from late June through August, with females laying eggs in late summer near violet patches.²⁸

The monarch butterfly is proposed for listing as a threatened species under the ESA and is under the jurisdiction of the USFWS. Although not currently listed as threatened or endangered, the monarch has been identified by the IDNR as a species of greatest conservation need in Illinois, due to ongoing population declines linked to habitat loss, pesticide use, and climate change.²⁹ The preferred habitat for monarchs is open meadows, fields, and wetland edges with the presence of milkweed and flowering plants. Monarchs from Ontario join local populations in their migration south in the fall, returning in the spring. Migration through the Action Area is largely along the shoreline of Lake Michigan. Within the Chicago metropolitan Action Area, monarchs are commonly observed from May through October, utilizing prairie remnants, parklands, roadside rights-of-way, gardens, and restored grasslands as breeding and foraging habitat. Larvae feed exclusively on milkweed species such as common milkweed (*Asclepias syriaca*), swamp milkweed (*A. incarnata*), and butterfly weed (*A. tuberosa*), while adults feed on a diversity of native flowering plants.³⁰

Plants

Two plant species were listed on the IPaC report as federally threatened or endangered: eastern prairie fringed orchid (*Platanthera leucophaea*) and leafy prairie-clover (*Dalea feliosa*).

The eastern prairie fringed orchid is listed as threatened. It occurs in moist, calcareous prairies, sedge meadows, and wetlands often underlain by dolomitic or limestone bedrock. Within the Chicago metropolitan area, suitable habitat remains in remnant wet prairie and fen systems.³¹

The leafy prairie-clover is a federally endangered plant species which occurs in dry-mesic to mesic limestone prairies, gravel hill prairies, and dolomite prairies with thin soils and high sunlight exposure. In

²⁷ U.S. Fish and Wildlife Service (USFWS). 2018. *Conservation Management Guidelines for the Rusty Patched Bumble Bee (Bombus affinis)*.

²⁸ U.S. Fish and Wildlife Service. 2023. *Species Status Assessment Report for the Regal Fritillary (Speyeria idalia)*. U.S. Fish and Wildlife Service, Midwest Region.

²⁹ Illinois Endangered Species Protection Board. 2020. *Checklist of Endangered and Threatened Animals and Plants of Illinois*.

³⁰ U.S. Fish and Wildlife Service (USFWS). 2020. *Species Status Assessment Report for the Monarch Butterfly (Danaus plexippus plexippus)*. U.S. Fish and Wildlife Service, Midwest Region.

³¹ USFWS 2025, IPaC; IDNR 2024 SSA; Illinois Endangered Species Protection Board

the Chicago metro area, habitat occurs in Will and Cook Counties, with documented occurrences in Joliet Army Ammunition Plant Prairie, Bluff Spring Fen, and Lockport Prairie Nature Preserve³² which are all outside of the Project Area.

The federally listed plant species occur within natural areas with specific requirements and rarely in urbanized environments. The Action Area is comprised largely of highly urbanized and developed residential, commercial, and industrial areas; therefore, the probability of occurrence for these plant species is low.

3.3.2.2 State Species of Concern

This project was evaluated for potential impacts to wildlife and habitat resources, including federally and state-protected species, in accordance with the Endangered Species Act of 1973, as amended (50 CFR Part 402), and the Illinois Endangered Species Protection Act (520 ILCS 10/1 *et seq.*). Wildlife agency coordination for the project includes the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR), Office of Resource Conservation.

State-protected flora and fauna with potential to occur within the Action Area were identified using information from the USFWS IPaC system and the Illinois Endangered Species Protection Board (2020). These data were cross-checked against the USFWS Chicago Ecological Services Field Office regional species list and Natural Heritage Database records to confirm species presence or suitable habitat within Cook, DuPage, Will, and Kane Counties, Illinois.³³ Species limited to regions outside the Action Area were excluded. The resulting list includes only those species most likely to occur within the Action Area. This list is provided in **Appendix B**.

3.3.2.3 Migratory Birds

Migratory birds within the Chicago metropolitan Action Area are most active during two major migration periods each year — spring migration (March–May) and fall migration (August–November). Migratory bird species found within the operating area will vary throughout the year.

The Action Area lies within Bird Conservation Region (BCR) 13, the *Lower Great Lakes / St. Lawrence Plain*, which encompasses northeastern Illinois, northern Indiana, and southeastern Wisconsin. This region provides a mosaic of prairie, wetland, forest, and urban habitats that support numerous breeding and migratory bird species identified by the U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern (BCC 2021).³⁴

Species of conservation concern that may occur within BCR 13 include the Black Tern (*Chlidonias niger surinamensis*), Bobolink (*Dolichonyx oryzivorus*), Cerulean Warbler (*Setophaga cerulea*), Golden-winged Warbler (*Vermivora chrysoptera*), Henslow's Sparrow (*Centronyx henslowii*), King Rail (*Rallus elegans*), Canada Warbler (*Cardellina canadensis*), Black-billed Cuckoo (*Coccyzus erythrophthalmus*), Eastern Whip-poor-will (*Antrostomus vociferus*), Chimney Swift (*Chaetura pelagica*), Barn Swallow

³² U.S. Fish and Wildlife Service. *Recover Plan for the Leafy Prairie Clover (Dalea foliosa)*. (1996)

³³ Illinois Department of Natural Resources (IDNR). 2025. *Illinois Natural Heritage Database (Biotics 5): Element Occurrence Records for State and Federally Listed Species*. Office of Resource Conservation, Springfield, Illinois. Accessed October 2025.

³⁴ U.S. Fish and Wildlife Service. *Birds of Conservation Concern 2021*. Falls Church, VA: Migratory Birds Program

(*Hirundo rustica*), Grasshopper Sparrow (*Ammodramus savannarum perpallidus*), and Le Conte's Sparrow (*Ammodramus leconteii*).³⁵

These species utilize a variety of habitats found within and surrounding the Chicago metropolitan region including prairies, wetlands, forested uplands, and urban and suburban areas. Within the Action Area, natural habitats occur as fragmented patches of wetland, riparian corridor, and restored prairie which are interspersed with developed land. Chimney Swifts and Barn Swallow have adapted to developed landscapes, utilizing chimneys, building eaves, culverts, or bridges during migration and nesting.

The Chimney Swift is a BCC with high probability within the operating area. Chimney Swifts often make their nests in manmade vertical surfaces preferring brick chimneys with open caps.³⁶ It is possible that Chimney Swifts may be nesting within the operating area and that drone operations in close proximity could affect its nesting sites during its breeding nesting season (March 15 to August 25). While it is not expected that infrequent drone overflights would cause adverse effects to nesting or feeding Chimney Swifts, Prime Air would conduct annual desktop reviews of available databases to determine active nesting sites and take avoidance measures if determined to be necessary.

The Barn Swallow, also listed as a BCC in BCR 13, commonly nests on bridges, culverts, and building eaves across the Action Area. It breeds from May through August and forages on flying insects over open water and fields. The species is widespread and well adapted to human structures.

The Bald Eagle was delisted from protection under the ESA in 2007. However, the Bald Eagle is still protected under the BGEPA, MBTA, and is state-listed as Threatened in Illinois. Bald Eagles are commonly observed near large open water habitats such as rivers, lakes, and the coast. Bald Eagles nest in large pine trees near water bodies that provide dependable food sources. Within the proximity of the Action Area, eagles are observed year-round along the Des Plaines and Illinois Rivers, and winter concentrations occur at Rock Run Rookery, Whalon Lake, and the Four Rivers Environmental Education Center in Will County.³⁷ Additional nests and sightings are confirmed in the Palos region of Cook County.³⁸

3.3.3 Environmental Consequences

Drones used for commercial package delivery fly at lower speeds and elevations and are smaller than conventional aircraft. Furthermore, the drones would be hovering in fixed positions at both the nest and delivery locations leaving them temporarily exposed to a potential mobbing and/or attacking bird defending its breeding territory.

Bird behavior, in particular mobbing and territorial defense behaviors, on flying and hovering drones is the most important risk consideration analysis, as these behaviors are the most pertinent to the Proposed Action. Mobbing behavior includes birds emitting alarm calls, flying at a potential predator, diverting its

³⁵ U.S. Fish and Wildlife Service. *Species List – Chicago Ecological Services Field Office* (2025).

³⁶ Michigan Audubon. Available: <https://www.michiganaudubon.org/bfc/chsw/>. Accessed December 2024

³⁷ Will County Forest Preserve District. 2023. "Eagles Return to Four Rivers Environmental Education Center." ReConnect with Nature. Will County, Illinois. Available online at: <https://www.reconnectwithnature.org/news-events/the-buzz/eagles-return-to-four-rivers>. Accessed October 2025

³⁸ Forest Preserve District of Cook County (FPDCC). 2023. "Bald Eagles Nest in Cook County." Forest Preserves of Cook County, River Forest, Illinois. Available online at: <https://fpdcc.com/bald-eagles-nest-cook-county>. Accessed October 2025

attention, and harassing it. Mobbing and aerial attack behaviors typically occur when a raptor, crow, or other aerial predator enters the airspace of a breeding habitat bird or territorial male.³⁹ Certain species of birds are known to harass, mob, and attack aerial predators that fly into or near their territory, especially during the breeding season when birds are actively nesting. The defending birds will chase, dive bomb, attack the backside, and vocalize to harass the aerial predator until the offender is far enough from the territory that the defending birds cease attacking and return to their nests and foraging activities.⁴⁰ Not all bird species exhibit mobbing and territorial defensive behaviors. Some bird species are more aggressive, defensive, and cued on aerial predators, while other species may show aggression or interest towards an overflying hawk in its territory. Species of birds that exhibit mobbing and territorial defense behaviors include Northern Mockingbirds, kingbirds, blackbirds, grackles, jays, crows, ravens, and some raptors.

The MK30 drone would utilize existing infrastructure at each PADDC. There would be no further expansion of the PADDCs, or habitat modification associated with the Proposed Action. Earlier construction was not part of the Proposed Action reviewed by the FAA, but any future ground construction at the PADDC sites would require approval or authorization by the FAA.

Prime Air's aircraft would not touch the ground in any other place than the PADDC (except during emergency landings) since it remains airborne while conducting deliveries. The operations would take place within airspace and would typically be well above the tree line and away from sensitive habitats. After launch, Prime Air's drone would rise to a cruising altitude between 205 and 370 ft AGL and follow a preplanned route to its delivery site. The pre-planned route is optimized to avoid terrain and object obstructions, areas of high aircraft traffic, and areas where people may gather in large numbers such as highways, parks, and schools.

Aircraft would typically stay at between 205 and 370 ft AGL or higher except when descending to drop a package. When making a delivery, the aircraft descends, and packages are dropped to the ground from approximately 13 ft AGL. Packages are carried internally in the aircraft's fuselage and are dropped by opening a set of payload doors on the aircraft. After the package is dropped the drone then climbs vertically to between approximately 205 and 370 ft and reverses the path taken, returning to the takeoff/landing pad at the PADDC. The drone would take approximately 53 seconds to complete a delivery, which includes the descent from en route altitude, dropping the package, and returning back to en route altitude. As a result, the duration of exposure by most wildlife on the ground to the visual or noise impacts from the drone would be of very short duration (less than a minute).

It is not likely that listed species would be in the vicinity of the delivery location because such locations would be developed areas. However, even if species were expected to be exposed to this noise level, the noise would be unlikely to cause significant disturbance. At a potential maximum of 3,000 flights per day across the entire Action Area, the distribution and altitude of the flights are not expected to significantly affect wildlife in the Action Area.

³⁹ Royal Society for the Protection of Birds (RPSB). 2023. What is Mobbing? Available: <https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/birdwatching/bird-behaviour/what-is-mobbing/>. Accessed: July 2023 and February 2024.

⁴⁰ Kalb, N., and C. Randler. 2019. Behavioral Responses to Conspecific Mobbing Calls Are Predator-Specific in Great Tits (*Parus major*). *Ecology and Evolution* 9(16):9207–9213. Available: <https://doi.org/10.1002/ece3.5467>.

A significant impact on federally listed threatened and endangered species would occur when the USFWS or NMFS determines 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. However, 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.

Additionally, the FAA has looked at the potential effects of wildfires that may be caused by the Proposed Action. While the Prime Air drone has been evaluated for airworthiness and is considered to be safe for the proposed operations over the operating areas, the FAA acknowledges that a crash may occur and could result in a wildfire. Amazon Prime Air will use system reported data to locate and report an off-nominal drone and will follow their Safety Management System's prescribed Incident Response Process to coordinate with local first responders as required.

The FAA understands that Prime Air would immediately notify local emergency fire response services if one of its drones were to crash, and that fire responders would be able to manage any wildfire that could occur before the wildfire could cause significant impacts to biological resources in the operating areas.

3.3.3.1 No Action Alternative

Under the No Action Alternative, the FAA would not issue the approvals necessary to enable Prime Air to conduct commercial drone package delivery operations in the Chicago operating area, including the use of the MK30 drone. Accordingly, the No Action Alternative would not result in impacts on biological resources.

3.3.3.2 Proposed Action

The Proposed Action includes up to 1,000 MK30 drone flights per day per PADDC, up to 365 days per year, operating between 6 a.m. and 10:30 p.m. There would be no ground construction or habitat modification associated with the Proposed Action. The drone would not touch the ground in any other place than the PADDC (except during emergency landings) because it remains aerial while conducting deliveries. Scheduled deliveries would initiate from the PADDC at an en route altitude of less than 400 ft AGL and would generally occur between 205 and 370 ft AGL. The drone would lower to around 13 ft AGL and hover for two seconds to make a delivery. Then, the drone would transition back to an en route flight mode to return to the PADDC.

Operations would occur mostly in an urban environment, typically well above the tree line and away from sensitive habitats and given the short duration of increased ambient sound levels, flights are not expected to significantly affect wildlife in the area. A direct line of communication would be established with the Illinois Department of Natural Resources to discuss any potential concerns regarding impacts on wildlife or habitat in the Action Area. In addition, Prime Air would also specifically coordinate with the managing entities of state parks and natural areas within the Action Area on the thoughtful placement and use of delivery sites within these areas as necessary.

Special-Status Species

Mammals

Federally listed bat species including the northern long-eared bat and the tricolored bat may be located within the Action Area. The Proposed Action may include drone operations up until 10:30 P.M, which is anticipated to overlap with the dusk emergence of bat activity. The MK30 drone is not equipped nor is it authorized to operate in periods of darkness (before Morning Civil Twilight or after Evening Civil Twilight). Although operations may occur during dusk emergence, the listed bat species typically forage in areas near water or along forested edges.⁴¹ ⁴² Research suggests that drones have “*minimal impact on bat behavior*”⁴³ and that bats do not appear to be disturbed by drones.⁴⁴ Also, the risk of bat conflicts is only present for approximately 6 months each year, April through the beginning of October, when bats are not hibernating. Bats at roost or in flight could experience drone noise during the en route and delivery flight phases. Bats foraging at or near the tree line at the time a drone flies by 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 PADDs 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 bats. 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. Given the bat’s ability to avoid flying into objects, the short period of time the drone would be in any one place, and the low probability of encountering a bat during operations, the likelihood of the drone striking a bat is extremely low.

Based on 1) operations occurring mostly in an urban environment, 2) the altitude at which the drone flies in the en route phase (205 and 370 ft 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, the FAA has determined the action *may affect, but is not likely to adversely affect*, the tricolored bat or northern long-eared bat.

Birds

The two protected avian species identified in the IPaC report are discussed in detail below.

The Rufa Red Knot has a moderate potential to occur within the Action Area during migration (April–June; July–October). Because the Proposed Action involves drone operations primarily over developed urban and suburban airspace, with avoidance measures maintaining buffers from sensitive shoreline areas, no direct habitat disturbance is expected. In the rare instance where involvement with the species were to occur, the Rufa Red Knot is a medium sized bird, that would be able to hear and detect a drone

⁴¹ US Fish & Wildlife Service, Tricolored Bat. Available: <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>. Accessed: February 2024.

⁴² Michigan Department of Natural Resources. Available: <https://www.michigan.gov/dnr/education/michigan-species/mammals/bats>. Accessed: December 2024

⁴³ 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>

⁴⁴ 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.

approaching and move away in time to avoid a collision. Therefore, the project determination for the rufa red knot is *no effect*.

The Whooping Crane is a federally endangered species managed through a nonessential experimental population (NEP) designation under Section 10(j) of the Endangered Species Act for the Eastern Migratory Population (EMP). The EMP migrates between breeding areas in central Wisconsin and wintering grounds along the Gulf Coast and southeastern United States, following a broad corridor that generally tracks the western and southern edges of Lake Michigan. Occurrence within the Chicago metropolitan Action Area is rare and transient, as the region lies east of the primary migratory corridor. Individual cranes occasionally deviate from the established migration route, and isolated observations have been documented, including a confirmed sighting of a juvenile crane in Wilmette, Illinois (Cook County), that was relocated to Horicon Marsh, Wisconsin, during migration.

While no established breeding or staging areas exist within the Action Area, suitable stopover habitat (e.g., agricultural fields, wet meadows, and shallow wetlands) may be used opportunistically by migrating birds. Given the low frequency and transient nature of occurrence, and because the EMP is designated as a nonessential experimental population, the project determination for the Whooping Crane is *no effect*.

Clams

Activities associated with the Proposed Action will have *no effect* on federally listed clam species. One species was identified in the IPaC reports, the salamander mussel. The project does not include any ground disturbance to natural areas and no modifications to wetlands or water bodies.

Insects

Flying insects were identified as special concerns for the Proposed Action. Three listed insect species were identified in the IPaC report which are discussed below.

Hine's emerald dragonfly is known to occur within the area. However, designated critical habitat and areas with the highest concentration of the species have been avoided. Because drone operations occur far above the species' flight height of 3-6 ft above ground or water and will not generate direct or indirect habitat effects, the project is not anticipated to affect the life cycle, behavior, or habitat of the Hine's emerald dragonfly. Therefore, the proposed action will have *no effect* on this species.

The rusty patched bumble bee is often observed within the Action Area foraging in urban green spaces and residential gardens. USFWS designated High Potential Zones for the species are located throughout the Chicago metropolitan area.⁴⁵ Though bumblebees have been shown to be able to fly at high altitudes, they generally stay close to the ground when foraging. Because the action avoids direct disturbance to the below-ground nesting and overwintering environment and limits operations above the primary ground/vegetation layer where bees concentrate foraging activity, any exposure would be limited to brief, localized overflight-related disturbance; therefore, adverse effects are expected to be insignificant. Therefore, the FAA concurs with the USFWS D-Key, that the proposed Action will have *no effect* on the rusty patched bumble bee.

⁴⁵ U.S. Fish and Wildlife Service Rusty Patched Bumble Bee (*Bombus affinis*) Map. Available at: <https://www.fws.gov/species/rusty-patched-bumble-bee-bombus-affinis/map>. Accessed November 2025

The western regal fritillary is a prairie-associated butterfly which may occur within the Action Area. The species depends on violets as the sole larval host plant and nectar plants for adults, as well as native warm-season bunch grasses to provide protective sites for multiple life stages. The Proposed Action would occur primarily over urban/built environments. Because the action does not include ground disturbance, it would not affect the habitat components required by the western regal fritillary. Additionally, given the minimum flight altitude and the short duration of any overflight, the likelihood of direct interaction with individual butterflies is discountable. Therefore, the action would have *no effect* on the western regal fritillary.

The monarch butterfly is proposed for federal listing as a threatened species. The monarch has the potential to occur in the operating area. 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 can occur up to 4,000 ft AGL.⁴⁶ Because the project will not alter milkweed availability, floral resources, or habitat structure, and monarchs generally fly well below typical drone operating altitudes, it is not anticipated to affect the life cycle or habitat of the monarch butterfly. Therefore, the proposed action will have *no effect* on this species.

Reptiles

One reptile was identified within the USFWS official species list for the Action Area, the eastern massasauga rattlesnake. Since the operations would continue to occur within airspace only, and there would be no construction or ground disturbance under the proposed action, it is anticipated that there would be *no effect* on the eastern massasauga.

Plants

Activities associated with the Proposed Action will have *no effect* on federally listed plants. Additionally, it is not anticipated that the existing plant communities would be negatively affected by the Proposed Action.

The FAA's effect determinations for the federally listed species discussed are presented in **Table 3-2**.

⁴⁶ Altitudes attained by migrating monarch butterflies, *Danaus p. plexippus* (Lepidoptera: Danaidae), as reported by glider pilots. Available: <https://cdnsiencepub.com/doi/abs/10.1139/z81-084>. Accessed April 2022 and February 2024.

TABLE 3-2
EFFECTS DETERMINATION TABLE

Common Name	Species Name	Federal Status	PADDC	Effect Determination
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered	IGQ1, ORD5, SIL5	Not Likely to Adversely Affect
Tricolored bat	<i>Perimyotis subflavus</i>	Proposed Endangered	IGQ1, ORD5, SIL5	Not Likely to Adversely Affect
Eastern massasauga	<i>Sistrurus catenatus</i>	Threatened	IGQ1, ORD5, SIL5	No Effect
Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened	IGQ1, ORD5, SIL5	No Effect
Whooping Crane	<i>Grus americana</i>	Experimental Population, Non-Essential	IGQ1, ORD5, SIL5	No Effect
Salamander mussel	<i>Simpsonia ambigua</i>	Proposed Endangered	ORD5	No Effect
Hine's emerald dragonfly	<i>Somatochlora hineana</i>	Endangered	IGQ1, ORD5, SIL5	No Effect
Monarch butterfly	<i>Danaus plexippus</i>	Candidate Species	IGQ1, ORD5, SIL5	No Effect
Rusty patched bumble bee	<i>Bombus affinis</i>	Endangered	IGQ1, ORD5, SIL5	No Effect
Western regal fritillary	<i>Argynnis idalia occidentalis</i>	Proposed Threatened	IGQ1, ORD5, SIL5	No Effect
Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	Threatened	IGQ1, ORD5, SIL5	No Effect
Leafy prairie-clover	<i>Dalea feliosa</i>	Endangered	IGQ1, ORD5, SIL5	No Effect

Source: FAA, 2025.

3.3.3.3 Migratory Birds

Prime Air has stated to the FAA that it would monitor the operating area for any active Bald Eagle nests that may occur. Monitoring efforts would focus on annual desktop reviews of available databases for confirmation of existing nests and identification of new nests, but could also include, if required by USFWS, annual in-person visual surveys of potential nests located in drone operating areas. Bald Eagle nests are typically very conspicuous, usually five to nine ft in diameter, with a vertical depth up to eight ft, and should be easily identified.⁴⁷ Bald Eagles are usually seen near lakes, rivers, and marshes while foraging for fish or carrion. The National Bald Eagle Management Guidelines state that aircraft should stay at least 1,000 ft from the nests during the breeding season unless the aircraft is operated by a trained wildlife biologist.⁴⁸ If nests are identified, Prime Air will establish an avoidance area such that there is 1,000-ft vertical and horizontal separation distance between the vehicle's flight path and the nest. The avoidance area will be maintained until the end of the breeding season (January 15 through August 15).⁴⁹

Of the BCC migratory birds which may occur within the area, the most likely species to occur are the Chimney Swift and Barn Swallow. These are BCC species adapted to urban environments with high probability of occurrence within the operating area. Chimney Swifts often make their nests in manmade

⁴⁷ USFWS Midwest Region: Identification of Large Nests. Available: <https://www.fws.gov/program/eagle-management/eagle-permits>. Accessed: January 2024.

⁴⁸ U.S. Fish and Wildlife Service (USFWS). 2007. *National Bald Eagle Management Guidelines*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 25 pp.

⁴⁹ USFWS. Eagle Management. Available at: <https://www.fws.gov/program/eagle-management/eagle-incident-disturbance-and-nest-take-permits>. Accessed December 2024.

vertical surfaces preferring brick chimneys with open caps.⁵⁰ It is possible that Chimney Swifts may be nesting within the operating area and that drone operations in close proximity could affect its nesting sites during its breeding nesting season (March 15 to August 25). Barn Swallows commonly nest on manmade structures such as bridges, culverts, building eaves, and overhangs, often in close proximity to human activity. Within the Chicago metropolitan Action Area, the species is widespread during the breeding season (May through August), foraging on flying insects over open water, grasslands, and developed areas. While it is not expected that infrequent drone overflights would cause adverse effects to nesting or feeding of Chimney Swifts or Barn Swallows, Prime Air would conduct annual desktop reviews of available databases to determine active nesting sites and take avoidance measures if determined to be necessary.

The other state-protected and BCC species identified breed in a variety of habitats, mainly wetlands, surface water systems, and coastal areas. The Proposed Action is not anticipated to impact the nesting or sheltering for the species, as the PADDC areas are not proposed within wetland or coastal systems. Additionally, the drone's en route overflights are not expected to result in effects to any lifecycles of these species.

Due to the limited operating area and proposed number of daily operations, occasional drone overflights at between approximately 205 and 370 ft AGL are not expected to impact critical lifecycles of wildlife species or their ability to survive.

In summary, 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 action area;
- 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;
- 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.

The FAA initiated Section 7 consultation with the USFWS Illinois-Iowa Ecological Services Field Office on April 2, 2026.

Copies of all agency correspondence are provided in **Appendix B**.

3.3.3.4 Reasonably Foreseeable Effects

The introduction of Prime Air's drone operations may occur in areas subject to other aviation activity, necessitating the evaluation of reasonably foreseeable effects on biological resources when combined with other aviation operations. Prime Air's proposed operations of the MK30 drone would utilize existing infrastructure at each PADDC and any future ground construction at the PADDC sites would require further approval or authorization by the FAA. Furthermore, drone operations would occur mostly in an

⁵⁰ Michigan Audubon. Available: <https://www.michiganaudubon.org/bfc/chsw/>. Accessed December 2024

urban environment, typically well above the tree line and away from sensitive habitats and given the short duration of increased ambient sound levels, flights are not expected to significantly affect wildlife in the area. In the future, other drone operations or aviation activities may be proposed to operate with this Proposed Action's operating areas. Should that occur, Prime Air understands the potential for impacts may increase due to the introduction of additional drone or other aviation activity and would work with operators and the FAA to mitigate potential impacts. The FAA would also conduct a new environmental analysis—including evaluating reasonably foreseeable effects on biological resources—prior to the commencement of other drone operations in these areas.

3.4 Department of Transportation Act Section 303 (referred to as "Section 4(f)") and Land and Water Conservation Fund (referred to as "Section 6(f)")

3.4.1 Definition of Resource and Regulatory Setting

Section 4(f) of the U.S. Department of Transportation (DOT) Act (codified at 49 U.S.C. § 303) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Section 4(f) states that "... [the] Secretary of Transportation may approve a transportation program or project requiring the use of any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance or land from a historic site of national, state, or local significance, only if there is no feasible and prudent alternative to the use of such land and the program or project includes all possible planning to minimize harm resulting from the use."

The word "use" can mean either a physical or constructive use. A Physical use is the actual physical taking of a Section 4(f) property through purchase of land or a permanent easement, physical occupation of a portion or all of the property, or alteration of structures or facilities on the property. A "constructive" use does not require a physical taking of a Section 4(f) property. A Constructive use would occur when a project produces an effect, such as excessive noise, that would result in substantial impairment to property to the degree that the activities, features, or attributes of the property 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 being used for a Proposed Action.

The procedural obligations for Section 4(f) compliance are outlined in the FAA Order 1050.1 Desk Reference. Additionally, the FAA uses the regulations and guidance provided by the Federal Highway Administration (FHWA) when evaluating potential impacts on Section 4(f) properties.^{51,52} While these requirements are not obligatory for the FAA, they may be utilized as guidance to the extent that they are applicable.⁵³

The Land and Water Conservation Fund (LWCF) Act (54 U.S.C. § 200305(f)(3)), as amended, provides funding for the purchase and improvement of recreational lands, wildlife and waterfowl refuges, and other

⁵¹ FHWA, July 20, 2012. Section 4(f) Policy Paper. Office of Planning, Environment and Realty Project Development and Environmental Review, Washington, DC. Available at: <https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx>.

⁵² 23 CFR Part 774, Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and historic Sites (Section 4(f)).

⁵³ Further details about the DOT Act and Section 4(f) can be accessed in 23 CFR Part 774 et seq.

similar resources. The LWCF established a fund for federal acquisition of park and recreational lands and provides matching grants to state and local governments for recreation planning, acquisition, and development. Lands purchased by this fund are protected from conversion to uses other than public outdoor recreation.

3.4.2 Affected Environment

The FAA used data from federal, state, and other publicly accessible sources to identify potential Section 4(f) resources within the study area. As listed in Table C-1 of **Appendix C**, the FAA identified a total of 1,102 properties that could meet the definition of a Section 4(f) resource, including public parks administered by city, county, township and state authorities. There is one national park, the Illinois and Michigan Canal National Heritage Area, in the operating area associated with the IGQ1 PADDC. There are no other federally managed Section 4(f) resources within the operating areas. Historic and cultural resources are addressed by both Section 4(f) and the National Historic Preservation Act (NHPA) of 1966 (54 U.S.C. §§ 300101 *et seq.*, as amended), and are discussed further in **Section 3.5**. Additionally, the FAA requested assistance from national, state, city, and county governments in identifying the appropriate stakeholders that are likely to have an interest in the project and its effects on Section 4(f) resources. The officials with jurisdiction under Section 4(f) regulatory interest include:

- Addison Park District
- Alsip Park District
- Bartlett Park District
- Bloomingdale Park District
- Blue Island Park District
- Butterfield Park District
- Calumet Memorial Park District
- Calumet Township
- Carol Stream Park District
- Chicago Heights Park District
- Chicago Park District
- City of Blue Island
- City of Calumet City
- City of Chicago
- City of Country Club Hills
- City of Palos Heights
- City of Wheaton
- Community Consolidated School District 89
- Cook County
- Cook County Housing Authority
- Country Club Hills Park District
- Dolton Park District
- Ford Heights Park District
- Forest Preserve District of Cook County
- Forest Preserve District of DuPage County
- Forest Preserve District of Kane County
- Forest Preserve District of Will County
- Frankfort Park District
- Geneva Park District
- Glen Ellyn Park District
- Hanover Park Park District
- Harold Colbert Jones C
- Harvey Park District
- Hazel Crest Park District
- Homewood-Flossmoor Park District
- Homewood-Flossmoor Park District
- Illinois Department of Natural Resources
- Lan-Oak Park District
- Lisle Park District
- Lombard Park District
- Markham Park District
- Medinah Park District
- Merrionette Park Baseball & Softball
- Metro Water Reclamation District
- Midlothian Park District
- Mokena Community Park District

- Naperville Park District
- National Park Service
- New Lenox Community Park District
- Northeastern Illinois University
- Oak Forest Park District
- Oak Lawn Park District
- Olympia Fields Park District
- Phoenix Park District
- Posen Park District
- Riverdale Park District
- Robbins Park District
- Roselle Park District
- Schaumburg Park District
- School District #128
- School District #143 1/2
- School District #158
- School District #54
- Sibley Riverside Improvement District
- St. Charles Park District
- Streamwood Park District
- Tinley Park-Park District
- Village of Alsip
- Village of Calumet Park
- Village of Crestwood
- Village of Dixmoor
- Village of East Hazel Crest
- Village of Glendale Heights
- Village of Glenwood
- Village of Hazel Crest
- Village of Lansing
- Village of Matteson
- Village of Merrionette Park
- Village of Monee
- Village of Olympia Fields
- Village of Orland Hills
- Village of Orland Park
- Village of Park Forest
- Village of Phoenix
- Village of Richton Park
- Village of Schaumburg
- Village of South Chicago Heights
- Village of South Holland
- Village of Thornton
- Village of University Park
- Village of Wayne
- Warrenville Park District
- West Chicago Park District
- Wheaton Park District
- Winfield Park District

These organizations were informed of the Proposed Action and the opportunity to provide comments via the Notice of Availability, which was electronically distributed to them on July 15, 2026.

As noted in Table C-2 of **Appendix C**, 52 public recreation areas and facilities in the three drone operating areas were developed using LWCF grant funds.

3.4.3 Environmental Consequences

3.4.3.1 No Action Alternative

Under the No Action Alternative, the FAA would not issue the approvals necessary to enable Prime Air to conduct commercial drone package delivery operations in the Chicago area. Accordingly, the No Action Alternative would not result in impacts on Section 4(f) properties.

3.4.3.2 Proposed Action

Under the Proposed Action, the FAA would approve Prime Air's OpSpec amendment so that it can introduce drone package delivery operations by using the MK30 drone across the intended Chicago operating areas. There would be no physical use of Section 4(f) resources because the Proposed Action has no direct interaction with any resources on the ground. Constructive use could occur when a project produces an effect, such as excessive noise, that would result in substantial impairment to a property

where the features of that property are substantially diminished. However, as discussed in **Section 3.6**, the Proposed Action would not result in a significant increase in noise levels at any location within the study area. As further described in **Section 3.8**, the short duration of en route flights would minimize any potential for significant visual impacts. Therefore, the FAA has determined that the Proposed Action would not cause substantial impairment, or direct or constructive use, as defined in **Section 3.4.1**, to any of the Section 4(f) resources in the study area. The Proposed Action would not convert property acquired or developed using LWCF grants for uses other than public outdoor recreation. Therefore, there would be no impacts related to the conversion of LWCF fund-assisted properties.

3.4.3.3 Reasonably Foreseeable Effects

The introduction of Prime Air's drone operations may occur in areas subject to other aviation activity, necessitating the evaluation of reasonably foreseeable effects on Section 4(f) resources when combined with other aviation operations. Prime Air's operations would have no physical use of Section 4(f) resources because the Proposed Action has no direct interaction with any resources on the ground away from the PADDs. Furthermore, as discussed in Section 3.6, the Proposed Action would not result in a significant increase in noise levels at any location within the operating areas and the short duration of en route flights would minimize any potential for significant visual impacts. In the future, other drone operations may be proposed to operate with this Proposed Action's operating areas. Should that occur, Prime Air understands the potential for impacts may increase due to the introduction of additional drone or other aviation activity and would work with operators and the FAA to mitigate potential impacts. The FAA would also conduct a new environmental analysis—including evaluating reasonably foreseeable effects on Section 4(f) resources—prior to the commencement of other drone operations in these areas.

3.5 Historical, Architectural, Archaeological, and Cultural Resources

3.5.1 Regulatory Setting

This section discusses historic, architectural, archaeological, and cultural resources within the study area. These resources reflect human culture and history in the physical environment, and may include structures, objects, and other important features in past human events. Cultural resources can also include characteristics of the physical environment such as natural features and biota that are important to traditional cultural practices and institutions.

The primary laws pertaining to the treatment of historic, architectural, archaeological, and cultural resources during environmental analyses are the *National Historic Preservation Act of 1966* (NHPA) (54 U.S.C. §§ 300101 *et seq.*), the *Archaeological Resources Protection Act* (16 U.S.C. §§ 470aa-470mm), and the *Native Graves Protection and Repatriation Act* (25 U.S.C. §§ 3001-3013).

Section 106 of the NHPA requires federal agencies with jurisdiction over a proposed federal action (referred to as an “undertaking” under the NHPA) to take into account the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). The term “historic properties” describes “any prehistoric

or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register” (36 CFR § 800.16(l)(1)).

As documented in the 1050.1 Desk Reference, the regulations implementing Section 106 require the FAA to consult with certain parties, such as the SHPO and the THPO of a Federally Recognized Indian Tribe pursuant to Section 1010(d)(2) of the NHPA. Consultation with THPO(s) occurs if an undertaking is occurring on tribal lands or if an undertaking’s Area of Potential Effects (APE) is located outside tribal lands but includes historic resources of religious and cultural significance to a tribe. The purpose of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The agency also must provide an opportunity for public involvement (36 CFR § 800.1(a)). Consultation with Federally Recognized Indian Tribes regarding issues related to Section 106 must recognize the government-to-government relationship between the Federal Government and Native American tribes as set forth in Executive Order (EO) 13175, “*Consultation and Coordination with Indian Tribal Governments*” and the Presidential Memorandum on Tribal Consultation, dated November 5, 2009.

Consultation under Section 106 is not required if the undertaking has no potential to affect historic properties. The regulations implementing Section 106 state: “If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations under section 106 of this part.” (36 CFR § 800.3(a)(1)).

As discussed in FAA Order 1050.1G, the FAA has not established a significance threshold for Historical, Architectural Archaeological, and Cultural Resources. Whether an action would result in a finding of adverse effects through the Section 106 process is a consideration when assessing the significance of an impact. However, a finding of an adverse effect does not necessarily mean an impact is significant; nor would it necessarily require the preparation of an Environmental Impact Statement. Should an adverse effect be determined to have occurred, the Section 106 process would be resolved through a Memorandum of Agreement or Programmatic Agreement to record resolution measures to mitigate or minimize adverse effects.

3.5.2 Affected Environment

Three APEs were established pursuant to 36 CFR § 800.4(a), each encompassing approximately 174 sq mi occurring within a 7.5-mi radius surrounding each PADCC. According to the documentation and geospatial data published by the National Park Service in the National Register database and the Federal Determination of Eligibility database,⁵⁴ and the documentation and geospatial data published by the State of Illinois’ in their Historic and Architectural Resources Geographic Information System (HARGIS), there are 13 historic districts with approximately 456 contributing features,⁵⁵ 32 individual historic properties, and no National Historic Landmarks, totaling approximately 488 historic properties that are

⁵⁴ The most recent versions of the National Register and Federal DOE databases were last updated on June 24, 2025 and are available at www.nps.gov/subjects/nationalregister/database-research.htm.

⁵⁵ The total number of contributing features is approximate because not all districts had documentation that enumerated the specific number of contributing features. Also, some districts did not have current documentation available to the public that could be referenced.

listed or have been determined eligible for listing in the National Register located in the APEs. Historic properties occurring within the APE are listed in **Tables D-1 through D-3 of Appendix D**.

3.5.2.1 Potentially Sensitive Historic Properties

Within 0.5 miles of a PADDC

The areas most likely to experience visual or auditory effects resulting from the undertaking are in close proximity to a PADDC. In these locations, drone operations would be concentrated due to the frequency of inbound and outbound flights. However, there are no known historic properties located within 0.5 mi of any of the PADDCs where potential visual or auditory effects would be concentrated.

Historical Significance Considerations

Historic properties with historical significance that could be affected by the undertaking include properties where a quiet or pre-industrial setting is essential to the integrity of the resource. These historic properties may include cemeteries, areas where outdoor religious practices may occur, properties associated with early settlement or habitation, or tribal cultural resources. Based on these criteria, there are approximately six known historic properties within the three APEs that are parks, religious institutions, cemeteries, or have significance that is partially based on a quiet or pre-industrial setting (**Table 3-3**).

**TABLE 3-3
POTENTIALLY SENSITIVE HISTORIC PROPERTIES WITHIN THE APEs**

Resource Name	Property Type	County	City	PADCC	Significance Classification	Sensitivity Profile
First Church of Lombard	Building	DuPage	Lombard	SIL3	Architecture	Significant for design
Lake Ellyn Park	District	DuPage	Glen Ellyn	SIL3	Entertainment/ Recreation	Park serving multiple civic uses;
McGovney-Yunker Farmstead	District	Will	Mokena	ORD5	Agriculture	Exemplifies farming from mid-19 th to early-20 th centuries
Oaklawn Farm	District	Kane	Wayne	SIL3	Agriculture; Architecture	Notable horse breeding farm; excellent example of French Chateau-style residence
Sacred Heart Mission Church	Building	Cook	Chicago	IGQ1	unknown / not available	Presumed significant for design
Trinity Episcopal Church	Building	DuPage	Wheaton	SIL3	Architecture	Significant for design

3.5.3 Environmental Consequences

3.5.3.1 No Action Alternative

Under the No Action Alternative, the FAA would not issue the approvals necessary to enable Prime Air to conduct commercial drone package delivery operations in the Chicago area. As such, there would be no impact on any historical, architectural, archaeological, or cultural resources.

3.5.3.2 Proposed Project

As outlined in 36 CFR § 800.5(a), an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the

National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. The undertaking does not include any actions that would physically alter a historic property in any way, nor would it change the use of a historic property or involve the transfer of property out of federal ownership. Any adverse effects that may result from the undertaking are limited to the potential introduction of visual, atmospheric, or audible elements that could diminish the integrity of the property's significant historic features. Because these historic properties include character-defining features or whose historic integrity is strongly associated with quiet, rural, pre-industrial, or otherwise natural settings, feeling, or associations, they would be considered sensitive to the noise or visual intrusions that could result from the operation of drones over, into, or in their general vicinity.

The noise modeling methodology and methods presented in **Section 3.6** are suitable for the evaluation of federal actions in compliance with NEPA and other applicable environmental regulations or federal review standards at the discretion and approval of the FAA. In particular, the analysis is intended to function as a nonstandard equivalent methodology under FAA Order 1050.1F, and therefore, required prior written consent from the FAA's Office of Environment and Energy for each project seeking a NEPA determination. The number of daily drone operations would be limited such that any historic or cultural resource would only be subject to a small number of overflights per day. Furthermore, the noise analysis presented in Section 3.6 concluded that noise levels would be below the FAA's threshold for significance, even in areas with the highest noise exposure, such as those within 0.5 mi of a PADDC.

The FAA has not developed a visual effects significance threshold; however, factors the 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. The Proposed Undertaking makes no changes to any landforms or land uses, and visual effects would be short-term in nature; thus, there would be no effect to the visual character of the area. Excluding ground-based activities supporting the drones, operations would be occurring in airspace only. The FAA estimates that, at typical operating altitude and speeds, the drone would be observable for approximately 3.6 seconds during en route flight by an observer on the ground.

As noted above, there are six known historic properties that could be categorized as having historical significance that could be diminished by introductions of new visual, atmospheric, or audible elements. None of these seven historic properties are located within 0.5 miles of a PADDC where the project effects would be most pronounced. The number of instances of auditory or visual effects would diminish exponentially with the distance of each property from the PADDC center. Therefore, the project effects would be intermittent. These historic properties include 1 park which is located within a previously developed, largely suburban environment. It is significant for its design. None of these associations would be altered by the project. There are 3 religious institutions, all of which are (or are presumed to be) historically significant for their architectural design.⁵⁶ No aspect of the project would alter their appearance and therefore would not affect the historical significance of these religious properties. The

⁵⁶ The National Register generally does not allow religious institutions to be considered significant solely because of their religious affiliations. To address this, there is specific guidance, Criteria Consideration A, that is applied to religious properties to assess their eligibility for listing in the National Register. Most religious properties, such as individual churches, are significant for their architectural design and it for this reason their significance is presumed to follow this trend.

remaining 2 historic properties are agricultural in nature or are resources that are not parks but are located within parks. The Mc Govney-Yunker Farmstead is exemplary as a farming complex from the mid-19th and early-20th centuries. Oaklawn Farm is historically significant for its horse breeding program and for the architecture of its main residential building. None of these areas of significance are particularly sensitive to the additional noise or visual effects associated with the project. While a rural setting is important to communicate their historically significant uses and associations, all are currently subject to typical auditory and visual disruptions associated with vehicular or overhead flight traffic.

Based on the historical significance associations of the properties, anticipated noise levels, distance of historic properties from the most heavily trafficked areas near the PADDs, and the brief duration of any potential visual, atmospheric, or auditory intrusions, the FAA concluded a finding of *no adverse effects* to historic properties for this undertaking.

The FAA initiated consultation with the IL SHPO on April 23, 2026, and with the Certified Local Governments (CLG) on April 27, 2026, seeking concurrence with the FAA's definition of the APEs and its finding of *no adverse effects*.

Copies of the SHPO and CLG consultations are included in **Appendix D-1**.

The FAA also consulted with Tribal Governments, on March 5, 2026 (via email and regular mail), that may potentially attach religious or cultural significance to resources in the APEs, which include the following:

- Absentee Shawnee Tribe
- Delaware Nation
- Delaware Tribe of Indians
- Ho Chunk Nation of Wisconsin
- Match-E-Be-Nash-She-Wish Band of Pottawatomis Indians
- Nottawaseppi Huron Band of the Potawatomi
- Pokagon Band of Potawatomi Indians
- Ponca Tribe of Indians of Oklahoma
- Prairie Band Potawatomi Nation
- The Miami Tribe of Oklahoma

Copies of representative correspondence with potentially interested Tribal Governments and all specific replies are included in **Appendix D-2**.

3.5.3.3 Reasonably Foreseeable Effects

The introduction of Prime Air's drone operations may occur in areas subject to other aviation activity, necessitating the evaluation of reasonably foreseeable effects on historical, architectural, archaeological, and cultural resources when combined with other aviation operations. Prime Air's drone operations would have limited non-physical, temporary impacts on historic properties such as the introduction of audible

and/or visual elements. Furthermore, as described in Section 3.6, a noise analysis concluded that noise levels would be below the FAA’s threshold for significance, even in areas with the highest noise exposure. SHPO offices within Prime Air’s proposed areas of operations also concurred with the FAA’s determination, the Proposed Action, would have no adverse effects. In the future, other drone operations may be proposed to operate with this Proposed Action’s operating areas. Should that occur, Prime Air understands the potential for impacts may increase due to the introduction of additional drone or other aviation activity and would work with operators and the FAA to mitigate potential impacts. The FAA would also conduct a new environmental analysis—including evaluating reasonably foreseeable effects on historical, architectural, archaeological, and cultural resources and consultation with SHPOs and tribal governments, as appropriate—prior to the commencement of other drone operations in these areas.

3.6 Noise and Noise-Compatible Land Use

3.6.1 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) have directed the FAA to regulate aircraft noise. Through 14 CFR Part 36, the FAA regulates noise from aircraft. To ensure that noise would not cause a significant impact to any residential land use or noise sensitive resource within the operating area, the FAA initiated an analysis of the potential noise exposure in the area that could result from implementation of the Proposed Action.

FAA Order 1050.1G, Appendix C, requires the FAA to identify the location and number of noise sensitive areas that could be significantly impacted by noise. As defined in the FAA Order 1050.1 Desk Reference, 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 mid-range frequencies and reduced sensitivity for lower and highest frequencies. Unless otherwise noted, all sound levels discussed in this document should be understood to be A-weighted.

To comply with NEPA requirements, the FAA has issued requirements for assessing aircraft noise in Appendix C of FAA Order 1050.1G. The 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 p.m. to 7 a.m. A significant noise impact is defined in Appendix C of FAA Order 1050.1G as an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure or a noise exposure at or above the 65 dB level due to a DNL 1.5 dB or greater increase at a noise sensitive receiver (e.g., residential).

3.6.2 Affected Environment

As shown in **Figure 2-5**, the operating areas cover approximately 525 sq mi, and the estimated total population is roughly 1,466,000. Each PADDC operating area covers approximately 174 sq mi with the IGQ1 operating area including an estimated population of approximately 596,000 with a population density of approximately 3,400 people per sq mi; the ORD5 operating area including an estimated population of approximately 388,000 with a population density of approximately 2,200 people per sq mi, and the SIL3 operating area including an estimated population of approximately 482,000 with a population density of 2,800 people per sq mi. Among these potentially affected populations, there is an estimated population of approximately 217,000 within the overlap between the IGQ1 and ORD5 operating areas which would potentially experience effects of drone operations from both PADDCs.⁵⁷ There are four airports and 12 heliports located in the drone's proposed areas of operations, as listed in **Table 3-4**.⁵⁸

TABLE 3-4
AIRPORTS AND HELIPORTS WITHIN EACH DRONE OPERATING AREA

FAA Identifier	Name	Facility Type	PADDC Operations Area(s)	Airspace Classification
IS81	Alsip Fire Department	Heliport	IGQ1	-
TF8	Tinley Park Heliport	Heliport	IGQ1, ORD5	-
9IS4	Franciscan St James Health - Chicago Heights	Heliport	IGQ1, ORD5	-
IL92	Ingalls Memorial Hospital	Heliport	IGQ1	-
IS17	Harvey Police Department	Heliport	IGQ1	-
8IL8	South Suburban Hospital	Heliport	IGQ1, ORD5	-
IS30	Franciscan St James Health - Olympia Fields	Heliport	IGQ1, ORD5	-
2IL9	Meadow Creek	Airport	ORD5	G
ORD	Chicago O'Hare International Airport	Airport	SIL3	B
IS12	Urso	Heliport	SIL3	-
IS09	Adventist Glenoaks Medical Center	Heliport	SIL3	-
LL95	Clarke	Heliport	SIL3	-
72IL	Cornerstone	Heliport	SIL3	-
IS39	Central DuPage Hospital	Heliport	SIL3	-
DPA	DuPage	Airport	SIL3	D
06C	Schaumburg Regional	Airport	SIL3	G

Source: ESRI, 2023.

⁵⁷ U.S. Census Bureau, "Total Population," American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B01003, accessed on February 13, 2026, [https://data.census.gov/table/ACSDT5Y2024.B01003?g=050XX00US17031\\$1500000,17043\\$1500000,17089\\$1500000,17197\\$1500000&tp=true](https://data.census.gov/table/ACSDT5Y2024.B01003?g=050XX00US17031$1500000,17043$1500000,17089$1500000,17197$1500000&tp=true).

⁵⁸ It is necessary to evaluate the total noise exposure in areas subject to other aviation noise sources.

3.6.3 Environmental Consequences

3.6.3.1 No Action Alternative

Under the No Action Alternative, the FAA would not issue the approvals necessary to enable Prime Air to conduct commercial drone package delivery operations in the Chicago area. As such, no impacts to noise and noise-compatible land use would occur.

3.6.3.2 Proposed Action

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 acoustic frequency content (pitch).⁵⁹ Drone noise generally has high-frequency acoustic content, which can often be more discernable from other typical noise sources.

To ensure that noise would not cause a significant impact to any noise sensitive area within the operating area, the FAA initiated an analysis of the potential noise exposure in the area that could result from implementation of the Proposed Action. Except for the actual PADDC property, the rural, commercial, and residential properties that are adjacent to the PADDC location are likely to experience the highest noise levels as a result of the Proposed Action. This is due to noise from drone departures from and arrivals to the PADDC, as well as more concentrated en route noise from the drones transiting to and from the PADDC.

Noise Exposure

Utilizing the operational projections defined in **Chapters 1 and 2**, the noise analysis methodology detailed in **Appendix E** was used to estimate DNL levels for the proposed Chicago area operations. Noise levels were calculated for each flight phase and are presented in the following three sub-sections:

- Noise Exposure for PADDC Operations
- Noise Exposure for En Route Operations
- Noise Exposure for Delivery Operations

Noise Exposure for PADDC Operations

Based on the anticipated average daily maximum of 1,000 deliveries provided by Prime Air for each PADDC, with 100 of the 1,000 daily deliveries (10%) occurring during the period from 6 a.m. to 7 a.m. and 10 p.m. to 10:30 p.m., the extent of noise exposure associated with PADDC operations is shown in **Figures 3-1 through 3-3**. This region was determined based on a review of the layout of the PADDC locations and using the noise level information presented in **Table 6** of the Noise Technical Report in **Appendix E**. The noise analysis includes a 10 dB penalty which is applied to the 100 operations that are anticipated to occur during the nighttime period from 10 p.m. to 7 a.m. and is equivalent to 1 nighttime operation being counted as 10 daytime operations. These 100 night-time delivery operations would be equivalent to 1,000 daytime deliveries and, when combined with the daytime operations, would be equivalent to a combined total of 1,900 daytime equivalent delivery operations. **Table 3-5** provides the

⁵⁹ Federal Aviation Administration, Fundamentals of Noise and Sound. Available: https://www.faa.gov/noise/aviation_noise/fundamentals_of_noise, accessed April 30, 2024.

extent of noise exposure for PADDC operations, in feet from the boundary of the PADCC, for the DNL 65 dB and lower noise levels. Note that the data presented in **Table 3-5** only includes noise exposure associated with PADDC operations.

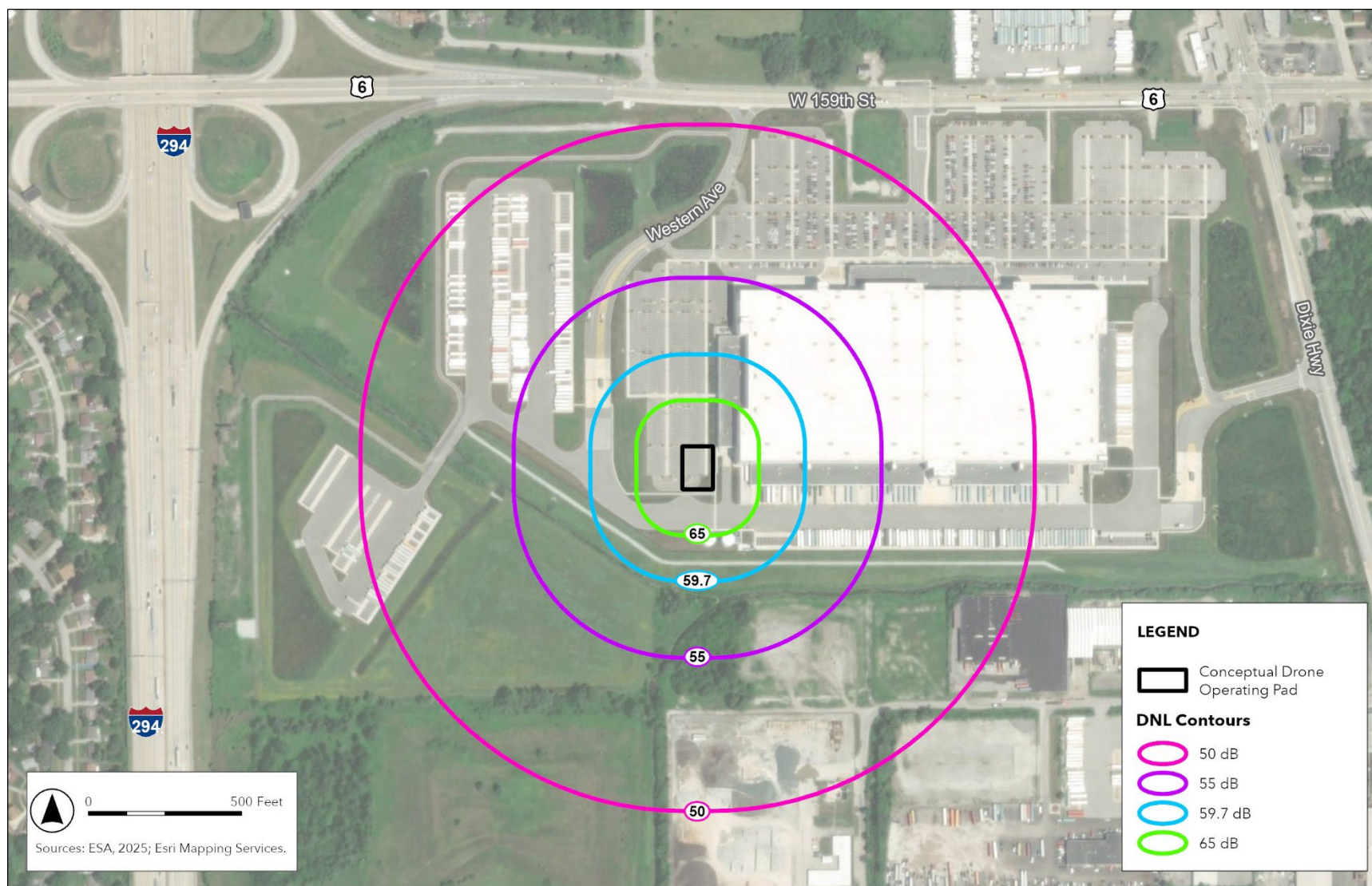
TABLE 3-5
ESTIMATED EXTENT OF NOISE EXPOSURE FROM EACH PADDC

Annual Average Daily DNL Equivalent Deliveries	Annual DNL Equivalent Deliveries	DNL 50 dB	DNL 55 dB	DNL 59.7 dB	DNL 60 dB	DNL 65 dB
≤1,900	≤693,500	1,050 feet	550 feet	300 feet	300 feet	150 feet

Source: ESA, 2025.

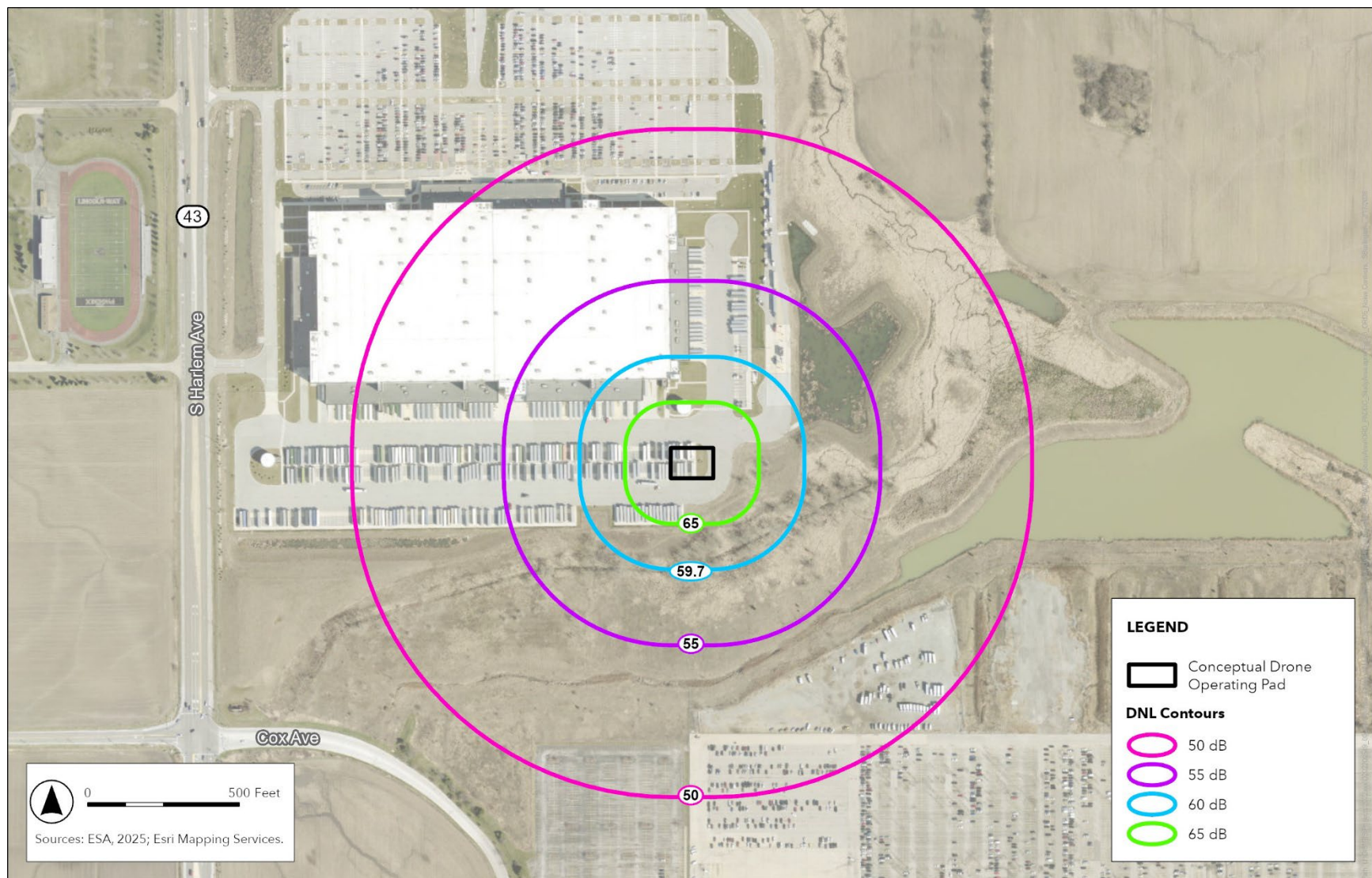
Noise Exposure for En Route Operations

As described in the Noise Technical Report in **Appendix E**, the drone is expected to typically fly the same outbound flight path between PADDCs and delivery points and inbound flight path back to the PADDCs. While the total average daily deliveries from each PADCC is 1,000, the number of overflights in a day will be dispersed because PADCCs are centrally located in each proposed operating area and delivery locations would be distributed throughout the proposed operating areas. A conservative estimate for the maximum number of overflights over any one location would be half, or 500 daily delivery overflights. To account for operations from PADCCs during the period from 6 a.m. to 7 a.m. and from 10 p.m. to 10:30 p.m., it is assumed that approximately 50 of the 500 daily delivery overflights (10%) would occur during these periods. These 50 night-time delivery overflight operations would be equivalent to 500 daytime deliveries. When combined with the daytime delivery overflight operations, this would be representative of a combined total of 950 daytime equivalent delivery overflight operations. Since each delivery involves both an outbound and inbound flight path, this equates to 1,900 daily overflights. It was conservatively assumed that when two or more MK30 drone operating areas overlap, overflights associated with an additional 950 daytime equivalent deliveries would be estimated, per operating area overlap. The en route noise exposure can be determined by referencing **Tables 7 and 8** of the Noise Technical Report in **Appendix E**. This analysis shows that en route noise levels could reach DNL 46.0 dB in any location within the operating area. For areas with two overlapping operating areas, the estimated en route noise levels could reach 48.9 dB, respectively.



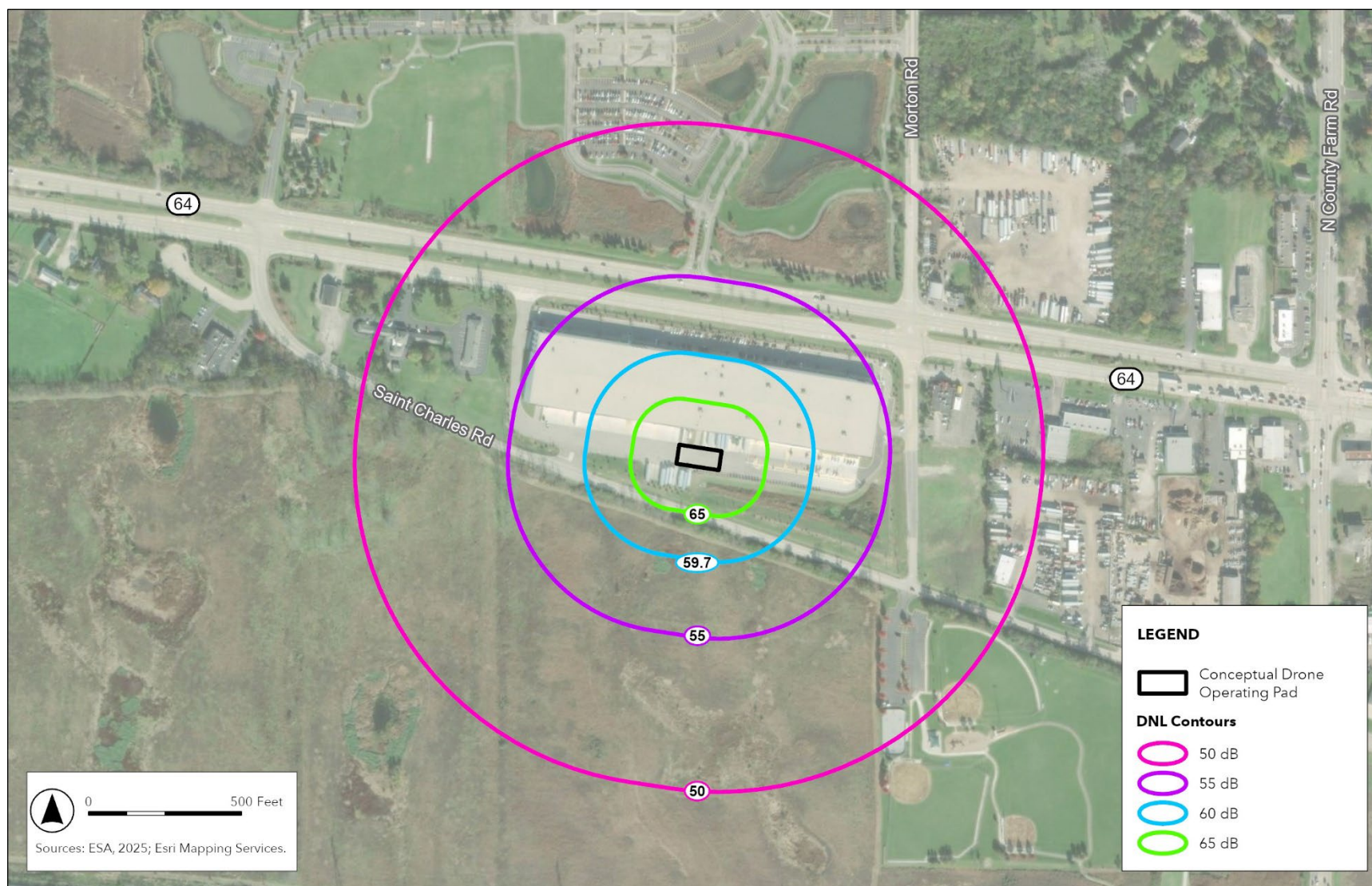
Source: ESA, 2025; Esri Mapping Services.

Figure 3-1
Noise Exposure Contours – IGQ1 PADDC



Source: ESA, 2025; Esri Mapping Services.

Figure 3-2
Noise Exposure Contours – ORD5 PADDC



Source: ESA, 2025; Esri Mapping Services.

Figure 3-3
Noise Exposure Contours – SIL3 PADDC

Noise Exposure for Delivery Operations

Due to the inherent uncertainty of the exact delivery site locations, the noise analysis developed a minimum and maximum representative average annual daily distribution of deliveries that could occur at a single delivery location in each operating area. The distribution of average annual daily deliveries ranges from one to four deliveries per operating day and conservatively assumes that at least one delivery will occur during the nighttime period between 6 A.M. and 7 A.M. and 10 P.M. and 10:30 P.M. This nighttime delivery is equivalent to 10 daytime deliveries, and when combined with daytime deliveries, is equivalent to a total combined maximum of 13 equivalent daytime delivery operations. The noise exposure for delivery operations includes outbound and inbound en route overflights at the typical operating altitude range of 205 and 370 ft AGL for operations associated with deliveries to other locations. The outbound en route altitude is expected to be flown between 205 and 250 ft AGL. The inbound en route altitude is expected to be flown between 325 and 37 ft AGL back to the PADDC.

A conservative estimate of delivery noise exposure can then be determined by referencing **Table 9** of the Noise Technical Report in **Appendix E**. The estimated delivery DNL includes values at the minimum and maximum distribution of DNL equivalent deliveries at various distances from the delivery point. They include the minimum listener distance from the delivery point at 16.4 ft, which is representative of the closest distance a person may approach before the drone takes automated actions to safely cancel the delivery. This is in addition to the minimum measured distance from the drone for which noise measurement data was available for a delivery, which is 25 ft. Values were also calculated at distances of 50 ft, 75 ft, 100 ft, and 125 ft from the delivery point, and are representative of distances from which nearby properties may experience noise from a delivery based on the average lot size for sold homes as reported in the 2022 US Census.⁶⁰ The noise exposure for any one delivery point (with en route noise as mentioned above) is provided in **Table 3-6**.

TABLE 3-6
DNL FOR DELIVERY LOCATIONS BASED ON MAXIMUM DELIVERIES PER LOCATION

APE Overlaps	Average Daily DNL Equivalent Deliveries	Annual DNL Equivalent Deliveries	Estimated Delivery DNL at 16.4 Feet¹	Estimated Delivery DNL at 25 Feet²	Estimated Delivery DNL at 50 Feet	Estimated Delivery DNL at 75 Feet	Estimated Delivery DNL at 100 Feet	Estimated Delivery DNL at 125 Feet
0 ³	≤15	≤ 5,475	57.2	55.1	51.8	50.2	48.9	48.1
1 ⁴	≤15	≤ 5,475	57.5	55.6	52.8	51.6	50.7	50.1

Notes:

1. Minimum possible listener distance from drone.
2. Minimum measured listener distance.
3. Assumes conservative estimate of overflights associated with 500 deliveries or 937 overflights (with nighttime equivalent operations), over any one delivery location as mentioned above. DNL values are calculated from the logarithmic summation of the DNL values presented in Table 9 for deliveries with the en route noise level of DNL 45.9 dB derived from Tables 7 and 8 in the Noise Technical Report in Appendix E.
4. Assumes conservative estimate of overflights associated with the overlap of two operating areas with 1,000 deliveries or 1,887 overflights (with nighttime equivalent operations), over any one delivery location as mentioned above. DNL values are calculated from the logarithmic summation of the DNL values presented in Table 9 for deliveries with the en route noise level of DNL 48.9 dB derived from Tables 7 and 8 in the Noise Technical Report in Appendix E.

Source: ESA, 2025.

⁶⁰ The 2022 US Census national average lot size for single-family sold homes was 15,265 sq ft. This is representative of a property with dimensions of a 123.55 x 123.55-ft square. 125 ft represents a 125-ft lateral width of the parcel rounded up to the nearest 25 ft. Available: https://www.census.gov/construction/chars/xls/soldlotsize_cust.xls, accessed January 18, 2024.

Table 3-6 shows that, with the maximum number of average annual daily deliveries at a single location, including overflights, noise levels for the estimated number of deliveries will not exceed the FAA’s significance threshold for noise of DNL 65 dB in any of the areas where Prime Air anticipates conducting deliveries.

Total Noise Exposure Results

The maximum noise exposure levels within the operating area would occur at the PADDC site where noise levels at or above DNL 50 dB would extend approximately 1,050 ft from each PADDC. Noise levels at or above DNL 65 dB would extend approximately 150 ft from the PADDC. No residential or other noise sensitive receivers would be exposed to noise levels greater than DNL 55 dB associated with PADCC operations. Additionally, the estimated noise exposure for en route operations could reach up to DNL 46 dB at any location within the operating area for a single PADCC operating area, and when two PADDC operating areas overlap, the estimated en route noise could reach up to DNL 48.9 dB, respectively. Lastly, the resulting noise exposure at any residential-zoned property line from deliveries would not be expected to exceed DNL 50.1 dB, even in instances where there is overlap between two PADCC operating areas.

As explained in **Section 3.6.1** above, the FAA has an established noise significance threshold, defined in FAA Order 1050.1G, which is used when assessing noise impacts in a particular operating area. A significant noise impact is defined as an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure or a noise exposure at or above the 65 dB level due to a DNL 1.5 dB or greater increase. Based on the results of the noise analysis performed for this EA, noise impacts from operations are not expected to result in a significant impact. Noise generated by the operations is also not expected to be incompatible with noise sensitive resources within each operating area.

3.6.3.3 Reasonably Foreseeable Effects

Per FAA Order 1050.1G, Appendix C,⁶¹ if any “airspace or procedure actions” are introduced, these actions must be assessed to determine if any of the following increases result from the action:

- For DNL 65 dB and higher: ± 1.5 dB
- For DNL 60 dB and higher: ± 3 dB⁶²
- For DNL 45 dB to < 60 dB: ± 5 dB⁶³

FAA Order 1050.1G defines a “significant impact” as an action that results in ± 1.5 dB change within the DNL 65 noise exposure contour over a noise-sensitive land use. A “reportable” change is a ± 3 dB-change within the DNL 60 or a ± 5 dB-change within the DNL 45.

Because drone operations would occur in areas subject to other aviation noise sources, it is necessary to evaluate the reasonably foreseeable noise exposure that would result from introducing the other aviation noise sources present. Examples of such scenarios are drone operations occurring in the vicinity of Prime Air’s operating areas with increased aviation activity (e.g., where other commercial drone operators may

⁶¹ https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1050.1G.pdf.

⁶² The FAA considers these increases to be “reportable” but not a significant impact.

⁶³ The FAA considers these increases to be “reportable” but not a significant impact.

operate or operations close to airports). Aircraft-related noise sources are most likely to be the dominant contributors to noise exposure near airports. By comparison, other sources of noise would not appreciably contribute to overall noise levels at these locations.

As discussed in **Section 3.6.2**, there are four airports and 12 heliports located in the MK30 drone’s three proposed areas of operations. Of which, the Class B surface area of the Chicago O’Hare International Airport (ORD) and the Dupage Airport (DPA) class D surface area overlap with a portion of the SIL3 PADCC’s proposed area of operations. For areas where the drone operating area does not overlap with Class B or D airspace, there would be little potential for the reasonably foreseeable effect of traditional aircraft noise combined with drone noise. The conservative estimate of DNL 54.1 dB represents the threshold at which a reportable change of 5 dB would occur, as defined by FAA requirements for areas where DNL falls between 45 dB and less than 60 dB. While this increase may be perceptible, it is unlikely to result in significant adverse land use impacts, as shown in **Table 3-7**.

TABLE 3-7
REASONABLY FORESEEABLE NOISE EXPOSURE

Noise Source	Description	DNL (dB)	Energy $10^{(DNL/10)}$	Combined Noise Sources in DNL (dB)
1	Proposed Action ¹	57.5	562,341.3	-
2	Airports within Study Area	54.1	257,039.6	-
1+2	Proposed Action + Airports	-	819,380.9	59.1
Delta	Reasonably Foreseeable Change in Noise Exposure	-	-	5.0

Notes:

1. Proposed Action DNL based off exposure at delivery site location with two overlapping PADCC operating areas to assume conservative estimates.

Source: ESA, 2025.

Additionally, Prime Air’s flight route planning software would take into account air traffic to avoid dense airspace restrictions, such as airport runways and heliports. This would help avoid potential noise-related reasonably foreseeable effects on the air traffic near controlled surfaces. There are no other known Part 135 commercial drone package delivery operators conducting operations in proximity to Prime Air’s proposed MK30 drone operations areas or the PADCCs, which are located in areas zoned for commercial activities. As such, the addition of Prime Air’s commercial delivery service is not expected to result in reasonably foreseeable effects on other potential Part 135 commercial drone operations. Any future Part 135 operators would be required to work with the FAA to complete an environmental review before beginning operations, ensuring that any potential reasonably foreseeable effects are properly analyzed and disclosed, and the appropriate siting of potential drone operating facilities would be considered to avoid a significant impact on the environment.

In the future, other drone operators may propose locating operations within this Proposed Action’s operating areas. Should that occur, Prime Air understands the potential for impacts may increase due to another operator’s activities and would work with that operator and the FAA to mitigate potential impacts. Additionally, the FAA would conduct a new environmental analysis—including noise and reasonably foreseeable impacts—prior to another operator beginning drone package delivery operations

in these areas. Areas of existing aviation noise sources within the operating areas would be avoided; thus, the Proposed Action would not contribute to significant reasonably foreseeable noise impacts.

3.7 Visual Effects (Visual Resources and Visual Character)

3.7.1 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 operating 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 drone in flight—which could be out of character with the suburban or natural landscapes.

The FAA has not developed a visual effects significance threshold. Factors the 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 operating area; or (3) block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

3.7.2 Affected Environment

The Proposed Action would take place over a combination of suburban and urban properties. As noted in **Section 3.4**, there are many public parks that could be valued for aesthetic attributes within the operating areas. Prime Air’s proposal is to avoid overflights of large open-air gatherings of people during the scope of the Proposed Action, which includes many public parks and other public properties that may be covered under Section 4(f) (which are identified in **Appendix C**).

3.7.3 Environmental Consequences

3.7.3.1 No Action Alternative

Under the No Action Alternative, the FAA would not issue the approvals necessary to enable Prime Air to conduct drone commercial drone package delivery operations in the Chicago area. As such, there would be no visual impacts associated with the No Action Alternative.

3.7.3.2 Proposed Action

The Proposed Action makes no changes to any landforms or land uses, and visual effects would be short-term in nature; thus, there would be no effect to the visual character of the area. Excluding ground-based activities supporting the drones, operations would be occurring in airspace only. The FAA estimates that at typical operating altitude and speeds the drone en route would be observable for approximately 3.6 seconds by an observer on the ground. The Proposed Action involves airspace operations that are unlikely to result in visual impacts anywhere in the operating areas, including Section 4(f) properties. The short duration that each drone flight could likely be seen from most of the resources in the operating area—approximately 3.6 seconds while the drone is traveling en route at 52.4 knots (approximately 60 mph)—and the distribution of flights throughout each 174-sq mi operating area, would minimize any potential for

significant visual impacts at any location in the operating areas. Therefore, the Proposed Action would not result in significant visual impacts.

3.7.3.3 Reasonably Foreseeable Effects

The introduction of Prime Air's drone operations may occur in areas subject to other aviation activity, necessitating the evaluation of reasonably foreseeable effects on visual impacts when combined with other aviation operations. Prime Air's drone operations make no changes to any landforms or land uses, and visual effects would be short-term in nature; thus, there would be no effect on the visual character of the area. Furthermore, the distribution of flights throughout each proposed operating area would minimize any potential for significant visual impacts at any location and any visual effects are expected to be similar to existing air traffic in the vicinity of the operating areas and not be significant. In the future, other drone operations or aviation activity may be proposed to operate with this Proposed Action's operating areas. Should that occur, Prime Air understands the potential for visual impacts may increase due to the introduction of additional drone or other aviation activity and would work with operators and the FAA to mitigate potential impacts. The FAA would also conduct a new environmental analysis—including evaluating reasonably foreseeable effects on visual impacts—prior to the commencement of other drone operations in these areas.

CHAPTER 4

List of Preparers and Agencies Consulted

4.1 Preparers

Name and Affiliation	Years of Industry Experience	EA Responsibility
FAA Evaluators		
Christopher Hurst REM, CEA, CESCO, FAA AFS (Office of Safety Standards, Flight Standards Service) General Aviation Operations	20	Environmental Protection Specialist, Document Review
Christopher Couture, FAA AQS (Aviation Safety, Quality, Integration, and Executive Services)	17	Environmental Protection Specialist, Document Review
Jodi Jones, FAA AQS (Aviation Safety, Quality, Integration, and Executive Services)	15	Environmental Analyst, Document Review
Susumu Shirayama, FAA AEE (Office of Environment and Energy, Noise Division [AEE-100])	22	Environmental Protection Specialist, Noise Analysis and Document Review
Christopher Hobbs, FAA AEE (Office of Environment and Energy, Noise Division [AEE-100])	27	Environmental Protection Specialist, Noise Analysis and Document Review
Preparers		
Mike Arnold/ESA	34	QA/QC review
Sean Burlingame/ESA	17	NEPA documentation
Patricia Davis/ESA	4	NEPA documentation
Patrick Hickman/ESA	14	NEPA documentation
Sarah McAbee/ESA	16	NEPA documentation
Chris Nottoli/ESA	10	Noise modeling
Ted Reese/ESA	21	NEPA documentation
Susan Shaw/ESA	23	NEPA documentation
Neal Wolfe/ESA	23	Project Manager, NEPA documentation

4.2 Agencies Consulted

List of Agencies Consulted

U.S. Fish and Wildlife Service, Illinois-Iowa Ecological Services Field Office

Illinois State Historic Preservation Office

Absentee Shawnee Tribe

Delaware Nation

Delaware Tribe of Indians

Ho Chunk Nation of Wisconsin

Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians

Nottawaseppi Huron Band of the Potawatomi

Pokagon Band of Potawatomi Indians

Ponca Tribe of Indians of Oklahoma

Prairie Band Potawatomi Nation

The Miami Tribe of Oklahoma

DECLARATION RELATED TO PAGE LIMITS: The FAA has considered the factors mandated by NEPA and the EA represents the FAA’s good-faith effort to prioritize documentation of the most important considerations required by the statute within the congressionally mandated page limits. This prioritization reflects the FAA’s expert judgment, and any considerations addressed briefly or left unaddressed were, in the FAA’s judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision on how to proceed.

DECLARATION RELATED TO DEADLINE: The EA represents the FAA’s good-faith effort to fulfill NEPA’s requirements within the Congressional timeline and is substantially complete. In the FAA’s expert opinion, the FAA has thoroughly considered the factors mandated by NEPA. In the FAA’s judgment, the analysis contained herein is adequate to inform and reasonably explain the FAA’s final decision regarding the proposed federal action.