
Appendix E – Biological Resources

TECHNICAL MEMORANDUM
BIOLOGICAL EVALUATION



SHORT FORM ENVIRONMENTAL ASSESSMENT FOR
NORTH HANGAR AREA TAXILANE

WEST MICHIGAN REGIONAL AIRPORT (BIV)
HOLLAND, MI

PROJECT NUMBER 0819900-211654.02

February 2023

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1. Introduction

This technical memorandum documents the desktop review and biological reconnaissance survey conducted on the West Michigan Regional Airport (BIV or Airport) in Allegan County, Michigan.

West Michigan Regional Airport is a public use general aviation airport serving the Allegan and Ottawa Counties region of Michigan. Owned and operated by the West Michigan Airport Authority (WMAA)¹, the Federal Aviation Administration (FAA) classifies BIV as a general aviation airport in the National Plan of Integrated Airport Systems (NPIAS). BIV is defined as a Tier I airport, the highest classification, within the 2017 Michigan Aviation System Plan (MASP), further demonstrating the importance of the Airport to the aviation transportation system within the state of Michigan.

BIV is within the city limits of Holland, Michigan in Allegan County, which is located in southwest Michigan along the eastern shore of Lake Michigan, approximately 68 miles north of the Michigan-Indiana border. Interstate 196 (I-196), which links Benton Harbor, South Haven, Holland, and Grand Rapids, is located just south of the southern boundary of the Airport.

Communities neighboring the City of Holland are the City of Zeeland, the community of Beechwood, Fillmore and Laketown Townships in Allegan County, and Park and Holland Charter Townships in Ottawa County. The Airport is approximately 432 acres in size and sits to the east of the convergence of I-196 and U.S. Route 31/Business Loop I-196. Other surrounding roads are Washington Avenue on the western side of the Airport, Lincoln Avenue on the eastern side, 48th Street to the north, and 64th Street to the south. The Airport and Project Area of Interest (AOI) are shown on the Project Location Map provided in Appendix A.

The Airport has one runway, Runway 8/26, which measures 6,002 feet in length and 100 feet in width. A full parallel taxiway (50 feet wide) intersecting five connector taxiways is located north of Runway 8/26 with a holding pad at the approach end of Runway 26.

The purpose of this evaluation is to determine if the proposed action may affect species or habitat protected under Section 7 of the Endangered Species Act (ESA) or under Part 365 of the Michigan Natural Resources and Environmental Protection Act (1994, as amended) (NREPA). The project is receiving funding from the Federal Aviation Administration (FAA), which provides the federal nexus for the project.

¹ The WMAA is comprised of representatives from the City of Holland, Park Township, and the City of Zeeland.

2. Project Setting

2.1 Airport History

The airport began operations in 1942 when Gradus Geurink, a Holland aviator, created a small grass runway for private planes amidst a north Allegan County cornfield. The runway was first paved in 1962, with much of the airport's growth coming during the remainder of the 1960s and into the 1970s. The airport was privately owned until 1986, when the City of Holland acquired the airport, known at the time as Tulip City Airport and at that point it became a public airport. The City of Holland owned the airport until 2008, when the West Michigan Airport Authority (WMAA), a regional collaboration of the City of Holland, City of Zeeland, and Park Township, took ownership.

The Airport currently has one runway, Runway 8/26 and a full parallel taxiway with a holding pad at the approach end of Runway 26. Private hangars, a terminal/fixed base operator (FBO) building, maintenance facilities, and tiedown space on approximately 520,500 square feet of aircraft parking area are available for users of the airport. The FBO building and associated automobile parking were constructed in 2016 at the east end of Geurink Blvd on the north side of the airport. At that time, a drainage ditch that formerly ran parallel to Geurink Blvd was re-aligned to flow northward before heading east off Airport property.

2.2 Proposed Action

The project area covers approximately 17.1 acres and is located north of the FBO building and parking area within Section 8, Township 4N, Range 15W. It is located on the US Geological Survey (USGS) 7.5-minute quadrangle Hamilton West (latitude: 42° 44'47.26"N/longitude: 86° 6'31.03"W).

North of the existing terminal building at BIV is a 15-acre area that currently is not served by aviation infrastructure. The proposed action being evaluated in this technical memorandum includes the development of necessary infrastructure to provide access to this area. Major future development items include:

- Construction of 50-foot wide taxilane approximately 1,400 feet in length
- Construction of box hangars and associated apron areas
- Associated construction grading, lighting, fencing, utilities, and site restoration
- Reconstruction of an existing storm water detention basin
- Relocation of approximately 1,300 feet of an existing storm water drainage ditch

Construction staging areas and haul routes will be on existing roads and disturbed lands.

BIV will sufficiently develop the project area to allow private and corporate hangar development in the future with minimum additional site improvements. Future hangars, aprons, and apron approach work will be funded privately by individual developers as demand increases. Appendix B contains a map of the Preferred Project Alternative.

2.3 Action Area

The Action Area is defined in the Code of Federal Regulations (Part 402.02) as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” The Action Area has been identified for evaluation of potential impacts to a terrestrial zone associated with the construction and development of a 15-acre parcel. The primary driver of the terrestrial zone of effect is new impervious surfaces on agricultural land. The project area is located within a developed area and proposed actions will require the use of heavy machinery. The Action Area may experience increased noise and human presence during construction that may cause disturbance while being located within a relatively noisy airport environment.

The Action Area also includes potential impacts associated with the relocation of a section of previously relocated drainage ditch and construction of an extension of a stormwater detention basin to accommodate additional runoff from impervious surfaces. The storm water drainage ditch was relocated initially in 2016 in association with the construction of the FBO building and adjacent parking area. The current project proposes to enclose and relocate the drainage conveyance under the proposed taxilane, daylighting into the existing ditch east of the taxilane.

3. Regulatory Background

3.1 Endangered Species Act

Section 7(a)(1) of the Endangered Species Act of 1973 (ESA) requires all Federal agencies to use their authorities to conserve endangered and threatened species in consultation with U.S. Fish and Wildlife Service (USFWS).

Under the Section 7(a)(2) implementing regulations (50 CFR Part 402), Federal agencies must review their actions to determine whether they may affect endangered or threatened species or critical habitat. To accomplish this, Federal agencies must determine whether any listed species may be present in the action area and whether that area overlaps with critical habitat.

If one or more listed species may be present in the action area – or if critical habitat overlaps with the action area – agencies must evaluate the potential effects of their action. If no species or their critical habitat are present or affected, no consultation is required.

3.2 Natural Resources and Environmental Protection Act

Under Part 365 of the Michigan Natural Resources and Environmental Protection Act (1994, as amended) (NREPA), threatened and endangered species are protected from being taken or harmed during project activities. An environmental review must be completed for the project area to identify whether any threatened and endangered species may be affected by project actions. Permits may be required by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for project activities.

4. Biological Evaluation Methods

The potential impacts of the proposed project on federally listed fish, wildlife, and plants were assessed in accordance with the ESA of 1973, Fish and Wildlife Coordination Act, Executive Order 13112-Invasive Species, and the Migratory Bird Treaty Act (MBTA) of 1918. A Mead & Hunt biologist conducted a desktop review and a field assessment.

4.1 Desktop Review

Mead & Hunt accessed and reviewed threatened and endangered species information provided in the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database for the project (<https://ecos.fws.gov/ipac/>, accessed December 29, 2022). The IPaC review information provides the Federal list of threatened and endangered species and a list of migratory birds protected under the Migratory Bird Treaty Act (MBTA) or birds protected under the Bald and Golden Eagle Protection Act (Eagle Act) that may occur in the Action Area. Presence of critical habitat for federally listed species is also provided in this documentation.

Mead & Hunt requested an Early Coordination Review of the proposed project from the EGLE. In addition to a review of potential permits needed for the project, a database search of the Michigan Natural Features Inventory (MNFI) revealed no occurrences of State-listed threatened and endangered species. While the database search did not indicate the presence of Northern Long-eared bats or Indiana bats, the action area is within the range of the Indiana bat where the bat is considered potentially present wherever suitable habitat exists.

Mead & Hunt reviewed additional publicly available data sources listed below:

- Publicly available bird sightings (eBird, 2023)
- Online USGS topographic maps (USGS, 2023), National Hydrography Dataset (USGS, 2022), and National Wetlands Inventory (USFWS, 2022) maps in the vicinity for assessing presence of aquatic resources.

4.2 Site Field Assessment

Mead & Hunt conducted a field visit on September 27, 2022 to assess biological resources including the presence of suitable habitat for special-status species. The field assessment included a pedestrian survey to document onsite field observations of biological resources and taking of representative site photographs.

4.3 Existing Conditions

The Airport is located within the Lake Michigan Moraines (Level IV ecoregion: 56f) subsection of the Southern Michigan/Northern Indiana Drift Plains (Level III ecoregion: 56) (USEPA, 2023). Historically, this region supported beech and sugar maple in a lake-moderated climate. Oak savanna and oak-hickory forests inhabited the drier ridges and steep slopes of the ecoregion. The climate moderation afforded by Lake Michigan results in cooler summer temperatures and more moderate winter temperatures, ideal for agricultural production.

Undeveloped lands within the Action Area are in agricultural production. The drainage ditch, realigned in 2016, splits the farmed area into two sections and at the time of field work, both fields were in soybeans. The Airport property line forms the northern extent of the Action Area. The southeastern corner of the Action Area consists of a stormwater detention area. This area was expanded to the north during construction of the FBO building in 2016. A water control structure on the east berm of the detention area controls water levels and outgoing flows.

The Action Area is located in the North Branch Macatawa River watershed (HUC14: 4050002050060). Drainage generally flows to the east, either to the detention area in the southeastern corner of the Action Area via piped conveyances or through the re-aligned drainage ditch. Just to the east of the Action Area boundary, an undeveloped forested area with mapped wetlands receives detention pond overflow or ditch drainage which ultimately flows to the North Branch of the Macatawa River.

Topography within the Action Area is relatively flat with topographic highs around 676 ft (NAVD 1988) on the western end, gradually sloping to the east where the forested edge of the Action Area sits at about 668 ft. Topographic mapping from LiDAR Elevation Data for Allegan County (2015) is provided in Appendix C. These data are reflective of site conditions prior to the construction of the new FBO building and parking area.

National Wetlands Inventory (NWI) mapping and Michigan Wetlands mapping and FEMA floodplain mapping are presented in Appendix C.

5. Results

5.1 Desktop Review

No critical habitat under USFWS jurisdiction was identified in the Action Area. A review of streams in the National Hydrography Dataset (NHD) revealed no mapped streams within the Action Area although the North Branch of the Macatawa River is approximately 650 feet northeast of the Action Area boundary. The NWI did not identify wetlands within the Action Area; however, a forested wetland (PFO1) is mapped adjacent to the east boundary of the Action Area. No mapped floodplains are shown on FEMA floodplain mapping which is provided in Appendix C. Fourteen bird species protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (Eagle Act) were identified by the USFWS IPaC database search.

5.1.1 Listed species

5.1.1.1 Federal Threatened and Endangered

The USFWS IPaC database search for the project (<https://ecos.fws.gov/ipac/>, accessed December 29, 2022) identified nine federally endangered, threatened, or candidate species and one experimental population. Appendix D provides the Federal list of threatened and endangered species that may occur in the Action Area.

Also provided in Appendix D is USFWS consultation for the identified listed species. Table 1. summarizes the listed species identified within the IPaC database for the Action Area.

TABLE 1. FEDERAL LISTED SPECIES THAT MAY OCCUR IN ACTION AREA

| SPECIES NAME | COMMON NAME | STATUS | HABITAT REQUIREMENTS |
|-------------------------------|--------------------------------|--|--|
| <i>Myotis sodalis</i> | Indiana Bat | Endangered | Forested habitats containing trees \geq 5 inches dbh; suitable underground hibernacula |
| <i>Myotis septentrionalis</i> | Northern Long-eared Bat | Endangered | Forested habitats containing trees \geq 3 inches dbh; suitable underground hibernacula |
| <i>Perimyotis subflavus</i> | Tricolored Bat | Proposed Endangered | Forested habitats; suitable underground hibernacula |
| <i>Sistrurus catenatus</i> | Eastern Massasauga Rattlesnake | Threatened | Varied wetland habitats coincident with uplands; winter hibernation in low wet areas |
| <i>Charadrius melodus</i> | Piping Plover | Endangered | Migratory shorebird that uses wide, flat, sandy beaches, and small creeks and wetlands |
| <i>Calidris canutus rufa</i> | Red Knot | Threatened | Migratory shorebird that uses tidal flats and sandy areas |
| <i>Grus americana</i> | Whooping Crane | Experimental Population, Non-Essential | |

| SPECIES NAME | COMMON NAME | STATUS | HABITAT REQUIREMENTS |
|-----------------------------------|--------------------------|------------|---|
| <i>Lycaeides melissa samuelis</i> | Karner Blue Butterfly | Endangered | Remnant oak and pine barrens and savannas in diverse topography flat glacial lakebeds, dune and swale lakeshores, and steep dissected hills |
| <i>Cirsium pitcheri</i> | Pitcher's Thistle | Threatened | Lake level dune complexes and perched dune complexes on glacial moraines above lake providing refugia from wind disturbance |
| <i>Danaus plexippus</i> | Monarch Butterfly | Candidate | Migratory butterfly found in a variety of habitats supporting their obligate milkweed host plant |
| <i>Bombus affinis</i> | Rusty Patched Bumble Bee | Endangered | Grasslands and tallgrass prairies of the Upper Midwest |

5.1.1.2 Proposed, Candidate, or Experimental Species

The monarch butterfly is a candidate species and is not yet listed or proposed for listing. The status of the whooping crane is listed as an experimental population in this region.

5.1.1.3 State Listed Species

The Early Coordination Review of the proposed project from the EGLE (Appendix D) revealed no occurrences of State-listed threatened and endangered species. While the database search did not indicate the presence of Northern Long-eared bats or Indiana bats, the action area is within the range of the Indiana bat where the bat is considered potentially present wherever suitable habitat exists (Appendix D).

5.1.1.4 Migratory Birds

Bird sighting data was accessed through eBird (eBird, 2023). A listing of 80 birds seen in the general Airport vicinity (not necessarily in the Action Area) over the last seven years is provided in Appendix E. Most of these species are birds suited to more developed environments although there are sightings of five birds listed as Birds of Conservation Concern (BCC). Three of these sightings were for a single bird while Lesser Yellowlegs (9) and Chimney Swift (14) were found to occur in higher numbers reported in a single observation.

5.2 Onsite Field Assessment

No federally listed species were observed during the site visit. Tracks and signs of white-tailed deer (*Odocoileus virginianus*) were observed.

The Action Area is dominated by agricultural use and developed area including impervious surfaces. Soybeans planted in the agricultural fields on both sides of the drainage ditch were healthy with a small section drowned out near the eastern side of the Action Area boundary. Tree cover is minimal within the area and is confined to portions of the drainage ditches along Regent Blvd on the north and Geurink Blvd on the south. The forested sections are mostly scrub-shrub and smaller immature trees that do not

provide suitable habitat for bats (NLEB, Indiana, and tricolored) or nesting birds subject to the MBTA. A forested stand adjacent to the Action Area to the east does appear to contain suitable habitat for bats and potential nesting habitat for birds subject to the MBTA. This area was not surveyed.

A wetland delineation done at the time of the field visit found three wetlands – two drainage ditches and one stormwater detention basin (Mead & Hunt, 2023). The central drainage ditch (re-aligned in 2016) is dominated by herbaceous vegetation with scattered stands of willow throughout the realigned portion; the ditch area parallel to Geurink Blvd is covered by scrub-shrub and smaller trees. Some open water was observed in the central core of the stormwater basin while the edges of the basin were covered by willow and cattails. No flowing water was observed in the drainage ditches at the time of the site visit. Representative site photographs are provided in Appendix F.

5.3 Consultation to Date

A list of threatened, endangered, and candidate species was obtained through the USFWS IPaC database tool (accessed, December 29, 2022). The Michigan Federal Endangered Species Determination Key (Dkey) provides recommended determination(s) for some species within the Action Area based on information provided by the user through an interview process. A verification letter for the effect determination(s) is produced at the end of the Dkey process. Appendix D contains the Federal list of threatened and endangered species that may occur in the Action Area and the verification letter from the USFWS.

Early coordination with EGLE Water Resources Division (WRD) (August 25, 2022) on the proposed project identified applicable permitting requirements related to project work in the storm water detention basin, drainage ditch relocation, potential floodplain impacts, and potential impacts to wetlands. Further, WRD identified potential presence of the Indiana bat within or near the Action Area. This correspondence can be found in Appendix D.

6. Impact Analysis

6.1 Threatened and Endangered Species

Recommended determinations made through the Michigan Dkey are presented in Table 2. The assessment for these species rests on project information provided to USFWS.

TABLE 2. RECOMMENDED EFFECT DETERMINATIONS FROM MICHIGAN DKEY

| Species Name | Status | Dkey Determination |
|---|--|--------------------|
| Eastern Massasauga (<i>Sistrurus catenatus</i>) | Threatened | NLAA* |
| Indiana Bat (<i>Myotis sodalis</i>) | Endangered | No effect |
| Karner Blue Butterfly (<i>Lycaeides melissa samuelis</i>) | Endangered | No effect |
| Monarch Butterfly (<i>Danaus plexippus</i>) | Candidate | No effect |
| Northern Long-eared Bat (<i>Myotis septentrionalis</i>) | Endangered | No effect |
| Piping Plover (<i>Charadrius melodus</i>) | Endangered | No effect |
| Pitcher's Thistle (<i>Cirsium pitcheri</i>) | Threatened | No effect |
| Red Knot (<i>Calidris canutus rufa</i>) | Threatened | No effect |
| Whooping Crane (<i>Grus americana</i>) | Experimental Population, Non-Essential | No effect |

*NLAA=May affect, but not likely to adversely affect

6.1.1 Tricolored Bat

While the status of tricolored bat under the ESA is proposed endangered, section 7(a)(4) of the ESA requires Federal agencies confer with USFWS if their action will jeopardize the continued existence of a proposed species. Suitable bat habitat is not present within the Action Area. Therefore, the proposed action will have no effect on the tricolored bat.

6.1.2 Rusty-Patched Bumble Bee

The project area is located within the historical range of the rusty-patched bumble bee (*Bombus affinis*) (RPBB) as shown on the FWS habitat map (<https://www.fws.gov/midwest/endangered/insects/rpbb/rpbbmap.html>, accessed January 23, 2023). No Low or High Potential Zones are identified for Allegan County. Historic occurrences have been reported throughout Lower Michigan but none after 2000. The last reported occurrences of the bumble bee for Allegan County were in 1964 (<https://mnfi.anr.msu.edu/species/description/19854/bombus-affinis>, accessed January 23, 2023).

Within the historical range of the bumble bee, the RPBB has not been observed or collected since the year 2000. Section 7 consultation and Incidental Take permits are not needed.

Suitable foraging and nesting habitat are not present within the Action Area due to long-term agricultural and airport development activities. Therefore, the Action Area provides limited potential habitat for the RPBB. The proposed action will have no effect on the RPBB.

6.1.3 Eastern Massasauga

The Action Area is within the historic range of the eastern Massasauga rattlesnake (EMR). Due to historical land conversion to agriculture and continuing agricultural activities, and proximity to the developed airport environment, no suitable habitat for the Eastern Massasauga rattlesnake is present within the project area. Recommended best management practices for projects within the known EMR range will be implemented as detailed below. Therefore, the proposed action may affect, but not likely to adversely affect the EMR.

6.2 Migratory Birds

We conclude that this project will have no impact on species identified as Birds of Conservation Concern (BCC) under the MBTA or on Bald Eagles. The agricultural land proposed for conversion is not suitable habitat for the Upland sandpiper or Bobolink, both species preferring grassland habitats. Suitable habitat for the Chimney swift (chimneys, hollow trees, or tree cavities) is not present in the Action Area and the Lesser Yellowlegs' preferred boreal forest and tundra transition breeding habitat is not present nor are tidal flats and adjacent shallow lagoons potentially utilized at other times of the year. The Action Area does not contain perching habitat for Bald eagles nor suitable bodies of water for feeding.

6.3 Aquatic Habitat

The project will result in an increase in impervious area. A segment of the existing re-aligned drainage ditch will be enclosed and relocated under proposed project facilities and to the north of taxilane pavement. Pipe drainage will be substituted for open channel drainage in this segment. The culvert pipe will daylight into the existing drainage ditch just to the east of the proposed taxilane. Water quantity will be maintained and no impacts to wetlands outside of the Action Area are expected.

The western section of the stormwater detention pond (expanded in 2016) will be filled for taxilane construction. Additional detention area to the north will be constructed to accommodate this loss and the increase in imperious area related to the project. No increase in drainage runoff to areas outside of the Action Area is expected.

Land disturbance would occur in agricultural areas and minimal trees and shrubs will be removed along the existing drainage ditch as a result of relocation and culvert placement. Appropriate erosion control BMPs including the use of silt fencing and straw bales, among other measures will be used to minimize potential direct effects on water quality during construction.

7. Impact Avoidance and Minimization Measures

7.1 Eastern Massasauga

Recommended best management practices for projects within the known range of the EMR will be implemented as detailed in the Michigan Environmental Screening BMPs for the eastern massasauga (USFWS, 2017).

- Use of wildlife-safe erosion control materials
- Viewing of the MDNR's "60-Second Snakes: The Eastern Massasauga Rattlesnake" video and/or review of the EMR factsheet
- Reporting of any EMR observations (or any other threatened or endangered species) during project implementation

7.2 Erosion Control

The storm water and erosion control practices used at the Airport will be consistent with the soil types, erosion potential, storm water loads, and runoff conditions. Erosion and sedimentation control will be implemented in all phases of construction through best management practices in accordance with the standards set forth in the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater General Permit.

Prior to and during construction, the following temporary soil erosion and sedimentation control measures may be constructed and maintained as specified on construction plans:

- Routing water around exposed soil areas
- Velocity dissipation devices such as check dams, sediment traps, or riprap will be used in conveyance channels and at any outlet to reduce flow velocity
- Installation of silt fencing for down gradient perimeter control and up gradient of vegetative buffers before work begins
- Storm drain inlet protection
- Sediment controls installed at the perimeter of temporary soil stockpiles

Final stabilization will include uniform perennial vegetative cover.

8. Conclusion

Based upon the data sources reviewed above and recommended determinations made through the Michigan Dkey, we conclude that development of this site will have no effect on the Indiana Bat, Karner Blue Butterfly, Monarch Butterfly, Northern Long-eared Bat, Piping Plover, Pitcher's Thistle, Red Knot, or the Whooping Crane. Further, we conclude that the proposed project will have no effect on the Rusty-patched bumble bee or the tricolored bat. This project will have no impact on birds identified as subject to the MBTA or the Eagle Act.

We conclude the project may affect but will likely not adversely affect the Eastern Massasauga rattlesnake due to a lack of suitable habitat within the Action Area. Recommended best management practices for projects within the known EMR range will be implemented.

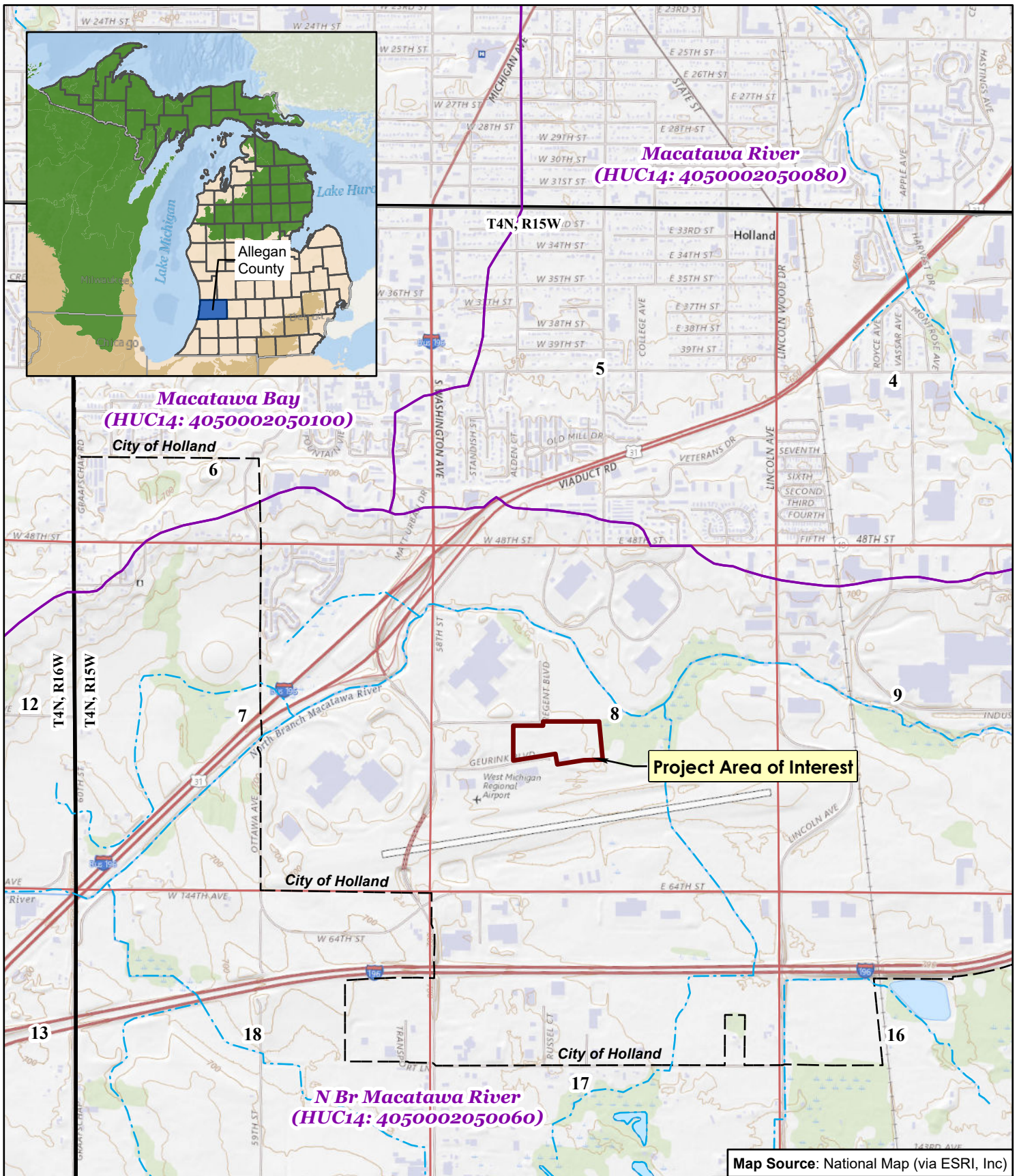
Increased stormwater drainage due to increased impervious surface will be accommodated by additional constructed detention area. Water quantity will be maintained in the piped section of the drainage ditch and no impacts to wetlands outside of the Action Area are expected.

9. References

- Mead & Hunt (2023). *Wetland Delineation Report: Short Form Environmental Assessment for North Hangar Area Taxilane*. Report prepared for West Michigan Regional Airport, Holland, MI. January 2023.
- U.S. Environmental Protection Agency (USEPA). (2023). *Level III and IV Ecoregions of Michigan*. Accessed January 2023, from https://geodata.epa.gov/arcgis/rest/services/ORD/USEPA_Ecoregions_Level_III_and_IV/MapServer
- U.S. Fish and Wildlife Service (USFWS). (2017). *Michigan Environmental Screening BMPs for massasauga: Eastern Massasauga (=rattlesnake)*. Retrieved April 1, 2022, from Environmental Screening for Eastern Massasauga Rattlesnake in Michigan: <https://ipac.ecosphere.fws.gov/>
- U.S. Fish and Wildlife Service (USFWS). (2022). *National Wetlands Inventory Wetlands Mapper*. Retrieved March 30, 2022, from <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>
- U.S. Geological Survey (USGS). (2022). *National Hydrography Dataset (NHD)*. Retrieved December 29, 2022, from <https://apps.nationalmap.gov/downloader/>
- U.S. Geological Survey (USGS). (2023). Topographic quadrangle, Hamilton West, 2019. Retrieved January 19, 2023, from topoView: <https://ngmdb.usgs.gov/topoview/>

Appendix A. Project Location Map

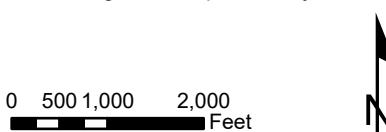




Map Source: National Map (via ESRI, Inc)

Project Location Map

West Michigan Regional Airport (BIV)
North Hangar Development Project



Legend

- Project AOI
- PLSS Township Line
- PLSS Section Line
- County Line
- Stream
- Lake/Pond
- Major Watershed
- Municipal Boundary
- LAND RESOURCE REGION**
- K
- L
- M

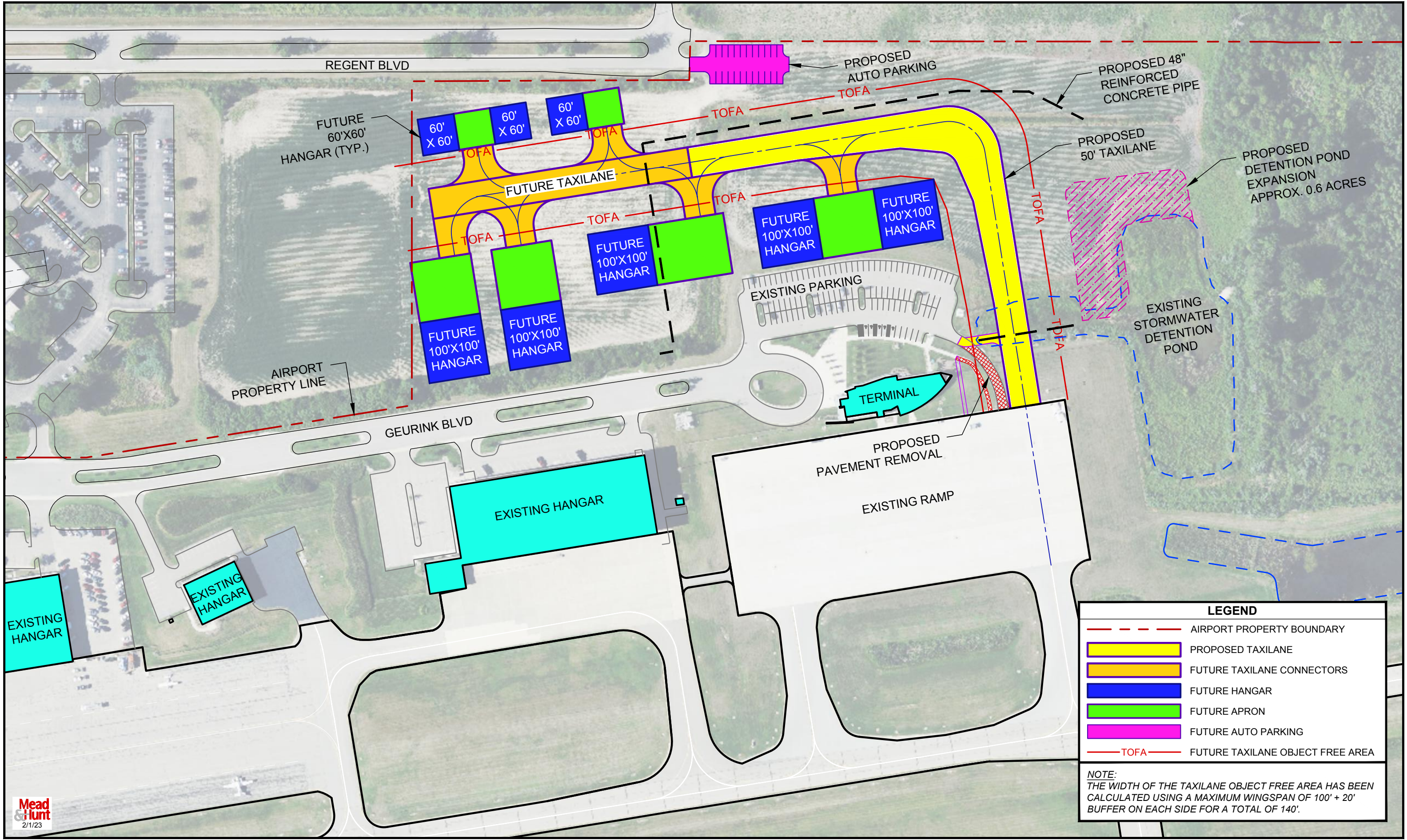
Project Location

T4N, R15W Section 8
City of Holland
Allegan County, MI
LRR Subregion: L
USACE Regional Supplement: NC/NE
Area of Interest: 17.1 acres
USGS Quads: Hamilton West
Field work conducted: Sept. 27, 2022

Appendix B. Proposed Project



ALTERNATIVE 3 - PROPOSED NORTH HANGAR AREA (PREFERRED ALTERNATIVE)

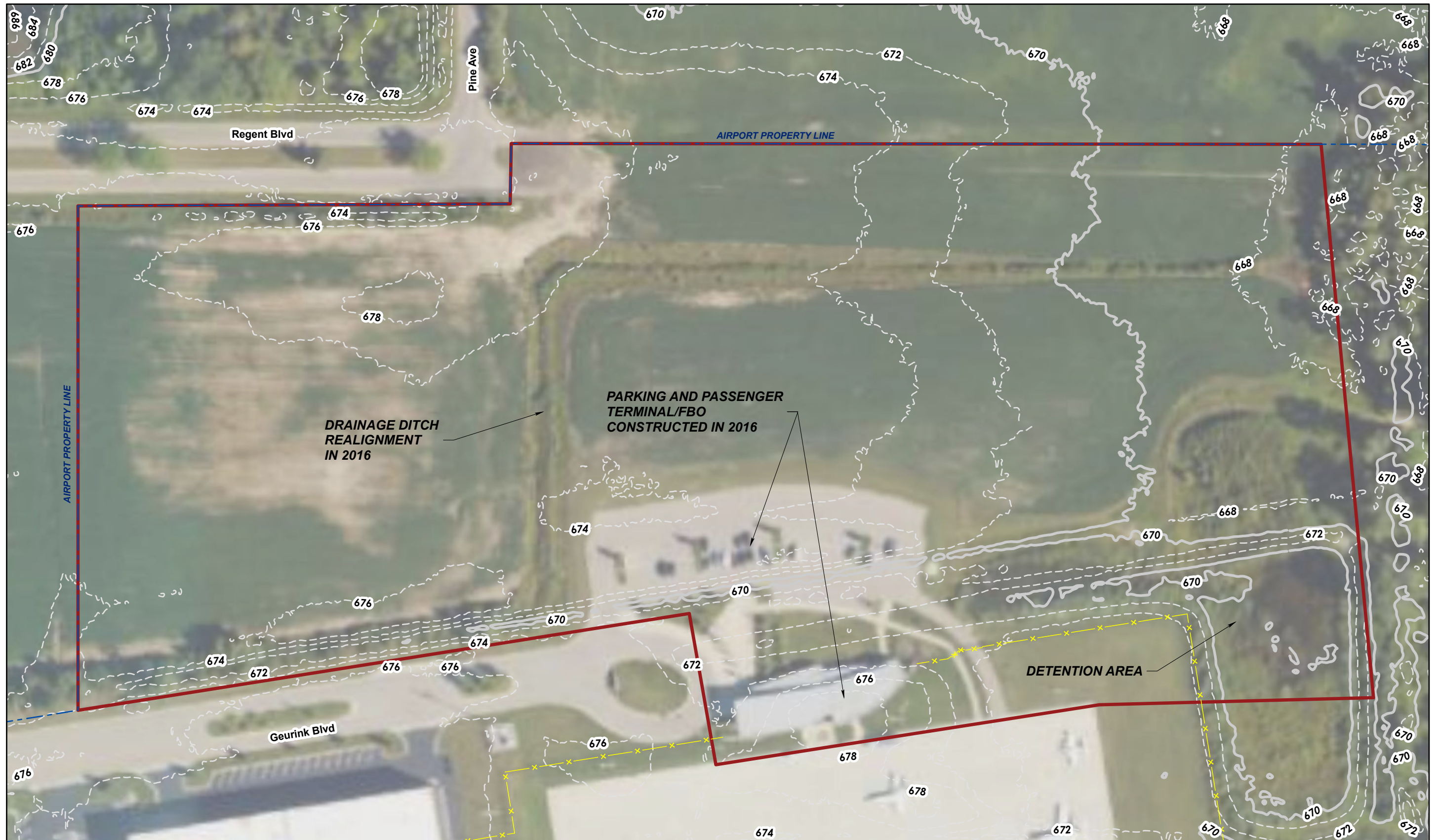


LEGEND

- - - AIRPORT PROPERTY BOUNDARY
- PROPOSED TAXILANE
- FUTURE TAXILANE CONNECTORS
- FUTURE HANGAR
- FUTURE APRON
- FUTURE AUTO PARKING
- - - TOFA FUTURE TAXILANE OBJECT FREE AREA

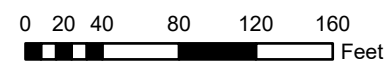
NOTE:
 THE WIDTH OF THE TAXILANE OBJECT FREE AREA HAS BEEN CALCULATED USING A MAXIMUM WINGSPAN OF 100' + 20' BUFFER ON EACH SIDE FOR A TOTAL OF 140'.

**Appendix C. Site Topography, Previous Wetland Mapping, and
FEMA Floodplain Mapping**



TOPOGRAPHY MAP

West Michigan Regional Airport (BIV)
North Hangar Development Project



Legend

- Project AOI
- Airport Property Line
- Existing Fence

- Contour Type**
- Index
 - Intermediate

Data Sources
 1. Contours, Allegan County, 2-foot contour interval generated from 2015 USGS DEM acquired by MiSAIL. Data obtained from USGS National Map (<https://apps.nationalmap.gov/downloader/>)
 2. Image Source: NAIP image service (<https://gis.apfo.usda.gov/arcgis/services>), 2022

PROJECT LOCATION

T4N, R15W Section 8
 City of Holland
 Allegan County, MI
 LRR Subregion: L
 USACE Regional Supplement: NC/NE
 Area of Interest: 17.1 acres
 USGS Quads: Hamilton West
 Field work conducted: Sept. 27, 2022



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

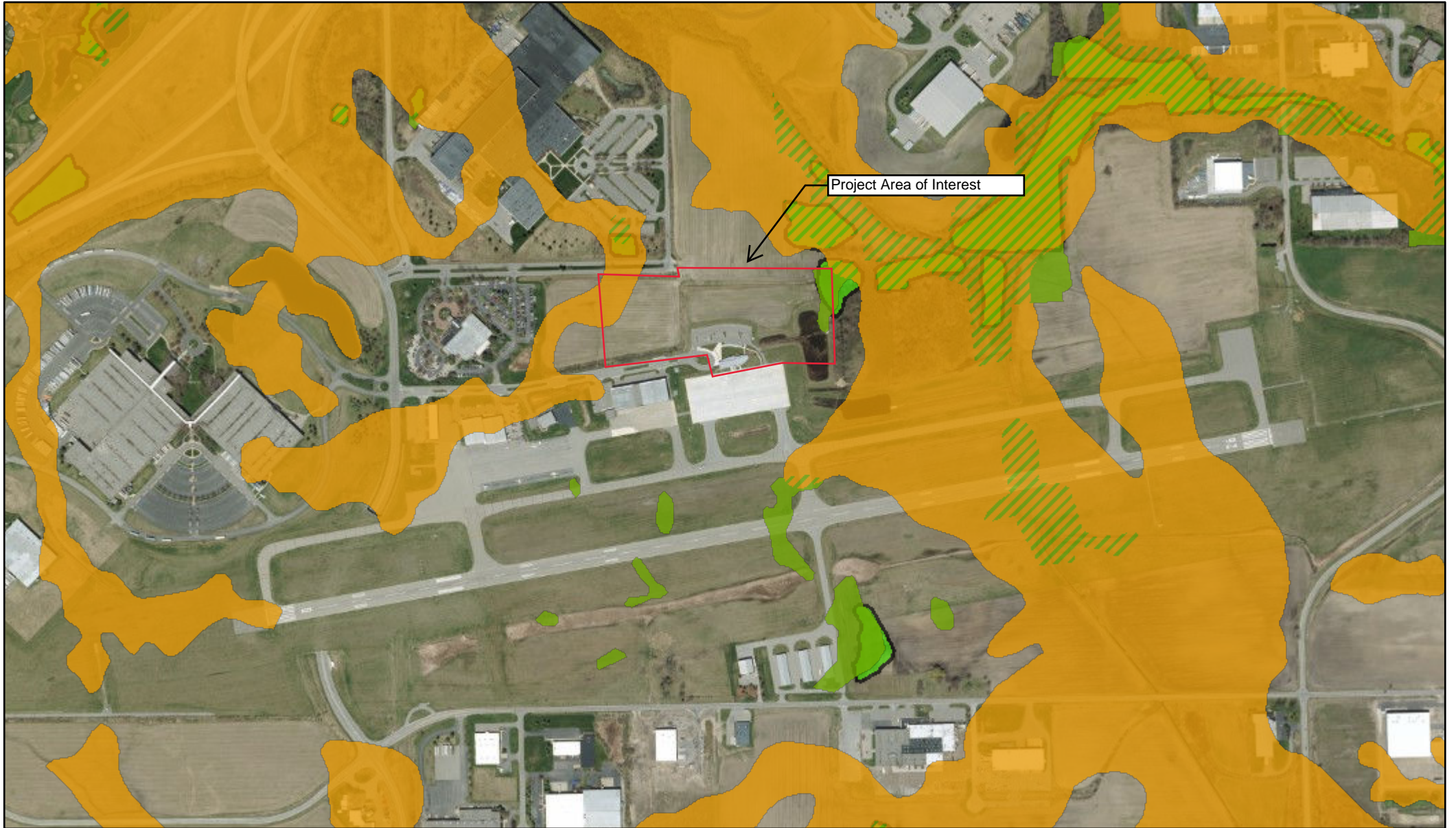
December 28, 2022

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |




This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

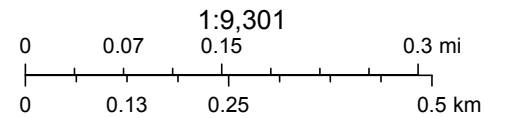
Wetlands Map Viewer



September 13, 2022

Part 303 Final Wetlands Inventory

-  Wetlands as identified on NWI and MIRIS maps
-  Soil areas which include wetland soils
-  Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils



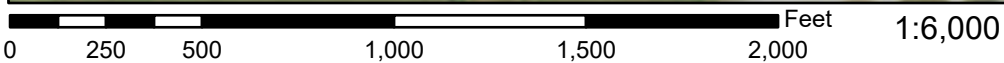
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclaimer: This map is not intended to be used to determine the specific

National Flood Hazard Layer FIRMette



86°6'49"W 42°44'54"N



86°6'12"W 42°44'27"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

| | | |
|-----------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| MAP PANELS | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **12/28/2022 at 10:46 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix D. Agency Coordination



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Michigan Ecological Services Field Office
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
Phone: (517) 351-2555 Fax: (517) 351-1443

In Reply Refer To:

December 29, 2022

Project Code: 2023-0029346

Project Name: WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT

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

To Whom It May Concern:

Official Species List

The attached species list identifies any Federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Under 50 CFR 402.12(e) (the regulations that implement section 7 of the Endangered Species Act), the accuracy of this species list should be verified after 90 days. You may verify the list by visiting the IPaC website (<https://ipac.ecosphere.fws.gov/>) at regular intervals during project planning and implementation. To update an Official Species List in IPaC: from the My Projects page, find the project, expand the row, and click Project Home. In the What's Next box on the Project Home page, there is a Request Updated List button to update your species list. Be sure to select an "official" species list for all projects.

Consultation requirements and next steps

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize Federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-Federal representative) must consult with the Fish and Wildlife Service if they determine their project may affect listed species or critical habitat.

There are two approaches to evaluating the effects of a project on listed species.

Approach 1. Use the All-species Michigan determination key in IPaC. This tool can assist you in

making determinations for listed species for some projects. In many cases, the determination key will provide an automated concurrence that completes all or significant parts of the consultation process. Therefore, we strongly recommend screening your project with the **All-Species Michigan Determination Key (Dkey)**. For additional information on using IPaC and available Determination Keys, visit <https://www.fws.gov/media/mifo-ipac-instructions> (and click on the attachment). Please carefully review your Dkey output letter to determine whether additional steps are needed to complete the consultation process.

Approach 2. Evaluate the effects to listed species on your own without utilizing a determination key. Once you obtain your official species list, you are not required to continue in IPaC, although in most cases using a determination key should expedite your review. If the project is a Federal action, you should review our section 7 step-by-step instructions before making your determinations: <https://www.fws.gov/office/midwest-region-headquarters/midwest-section-7-technical-assistance>. If you evaluate the details of your project and conclude “no effect,” document your findings, and your listed species review is complete; you do not need our concurrence on “no effect” determinations. If you cannot conclude “no effect,” you should coordinate/consult with the Michigan Ecological Services Field Office. The preferred method for submitting your project description and effects determination (if concurrence is needed) is electronically to EastLansing@fws.gov. Please include a copy of this official species list with your request.

For all **wind energy projects** and **projects that include installing communications towers that use guy wires**, please contact this field office directly for assistance, even if no Federally listed plants, animals or critical habitat are present within your proposed project area or may be affected by your proposed project.

Migratory Birds

Please see the “Migratory Birds” section below for important information regarding incorporating migratory birds into your project planning. Our Migratory Bird Program has developed recommendations, best practices, and other tools to help project proponents voluntarily reduce impacts to birds and their habitats. The Bald and Golden Eagle Protection Act prohibits the take and disturbance of eagles without a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <https://www.fws.gov/program/eagle-management/eagle-permits> to help you avoid impacting eagles or determine if a permit may be necessary.

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

We appreciate your consideration of threatened and endangered species during your project

planning. Please include a copy of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

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

This species list is provided by:

Michigan Ecological Services Field Office

2651 Coolidge Road Suite 101

East Lansing, MI 48823-6360

(517) 351-2555

Project Summary

Project Code: 2023-0029346
Project Name: WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT
Project Type: Airport - New Construction
Project Description: The West Michigan Regional Airport (BIV) is a public use airport located in Allegan County, Michigan, within the City of Holland. BIV is owned and managed by the West Michigan Airport Authority, which is made up of representatives from the City of Holland, Park Township, and the City of Zeeland.

The Airport has received requests to develop additional hangar space in the 15-acre area north of the existing terminal building. Currently, there is no aviation infrastructure serving this area. The Airport is planning to construct the necessary infrastructure to provide access to this area. Proposed development includes a community hangar, taxilanes, apron expansion, construction grading, lighting, fencing, utilities, and site restoration.

Major development items include:

- Construction of approximately 1,400 feet of a 50-foot wide taxilane
- Construction of a 120-foot by 120-foot community box hangar
- Expansion of approximately 2,400 square feet of an existing apron
- Reconstruction of an existing storm water detention basin
- Relocation of approximately 1,300 feet of an existing storm water drainage ditch

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.746166650000006,-86.10904712941796,14z>



Counties: Allegan County, Michigan

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

| NAME | STATUS |
|---|------------------------|
| Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/K4VZ7XKA25G33N64W5AN64GURI/documents/generated/6982.pdf | Endangered |
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/K4VZ7XKA25G33N64W5AN64GURI/documents/generated/6983.pdf | Endangered |
| Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

Birds

| NAME | STATUS |
|---|--|
| Piping Plover <i>Charadrius melodus</i> Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039 | Endangered |
| Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30. Species profile: https://ecos.fws.gov/ecp/species/1864 | Threatened |
| Whooping Crane <i>Grus americana</i> Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758 | Experimental Population, Non-Essential |

Reptiles

| NAME | STATUS |
|---|------------|
| Eastern Massasauga (=rattlesnake) <i>Sistrurus catenatus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> For all Projects: Project is within EMR Range Species profile: https://ecos.fws.gov/ecp/species/2202 General project design guidelines: https://ipac.ecosphere.fws.gov/project/K4VZ7XKA25G33N64W5AN64GURI/documents/generated/5280.pdf | Threatened |

Insects

| NAME | STATUS |
|--|------------|
| Karner Blue Butterfly <i>Lycaeides melissa samuelis</i> There is proposed critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/6656 | Endangered |
| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

Flowering Plants

| NAME | STATUS |
|--|------------|
| Pitcher's Thistle <i>Cirsium pitcheri</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8153 | Threatened |

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

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

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

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|-------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Dec 1 to Aug 31 |
| Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |

| NAME | BREEDING SEASON |
|--|-------------------------|
| Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |
| Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974 | Breeds Apr 22 to Jul 20 |
| Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Kirtland's Warbler <i>Setophaga kirtlandii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8078 | Breeds May 25 to Jul 31 |
| Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631 | Breeds Mar 1 to Jul 15 |
| Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |

| NAME | BREEDING SEASON |
|---|-------------------------|
| Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480 | Breeds elsewhere |
| Upland Sandpiper <i>Bartramia longicauda</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9294 | Breeds May 1 to Aug 31 |
| Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

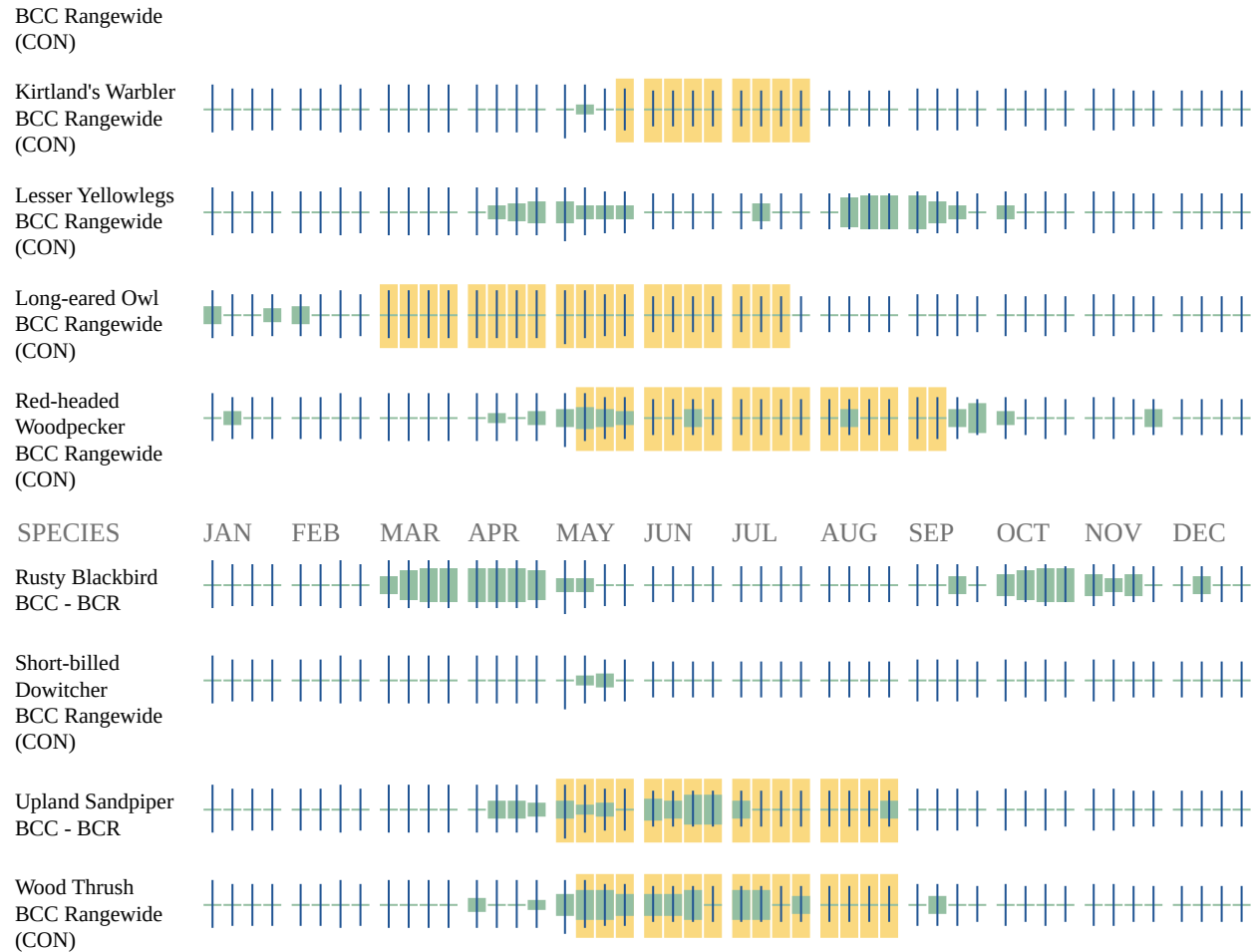
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#)

may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
-

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities,

should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

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

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
-

IPaC User Contact Information

Agency: Holland city (Allegan County, MI; Ottawa County, MI)

Name: Brauna Hartzell

Address: 2440 Deming Way

City: Middleton

State: WI

Zip: 53562

Email brauna.hartzell@meadhunt.com

Phone: 6082736380

Lead Agency Contact Information

Lead Agency: Federal Aviation Administration



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Michigan Ecological Services Field Office
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
Phone: (517) 351-2555 Fax: (517) 351-1443

In Reply Refer To:

January 03, 2023

Project code: 2023-0029346

Project Name: WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT

Subject: Verification letter for the project named 'WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT' for specified threatened and endangered species that may occur in your proposed project location consistent with the Michigan Endangered Species Determination Key (Michigan DKey)

Dear Brauna Hartzell:

The U.S. Fish and Wildlife Service (Service) received on **January 03, 2023** your effect determination(s) for the 'WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT' (the Action) using the Michigan DKey within the Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based on your answers and the assistance of the Service's Michigan DKey, you made the following effect determination(s) for the proposed Action:

| Species | Listing Status | Determination |
|--|---|----------------------|
| Eastern Massasauga (=rattlesnake) (<i>Sistrurus catenatus</i>) | Threatened | NLAA |
| Indiana Bat (<i>Myotis sodalis</i>) | Endangered | No effect |
| Karner Blue Butterfly (<i>Lycaeides melissa samuelis</i>) | Endangered | No effect |
| Monarch Butterfly (<i>Danaus plexippus</i>) | Candidate | No effect |
| Northern Long-eared Bat (<i>Myotis septentrionalis</i>) | Endangered | No effect |
| Piping Plover (<i>Charadrius melodus</i>) | Endangered | No effect |
| Pitcher's Thistle (<i>Cirsium pitcheri</i>) | Threatened | No effect |
| Red Knot (<i>Calidris canutus rufa</i>) | Threatened | No effect |
| Whooping Crane (<i>Grus americana</i>) | Experimental Population, Non- Essential | No effect |

The Service will notify you within 30 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for Federally listed species in Michigan. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the Michigan Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, the Michigan Ecological Services Field Office may request additional information to verify the effects determination reached through the Michigan DKey.

Your agency has met consultation requirements by informing the Service of your “No Effect” determination(s). No consultation is required for species that you determined will not be affected by the Action.

Please provide sufficient project details on your project homepage in IPaC (Define Project, Project Description) to support your conclusions and the Service’s 30-day review period. Failure to disclose important aspects of your project that would influence the outcome of your effects determinations may negate your determinations and invalidate this letter. If you have site-specific information that leads you to believe a different determination is more appropriate for your project than what the Dkey concludes, you can and should proceed based on the best available information.

The Service recommends that you contact the Service or re-evaluate the project in IPaC if: 1) the scope or location of the proposed Action is changed; 2) new information reveals that the action may affect listed species or designated critical habitat in a manner or to an extent not previously considered; 3) the Action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project changes are final or resources committed.

For non-Federal representatives: Please note that when a project requires consultation under section 7 of the Act, the Service must consult directly with the Federal action agency unless that agency formally designates a non-Federal representative (50 CFR 402.08). Non-Federal representatives may prepare analyses or conduct informal consultations; however, the ultimate responsibility for section 7 compliance under the Act remains with the Federal agency. If the Federal agency concurs with your determination, the project as proposed has completed section 7 consultation. All documents and supporting correspondence should be provided to the Federal agency for their records.

Bald and Golden Eagles:

Bald eagles, golden eagles, and their nests are protected under the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (Eagle Act). The Eagle Act prohibits, except when authorized by an Eagle Act permit, the “taking” of bald and golden eagles and defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” The Eagle Act’s implementing regulations define disturb as “...to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially

interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

If the Action may impact bald or golden eagles, additional coordination with the Service under the Eagle Act may be required. For more information on eagles and conducting activities in the vicinity of an eagle nest, please visit <https://www.fws.gov/library/collections/all-about-eagles>. In addition, the Service developed the National Bald Eagle Management Guidelines (May 2007) in order to assist landowners in avoiding the disturbance of bald eagles. The full Guidelines are available at <https://www.fws.gov/media/national-bald-eagle-management-guidelines-0>.

If you have further questions regarding potential impacts to eagles, please contact Chris Mensing, Chris_Mensing@fws.gov or 517-351-2555.

Monarch butterfly and other pollinators

In December 2020, after an extensive status assessment of the monarch butterfly, we determined that listing the monarch under the Endangered Species Act is warranted but precluded by higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. Therefore, the Service added the monarch butterfly to the candidate list. The Service will review its status each year until we are able to begin developing a proposal to list the monarch.

The Endangered Species Act does not establish protections or consultation requirements for candidate species. Some Federal and State agencies may have policy requirements to consider candidate species in planning. We encourage implementing measures that will remove or reduce threats to these species and possibly make listing unnecessary.

For all projects, we recommend the following best management practices (BMPs) to benefit monarch and other pollinators.

Monarch and Pollinator BMP Recommendations

Consider monarch and other pollinators in your project planning when possible. Many pollinators are declining, including species that pollinate key agricultural crops and help maintain natural plant communities. Planting a diverse group of native plant species will help support the nutritional needs of Michigan’s pollinators. We recommend a mix of flowering trees, shrubs, and herbaceous plants so that something is always blooming and pollen is available during the active periods of the pollinators, roughly early spring through fall (mid-March to mid-October). To benefit a wide variety of pollinators, choose a wide range of flowers with diverse colors, heights, structure, and flower shape. It is important to provide host plants for any known butterfly species at your site, including native milkweed for Monarch butterfly. Incorporating a water source (e.g., ephemeral pool or low area) and basking areas (rocks or bare ground) will provide additional resources for pollinators.

Many pollinators need a safe place to build their nests and overwinter. During spring and summer, leave some areas unmowed or minimize the impacts from mowing (e.g., decrease frequency, increase vegetation height). In fall, leave areas unraked and leave plant stems standing. Leave patches of bare soil for ground nesting pollinators.

Avoid or limit pesticide use. Pesticides can kill more than the target pest. Some pesticide residues can kill pollinators for several days after the pesticide is applied. Pesticides can also kill natural predators, which can lead to even worse pest problems.

Planting native wildflowers can also reduce the need to mow and water, improve bank stabilization by reducing erosion, and improve groundwater recharge and water quality.

Resources:

<https://www.fws.gov/initiative/monarchs>

<https://www.fws.gov/library/collections/pollinators>

Wetland impacts:

Section 404 of the Clean Water Act of 1977 (CWA) regulates the discharge of dredged or fill material into waters (including wetlands) of the United States. Regulations require that activities permitted under the CWA (including wetland permits issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE)) not jeopardize the continued existence of species listed as endangered or threatened. Permits issued by the U.S. Army Corps of Engineers must also consider effects to listed species pursuant to section 7 of the Endangered Species Act. The Service provides comments to the agencies that may include permit conditions to help avoid or minimize impacts to wildlife resources including listed species. For this project, we consider the conservation measures you agreed to in the determination key and/or as part of your proposed action to be non-discretionary. If you apply for a wetland permit, these conservation measures should be explicitly incorporated as permit conditions. Include a copy of this letter in your wetland permit application to streamline the threatened and endangered species review process.

Summary of conservation measures for your project You agreed to the following conservation measures to avoid adverse effects to listed species and our concurrence is only valid if the measures are fully implemented. These must be included as permit conditions if a permit is required and/or included in any contract language.

Eastern massasauga

Materials used for erosion control and site restoration must be wildlife-friendly. Do not use erosion control products containing plastic mesh netting or other similar material that could entangle eastern massasauga rattlesnake (EMR). Several products for soil erosion and control exist that do not contain plastic netting including net-less erosion control blankets (for example, made of excelsior), loose mulch, hydraulic mulch, soil binders, unreinforced silt fences, and straw bales. Others are made from natural fibers (such as jute) and loosely woven together in a manner that allows wildlife to wiggle free.

To increase human safety and awareness of EMR, those implementing the project must first review the EMR factsheet (available at <https://www.fws.gov/media/eastern-massasauga-rattlesnake-fact-sheet>), and watch MDNR's "60-Second Snakes: The Eastern Massasauga Rattlesnake" video (available at https://youtu.be/~PFnXe_e02w).

During project implementation, report sightings of any federally listed species, including EMR, to the Service within 24 hours

The project will not result in permanent loss of more than one acre of wetland or conversion of more than 10 acres of EMR upland habitat (uplands associated with high quality wetland habitat) to other land uses.

The project will occur entirely within the EMR active season (April 15 through October 15 in the southern Lower Peninsula; in the northern Lower Peninsula May 1 through October 1).

Northern long-eared bat

Based on the project area you entered into IPaC, the project does not occur within 0.25 miles of a known northern long-eared bat hibernaculum. Tree removal, as defined in the 4(d) rule, will not occur within 150 feet of a known occupied northern long-eared bat maternity roost tree.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT

2. Description

The following description was provided for the project 'WEST MICHIGAN REGIONAL AIRPORT (BIV) NORTH HANGAR PARK DEVELOPMENT':

The West Michigan Regional Airport (BIV) is a public use airport located in Allegan County, Michigan, within the City of Holland. BIV is owned and managed by the West Michigan Airport Authority, which is made up of representatives from the City of Holland, Park Township, and the City of Zeeland.

The Airport has received requests to develop additional hangar space in the 15-acre area north of the existing terminal building. Currently, there is no aviation infrastructure serving this area. The Airport is planning to construct the necessary infrastructure to provide access to this area. Proposed development includes a community hangar, taxilanes, apron expansion, construction grading, lighting, fencing, utilities, and site restoration.

Major development items include:

- Construction of approximately 1,400 feet of a 50-foot wide taxilane
- Construction of a 120-foot by 120-foot community box hangar
- Expansion of approximately 2,400 square feet of an existing apron
- Reconstruction of an existing storm water detention basin
- Relocation of approximately 1,300 feet of an existing storm water drainage ditch

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.746166650000006,-86.10904712941796,14z>



Qualification Interview

1. Are there any possible effects to any listed species or to designated critical habitat from your project or effects from any other actions or projects subsequently made possible by your project?

Select "Yes" even if the expected effects to the species or critical habitat are expected to be 1) extremely unlikely (discountable), 2) can't meaningfully be measured, detected, or evaluated (insignificant), or 3) wholly beneficial.

Select "No" to confirm that the project details and supporting information allow you to conclude that listed species and their habitats will not be exposed to any effects (including discountable, insignificant, or beneficial effects) and therefore, you have made a "no effect" determination for all species. If you are unsure, select YES to answer additional questions about your project.

Yes

2. This determination key is intended to assist the user in the evaluating the effects of their actions on Federally listed species in Michigan. It does not cover other prohibited activities under the Endangered Species Act (e.g., for wildlife: import/export, Interstate or foreign commerce, possession of illegally taken wildlife, purposeful take for scientific purposes or to enhance the survival of a species, etc.; for plants: import/export, reduce to possession, malicious destruction on Federal lands, commercial sale, etc.) or other statutes. Click yes to acknowledge that you must consider other prohibitions of the ESA or other statutes outside of this determination key.

Yes

3. Is the action the approval of a long-term (i.e., in effect greater than 10 years) permit, plan, or other action? (e.g., a new or re-issued hydropower license, a land management plan, or other kinds of documents that provide direction for projects or actions that may be conducted over a long term (>10 years) without the need for additional section 7 consultation).

No

4. Is the action being funded, authorized, or carried out by a Federal agency?

Yes

5. Does the action involve the installation or operation of wind turbines?

No

6. Are there at least 30 days prior to your action occurring? Endangered species consultation must be completed before taking any action that may have effects to listed species. The Service also needs 30 days to review projects before we can verify conclusions in some dkey output letters. For example, if you have already started some components of the project on the ground (e.g., removed vegetation) before completing this key, answer “no” to this question. The only exception is if you have a Michigan Field Office pre-approved emergence survey (i.e., if you have conducted pre-approved emergence surveys for listed bats before tree removal, you can still answer yes to this question).

Yes

7. Does the action involve constructing a new communication tower or modifying an existing communications tower?

No

8. Does the activity involve aerial or other large-scale application of any chemical (including insecticide, herbicide, etc.)?

No

9. Does your project include water withdrawal (ground or surface water) greater than 10,000 gallons/day?

No

10. Will your action permanently affect hydrology?

No

11. Will your action temporarily affect hydrology?

No

12. Will your project have any direct impacts to a stream or river (e.g., Horizontal Directional Drilling (HDD), hydrostatic testing, stream/road crossings, new storm-water outfall discharge, dams, other in-stream work, etc.)?

No

13. Does your project have the potential to indirectly impact the stream/river or the riparian zone (e.g., cut and fill, horizontal directional drilling, hydrostatic testing, construction, vegetation removal, discharge, etc.)?

No

14. Will your action disturb the ground or existing vegetation? This includes any off road vehicle access, soil compaction, digging, seismic survey, directional drilling, heavy equipment, grading, trenching, placement of fill, pesticide application, vegetation management (including removal or maintenance using equipment or chemicals), cultivation, development, etc.

Yes

15. Is the action a utility-scale solar development project?

No

16. [Hidden semantic] Does the action intersect the MOBU AOI?

Automatically answered

Yes

17. Under the ESA, monarchs remain warranted but precluded by listing actions of higher priority. The monarch is a candidate for listing at this time. The Endangered Species Act does not establish protections or consultation requirements for candidate species. Some Federal and State agencies may have policy requirements to consider candidate species in planning. We encourage implementing measures that will remove or reduce threats to these species and possibly make listing unnecessary. If your project will have no effect on monarch butterflies (for example, if your project won't affect their habitat or individuals), then you can make a "no effect" determination for this project. Are you making a "no effect" determination for monarch?

Yes

18. [Hidden Semantic] Does the action intersect the Eastern massasauga rattlesnake area of influence?

Automatically answered

Yes

19. Does your action involve prescribed fire?

No

20. Will this action occur entirely in the Eastern massasauga rattlesnake inactive season (October 16 through April 14)?

No

21. Will this action occur entirely in the Eastern massasauga rattlesnake active season (April 15 through October 15)?

Yes

22. Will the action result in permanent loss of more than one acre of wetland or conversion of more than 10 acres of uplands of potential Eastern massasauga rattlesnake habitat (uplands associated with high quality wetland habitat) to other land uses?

No

23. Will you use [wildlife safe materials](#) for erosion control and site restoration and eliminate the use of erosion control products containing plastic mesh netting or other similar material that could ensnare Eastern massasauga rattlesnake?

Yes

24. Will you watch MDNR's ["60-Second Snakes: The Eastern Massasauga Rattlesnake \(EMR\)"](#) video, review the [EMR factsheet](#) or call 517-351-2555 to increase human safety and awareness of EMR?

Yes

25. Will all action personnel report any Eastern massasauga rattlesnake observations, or observation of any other listed threatened or endangered species, during action implementation to the Service within 24 hours?
Yes
26. [Hidden Semantic] Does the action intersect the Karner blue butterfly area of influence?
Automatically answered
Yes
27. Will the action occur in oak savanna, oak or pine barrens, openings within oak forest, old fields in association with oak forest, or openings or rights-of-way with abundant native grasses and wildflowers?
No
28. [Hidden Semantic] Does the action area intersect the piping plover area of influence?
Automatically answered
Yes
29. [Hidden Semantic] Does the action area intersect the rufa red knot area of influence?
Automatically answered
Yes
30. [Hidden Semantic] Does the action area intersect the whooping crane (ex. Pop) area of influence?
Automatically answered
Yes
31. Have you determined that the action will have no effect on individuals within the whooping crane nonessential experimental population (NEP)?
Yes
32. [Hidden Semantic] Does the action area intersect the area of influence for Pitcher's thistle?
Automatically answered
Yes
33. [Hidden Semantic] Does the action area intersect the Indiana bat area of influence?
Automatically answered
Yes
34. The project has the potential to affect federally listed bats. Does the action area contain any known or potential bat hibernacula (natural caves, abandoned mines, or underground quarries)?
No
35. Has a presence/absence bat survey or field-based habitat assessment following the Service's Range-wide [Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines](#) been conducted within the action area?
No
-

36. Does the action involve removal/modification of a human structure (barn, house or other building) known to contain roosting bats?

No

37. Does the action include removal/modification of an existing bridge or culvert?

No

38. Does the action include herbicide application?

No

39. Does the action include tree cutting/trimming, prescribed fire, and/or pesticide (e.g., insecticide, rodenticide) application?

No

40. [Hidden Semantic] Does the action area intersect the Indiana bat AOI?

Automatically answered

Yes

41. [Hidden Semantic] Does this project intersect the northern long-eared bat area of influence?

Automatically answered

Yes

42. Is the project action area located within 0.25 miles of a known northern long-eared bat hibernaculum?

Automatically answered

No

43. Will the action involve Tree Removal as defined in the 4(d) rule for northern long-eared bat?

No

IPaC User Contact Information

Agency: Holland city (Allegan County, MI; Ottawa County, MI)

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State: WI

Zip: 53562

Email brauna.hartzell@meadhunt.com

Phone: 6082736380

Lead Agency Contact Information

Lead Agency: Federal Aviation Administration



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY



LIESL EICHLER CLARK
DIRECTOR

August 25, 2022

VIA EMAIL

William Ballard, AICP
MEAD & HUNT, Inc.
2605 Port Lansing Road
Lansing, MI 48906

Dear William Ballard:

SUBJECT: Early Coordination Review of Proposed Improvements
West Michigan Regional Airport, Holland, Michigan
Ottawa County, T04N R15W Section 08
Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Water Resources Division (WRD)

Thank you for your July 25, 2022, early coordination letter regarding the development of a Short Form Environmental Assessment (EA) for the proposed infrastructure additions at the West Michigan Regional Airport. The provided comments will evaluate the potential impacts of the proposed infrastructure listed in the early coordination letter.

The WRD has the following comments:

- a) Reconstruction of the existing storm water detention basin will require a permit under Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). If the existing storm water drainage ditch is determined to be a stream, as defined by Part 301, then any relocation work of it will require a permit under Part 301 as well. Stream relocations of 1000 feet or more in length will require an individual permit and concurrent federal review as defined in the state and federal Clean Water Act Section 404 Program Memorandum of Agreement. Given the amount of relocation proposed, stream mitigation will also likely be necessary.
- b) Any filling, occupation, or grading within the 100-year floodplain of the nearby North Branch Macatawa River, if it has a drainage area of two square miles more, will require a permit under the State's Floodplain Regulatory Authority, found in Part 31, Water Resources Protection, of the NREPA.
- c) Available wetland inventories indicate the presence of hydric soils in the project location and potential wetlands along the stormwater drainage ditch and retention pond. Any impacts to wetlands will require a permit under Part 303, Wetlands

Protection, of the NREPA. All potential wetlands within project area should be delineated by a professional wetland consultant, and then submitted to Transportation Review Unit for verification. Our recommendation is to submit a Voluntary Preliminary Review request in MiWaters for a site inspection to provide site-specific recommendations and verification of wetland delineations prior to applying for a permit. Wetland mitigation will likely be required for any unavoidable impacts as a result of this project.

- d) A review of our database indicates no occurrences of State and/or Federal Threatened and Endangered species in the project location. However, your project location is within the range of the Federally listed Indiana Bat and the bat is considered potentially present wherever suitable habitat exists within their range. You should consult with the Fish and Wildlife Service (USFWS) prior to performing work or applying for permits.

Thank you for the opportunity to comment on this EA. If you have any questions regarding this letter, please contact me at 616-295-2787 or at Johnsonb67@michigan.gov.

Sincerely,

A handwritten signature in black ink that reads "Ben Johnson". The signature is written in a cursive style with a large initial "B" and a long, sweeping tail.

Benjamin Johnson
EGLE – WRD
Transportation Review Unit

cc: Steve Houtteman, Michigan Department of Transportation
Jim Wattling, EGLE

Appendix E. Bird Sightings



Sightings, West Michigan Regional Airport, Allegan County, Michigan

eBird.org

| SPECIES NAME | COMMON NAME | COUNT | YEAR |
|-------------------------------------|--------------------------|-------|----------|
| | | | OBSERVED |
| <i>Meleagris gallopavo</i> | Wild Turkey | 12 | 2022 |
| <i>Falco sparverius</i> | American Kestrel | 1 | 2022 |
| <i>Sturnella magna</i> | Eastern Meadowlark | 2 | 2022 |
| <i>Agelaius phoeniceus</i> | Red-winged Blackbird | 2 | 2022 |
| <i>Falco peregrinus</i> | Peregrine Falcon | 1 | 2021 |
| <i>Bartramia longicauda</i>* | Upland Sandpiper | 1 | 2021 |
| <i>Branta canadensis</i> | Canada Goose | 7 | 2021 |
| <i>Sturnus vulgaris</i> | European Starling | 2 | 2021 |
| <i>Passerculus sandwichensis</i> | Savannah Sparrow | 1 | 2021 |
| <i>Turdus migratorius</i> | American Robin | 1 | 2021 |
| <i>Quiscalus quiscula</i> | Common Grackle | 2 | 2021 |
| <i>Gallinago delicata</i> | Wilson's Snipe | 1 | 2021 |
| <i>Cygnus columbianus</i> | Tundra Swan | 162 | 2021 |
| <i>Buteo jamaicensis</i> | Red-tailed Hawk | 1 | 2021 |
| <i>Tachycineta bicolor</i> | Tree Swallow | 1 | 2021 |
| <i>Molothrus ater</i> | Brown-headed Cowbird | 2 | 2021 |
| <i>Charadrius vociferus</i> | Killdeer | 2 | 2021 |
| <i>Eremophila alpestris</i> | Horned Lark | 2 | 2021 |
| <i>Anas platyrhynchos</i> | Mallard | 4 | 2020 |
| <i>Larus delawarensis</i> | Ring-billed Gull | 2 | 2020 |
| <i>Melanerpes carolinus</i> | Red-bellied Woodpecker | 1 | 2020 |
| <i>Zenaidura macroura</i> | Mourning Dove | 3 | 2020 |
| <i>Spinus tristis</i> | American Goldfinch | 1 | 2019 |
| <i>Passerina cyanea</i> | Indigo Bunting | 1 | 2019 |
| <i>Accipiter cooperii</i> | Cooper's Hawk | 1 | 2019 |
| <i>Melospiza melodia</i> | Song Sparrow | 1 | 2019 |
| <i>Columba livia</i> | Rock Pigeon | 4 | 2019 |
| <i>Buteo lagopus</i> | Rough-legged Hawk | 1 | 2019 |
| <i>Larus argentatus</i> | Herring Gull | 30 | 2019 |
| <i>Corvus brachyrhynchos</i> | American Crow | 55 | 2019 |
| <i>Poecile atricapillus</i> | Black-capped Chickadee | 1 | 2018 |
| <i>Passer domesticus</i> | House Sparrow | 1 | 2018 |
| <i>Bubo scandiacus</i> | Snowy Owl | 1 | 2018 |
| <i>Cathartes aura</i> | Turkey Vulture | 2 | 2018 |
| <i>Certhia americana</i> | Brown Creeper | 1 | 2018 |
| <i>Antigone canadensis</i> | Sandhill Crane | 11 | 2018 |
| <i>Aix sponsa</i> | Wood Duck | 2 | 2018 |
| <i>Haemorhous mexicanus</i> | House Finch | 2 | 2018 |
| <i>Cardinalis cardinalis</i> | Northern Cardinal | 1 | 2018 |
| <i>Ardea herodias</i> | Great Blue Heron | 1 | 2017 |
| <i>Chaetura pelagica</i>* | Chimney Swift | 14 | 2017 |
| <i>Hirundo rustica</i> | Barn Swallow | 2 | 2017 |
| <i>Bombycilla cedrorum</i> | Cedar Waxwing | 4 | 2017 |
| <i>Tringa flavipes</i>* | Lesser Yellowlegs | 9 | 2017 |

| SPECIES NAME | COMMON NAME | COUNT | YEAR OBSERVED |
|--|-------------------------------|-------|---------------|
| <i>Spatula discors</i> | Blue-winged Teal | 4 | 2017 |
| <i>Megaceryle alcyon</i> | Belted Kingfisher | 1 | 2017 |
| <i>Spatula clypeata</i> | Northern Shoveler | 2 | 2017 |
| <i>Spizelloides arborea</i> | American Tree Sparrow | 1 | 2016 |
| <i>Junco hyemalis</i> | Dark-eyed Junco | 1 | 2016 |
| <i>Circus hudsonius</i> | Northern Harrier | 1 | 2016 |
| <i>Dolichonyx oryzivorus</i>* | Bobolink | 1 | 2016 |
| <i>Falco columbarius</i> | Merlin | 1 | 2016 |
| <i>Toxostoma rufum</i> | Brown Thrasher | 1 | 2016 |
| <i>Spizella passerina</i> | Chipping Sparrow | 1 | 2016 |
| <i>Scolopax minor</i> | American Woodcock | 3 | 2016 |
| <i>Colaptes auratus</i> | Northern Flicker | 1 | 2016 |
| <i>Cyanocitta cristata</i> | Blue Jay | 3 | 2016 |
| <i>Phalacrocorax auritus</i> | Double-crested Cormorant | 1 | 2015 |
| <i>Tyrannus tyrannus</i> | Eastern Kingbird | 1 | 2015 |
| <i>Sturnella neglecta</i> | Western Meadowlark | 1 | 2015 |
| <i>Geothlypis trichas</i> | Common Yellowthroat | 1 | 2015 |
| <i>Chordeiles minor</i> | Common Nighthawk | 1 | 2015 |
| <i>Contopus virens</i> | Eastern Wood-Pewee | 1 | 2015 |
| <i>Vireo gilvus</i> | Warbling Vireo | 1 | 2015 |
| <i>Dumetella carolinensis</i> | Gray Catbird | 2 | 2015 |
| <i>Setophaga petechia</i> | Yellow Warbler | 3 | 2015 |
| <i>Empidonax traillii</i> | Willow Flycatcher | 2 | 2015 |
| <i>Catharus guttatus</i> | Hermit Thrush | 1 | 2015 |
| <i>Zonotrichia leucophrys</i> | White-crowned Sparrow | 1 | 2015 |
| <i>Tringa melanoleuca</i> | Greater Yellowlegs | 5 | 2015 |
| <i>Spizella pusilla</i> | Field Sparrow | 1 | 2015 |
| <i>Haliaeetus leucocephalus</i>** | Bald Eagle | 1 | 2015 |
| <i>Pandion haliaetus</i> | Osprey | 1 | 2015 |
| <i>Stelgidopteryx serripennis</i> | Northern Rough-winged Swallow | 5 | 2015 |
| <i>Chroicocephalus philadelphia</i> | Bonaparte's Gull | 15 | 2015 |
| <i>Sialia sialis</i> | Eastern Bluebird | 1 | 2015 |
| <i>Aythya americana</i> | Redhead | 7 | 2015 |
| <i>Aythya marila</i> | Greater Scaup | 1 | 2015 |
| <i>Dryobates pubescens</i> | Downy Woodpecker | 1 | 2015 |
| <i>Spiza americana</i> | Dickcissel | 2 | 1999 |

* USFWS Bird of Conservation Concern (BCC)

** Bald and Golden Eagle Protection Act

SOURCE:

e-Bird Sightings

[West Michigan Regional Airport, Allegan County, MI, US - eBird Hotspot](https://ebird.org/hotspot/L837511?yr=all&m=&rank=mrec)

<https://ebird.org/hotspot/L837511?yr=all&m=&rank=mrec>

accessed January 19, 2023

Appendix F. Site Photographs



West Michigan Regional Airport North Hangar Development



Photo 1. Wetland 1, general site. View to the east.



Photo 2. Farm field at edge of Wetland 1. View to the west.



Photo 3. Wetland 2, general site. View to the north.



Photo 4. Wetland 2 along farm field. View to the west.

West Michigan Regional Airport North Hangar Development



Photo 5. Drowned out area of farm field in Wetland 2. View to the south.



Photo 6. Wetland 3, general site. View to the southeast.



Photo 7. Wetland 3, general site. View to the east.



Photo 8. Infield area. View to the south.