

**PRELIMINARY ENVIRONMENTAL ASSESSMENT**  
FOR  
**PROPOSED AIRPORT DEVELOPMENT**  
AT

**General Mitchell International Airport  
Milwaukee, Wisconsin**

Prepared by:  
**Westwood Professional Services, Inc.**  
**One Systems Drive**  
**Appleton, WI 54914-1654**

**APRIL 19, 2024**

under contract with  
MILWAUKEE COUNTY

The Proposed Action Includes the following:

- Decommissioning of Runway 1R/19L
- Removal of Runway pavement and electrical utilities between the north end of Runway 1R/19L and Taxiway W.
- Conversion of Runway 1R/19L south of Taxiway W into a parallel taxiway including associated lighting and pavement rehabilitation

This Environmental Assessment has been prepared to assess the environmental impacts of the Proposed Action.

This environmental assessment becomes a federal document when evaluated and signed by the responsible Federal Aviation Administration (FAA) official.

**Preliminary**

April 19, 2024

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Responsible FAA Official

Date

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WISCONSIN DEPARTMENT OF NATURAL RESOURCES

WISCONSIN DEPARTMENT OF ADMINISTRATION - COASTAL MANAGEMENT  
PROGRAM (WCMP)

UNITED STATES ARMY CORPS OF ENGINEERS (USACE)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)

TRIBAL NOTIFICATION

MILWAUKEE COUNTY HISTORICAL SOCIETY

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

**APPENDIX 3 - EJS SCREEN COMMUNITY REPORT**

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## LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Aircraft Approach Category
ADG	Airplane Design Group
AEAs	Agricultural Enterprise Areas
AHI	Architecture History Inventory
Airport	General Mitchell International Airport
ALP	Airport Layout Plan
APE	Area of Potential Effects
ATCT	Air Traffic Control Tower
BMP	Best Management Practices
BOA	Wisconsin Department of Transportation - Bureau of Aeronautics
BRRTS	Bureau for Remediation and Redevelopment Tracking System
CAA	Clean Air Act
CBRA	Coastal Barriers Resource Act
CBRS	Coastal Barriers Resource System
CEQ	Council of Environmental Quality
CLEAN	Contaminated Lands Environmental Action Network
County	Milwaukee County
CWA	Clean Water Act
CY	Calendar Year
DNL	Day-Night Average Sound Level
DOT	United States Department of Transportation
EA	Environmental Assessment
ECIP	Erosion Control Implementation Plan
ECOS	Environmental Conservation Online System
ECP	Erosion Control Plan
EIS	Environmental Impact Statement
EJScreen	Environmental Justice Screening and Mapping Tool
EPA	Environmental Protection Agency
ERIS	Environmental Risk Information Services
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GHG	Greenhouse Gas
GIS	Geographic Information System



IPaC	Information for Planning and Consultation
LCA	Life-Cycle Assessment
LTA	Land Type Association
MIRLs	Medium Intensity Runway Lights
MPU	Master Plan Update
MSL	Mean Sea Level
MT	Metric Tons
NAAQS	National Ambient Air Quality Standards
NAVAIDs	Navigational Aids
NEPA	National Environmental Policy Act
NHI	Natural Heritage Inventory
NOI	Notice of Intent
NRCS	Natural Resources Conservation Service
NRHP	National Registry of Historic Places
NRI	Nationwide Rivers Inventory
PCI	Pavement Condition Index
PCN	Preconstruction Notification
PFAS	Per-and Polyfluoroalkyl Substances
REILs	Runway End Identifier Lights
SDWA	Safe Drinking Water Act
SEWRPC	Southeastern Wisconsin Regional Planning Commission
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SPA	Sponsor Proposed Action
Sponsor	Milwaukee County
SSA	Sole Source Aquifer
State	State of Wisconsin
TGCP	Transportation Construction General Permit
THPO	Tribal Historic Preservation Officer
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
WCMP	Wisconsin Coastal Management Program
WDNR	Wisconsin Department of Natural Resources
WHS	Wisconsin Historical Society

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# CHAPTER 1 - PURPOSE AND NEED

## 1.1 Introduction

The Milwaukee General Mitchell International Airport (Airport) is located in the City of Milwaukee, Milwaukee County, Wisconsin; approximately two miles west of Lake Michigan and approximately five miles south of downtown Milwaukee. Specifically, the Airport is located in Township 6 North, Range 22 East in Milwaukee County, Wisconsin<sup>1</sup>. The Airport primarily services southeastern Wisconsin including Milwaukee and surrounding counties. **Figure 1-1** provides a graphic representation of the Airport's location.

Presently, the Airport operates using a five-runway configuration, including two sets of parallel runways. The existing parallel runways are Runway 7L/25R and Runway 7R/25L orientated in an east/west direction and Runway 1L/19R and Runway 1R/19L orientated in a north/south direction. Runway 13/31 is orientated northwest/southeast. The Airport contains a vast taxiway network, numerous aprons, and vehicle service roads for airfield facility access. **Figure 1-2** provides a graphic representation of runway, taxiway, and apron layout.

The Airport is owned and operated by Milwaukee County (sponsor). The sponsor petitioned the Wisconsin Secretary of Transportation, under Wisconsin Statutes Chapter 114.33 for Federal and/or State aid for airport improvements<sup>2</sup>. Desired improvements were requested in a petition dated 8/26/2022 and included an Environmental Assessment to evaluate the decommissioning and removal of Runway 1R/19L.

The Airport is included in both the National Plan of Integrated Airport Systems<sup>3</sup> and in the Wisconsin State Airport System Plan<sup>4</sup>, which allows for the possibility of both federal and state aid. Federal aid in a project requires environmental review pursuant to the National Environmental Policy Act (NEPA)<sup>5</sup>. NEPA requires that environmental information is made available to public officials and citizens before decisions are made and before actions are taken.

An Environmental Assessment (EA) is a concise public document, prepared in compliance with NEPA, that discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare and Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI). The intent of this EA is to

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<sup>1</sup> WDNR Open Data, PLSS Quarter Sections: <https://data-wi-dnr.opendata.arcgis.com/maps/plss-quarter-sections>

<sup>2</sup> Wisconsin Statutes Chapter 114: <https://docs.legis.wisconsin.gov/statutes/statutes/114/i/33>

<sup>3</sup> National Plan on Integrated Airport Systems (Retrieved 10/6/2023): [https://www.faa.gov/airports/planning\\_capacity/npias/current](https://www.faa.gov/airports/planning_capacity/npias/current)

<sup>4</sup> Wisconsin State Airport System Plan 2030 (Retrieved 10/6/2023): <https://wisconsin.gov/Pages/projects/multimodal/sasp/air2030-chap.aspx>

<sup>5</sup> National Environmental Policy Act: <https://ceq.doe.gov/>

provide environmental documentation to assist local, state, federal officials, and the public in evaluating the proposed action.

This EA is broken down into 7 chapters. Chapter 2 provides discussion of alternatives, Chapter 3 discusses the affected environment, Chapter 4 addresses the environmental consequences, Chapter 5 describes other environmental considerations, Chapter 6 describes the public coordination and participation, and Chapter 7 provides a list of personnel involved with preparing this document.

## 1.2 Project Purpose and Need

The Airport is proposing to decommission and remove Runway 1R/19L and modify the supporting taxiway network. The goal of the proposed project is to meet the purpose and need defined in this section.

In September of 2022 the Airport completed a Master Plan Update (MPU)<sup>6</sup>. The MPU established needs and goals for the future of the Airport<sup>7</sup>. Through the MPU the opportunity to right size the airfield was analyzed. The MPU airfield analysis focused on balancing the runway configuration with forecast demand, protecting the ability to accommodate growth, and optimizing capacity benefits in the context of future Operation and Maintenance costs and capital expenses<sup>8</sup>. Currently, Runway 1R/19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways. Additionally, Runway 1R/19L primarily services military aircraft capable of operating on a 4,000-foot-long runway<sup>9</sup>. In 2023 a pavement inspection was completed, very poor to fair pavement conditions were identified. The purpose of the proposed project is to align the airfield configuration with the MPU development needs and the recently Federal Aviation Administration (FAA) approved Airport Layout Plan (ALP).

The need for the proposed project is based on addressing the rightsizing needs of the airport by removing underutilized and obsolete pavement. Currently, the Airport operates using a five-runway configuration. Through the most recent MPU, it was identified that by using a three-runway system the Airport would still be able to accommodate demand through the 2040 planning horizon. Utilizing a three-runway system the airfield taxiway network can be modified to fulfill the need to enhance aircraft circulation and increase efficiency. Additionally, the proposed action is needed to improve safety and reduce operation and maintenance costs associated with items such as deteriorating

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<sup>6</sup> Master Plan Update Website: <https://www.mkeupdate.com/>

<sup>7</sup> Master Plan Update, Introduction (Section 1): <https://www.mkeupdate.com/application/files/5216/6372/0039/MPU-Section1-Introduction-Final-2022-09-20.pdf>

<sup>8</sup> Master Plan Update, Section 6.1 (Refined Airfield Development): <https://www.mkeupdate.com/application/files/7316/6373/8358/MPU-Section6-AirportDevelopmentPlan-Final-2022-09-20.pdf>

<sup>9</sup> Master Plan Update, Section 4.2.1 (Critical Aircraft): <https://www.mkeupdate.com/application/files/9516/6372/8837/MPU-Section4-Requirements-Final-2022-09-20.pdf>

pavement, lighting repairs, and snow plowing. The proposed action facilitates future development to meet the identified future needs of the Airport without requiring the acquisition of additional property, while ensuring Airport resources are prudently deployed.

### **1.3 Requested Federal Action**

NEPA requires that environmental information is available to public officials and citizens before decisions are made and before actions are taken. To fulfill the requirements of NEPA, FAA Order 5050.4B<sup>10</sup> and FAA Order 1050.1F<sup>11</sup>, specify how the FAA will consider environmental impacts associated with a Federal Action. This EA was prepared in general accordance with FAA orders 5050.4B and 1050.1F for the proposed improvements at the Airport.

The FAA will evaluate the EA and either issue a FONSI or request that an EIS be completed.

If the preferred alternative is selected and a FONSI is issued, plan development could begin with construction to follow.

### **1.4 Other Actions**

The Ten-Year Airport Improvement Program identifies several potential improvements to the Airport<sup>12</sup>. Potential and ongoing airfield improvements identified for design and construction in the near future include<sup>13</sup>:

- Decommission and Removal of Runway 13/31 and Removal of Taxiway U and Taxiway G
- Rehabilitate Bullseye (Runway 1L-19R and Runway 7R-25L Intersection)
- Taxiway A Connector Rehabilitation and Removal
- North Apron Rehabilitation
- Taxiway C Rehabilitation
- Taxiway F Rehabilitation
- Taxiway Y Rehabilitation
- South Airfield Rehabilitation
- South Ramp Taxiway Strengthening

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<sup>10</sup> FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, U.S. Department of Transportation, Federal Aviation Administration, April 28, 2006: [https://www.faa.gov/sites/faa.gov/files/2022-07/5050-4B\\_complete.pdf](https://www.faa.gov/sites/faa.gov/files/2022-07/5050-4B_complete.pdf)

<sup>11</sup> FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, U.S. Department of Transportation, Federal Aviation Administration, July 16, 2015: [https://www.faa.gov/documentLibrary/media/Order/FAA\\_Order\\_1050\\_1F.pdf](https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1050_1F.pdf)

<sup>12</sup> The Ten-Year Airport Improvement Program listing is a snapshot of the Airport's 10-year program, based on assumptions about available revenue, legislative decisions, and local funding. Inclusion in this program is neither a guarantee of funding nor an indicator of final approval.

<sup>13</sup> The list includes airfield-only projects listed in the most recent Airport CIP for 2023-2034.

Locally, Milwaukee County is planning projects, two of which are near the airport, including<sup>14</sup>:

- W. Rawson Avenue (CTH BB) Reconstruction from S. 13<sup>th</sup> Street to S. Howell Avenue (2025)
- S 76<sup>th</sup> Street (CTH U) Bridge over Forest Home (STH 24) Rehabilitation (2025)

The Airport is located within the Wisconsin Southeast Transportation Region. The Wisconsin Department of Transportation (WisDOT) is planning several projects in the southeast region, two of which are relatively near the Airport<sup>15</sup>.

- WIS 241 Resurfacing (College Ave. to Layton Ave.)
  - The project will address deteriorating road conditions by resurfacing the original roadway with 4-inches of new asphalt.
- 1-41/1-94 Mitchell Interchange Resurfacing
  - The project will resurface the I-41/43/94/894 interstate highway between Rawson Ave, Howard Avenue, and 35<sup>th</sup> Street.

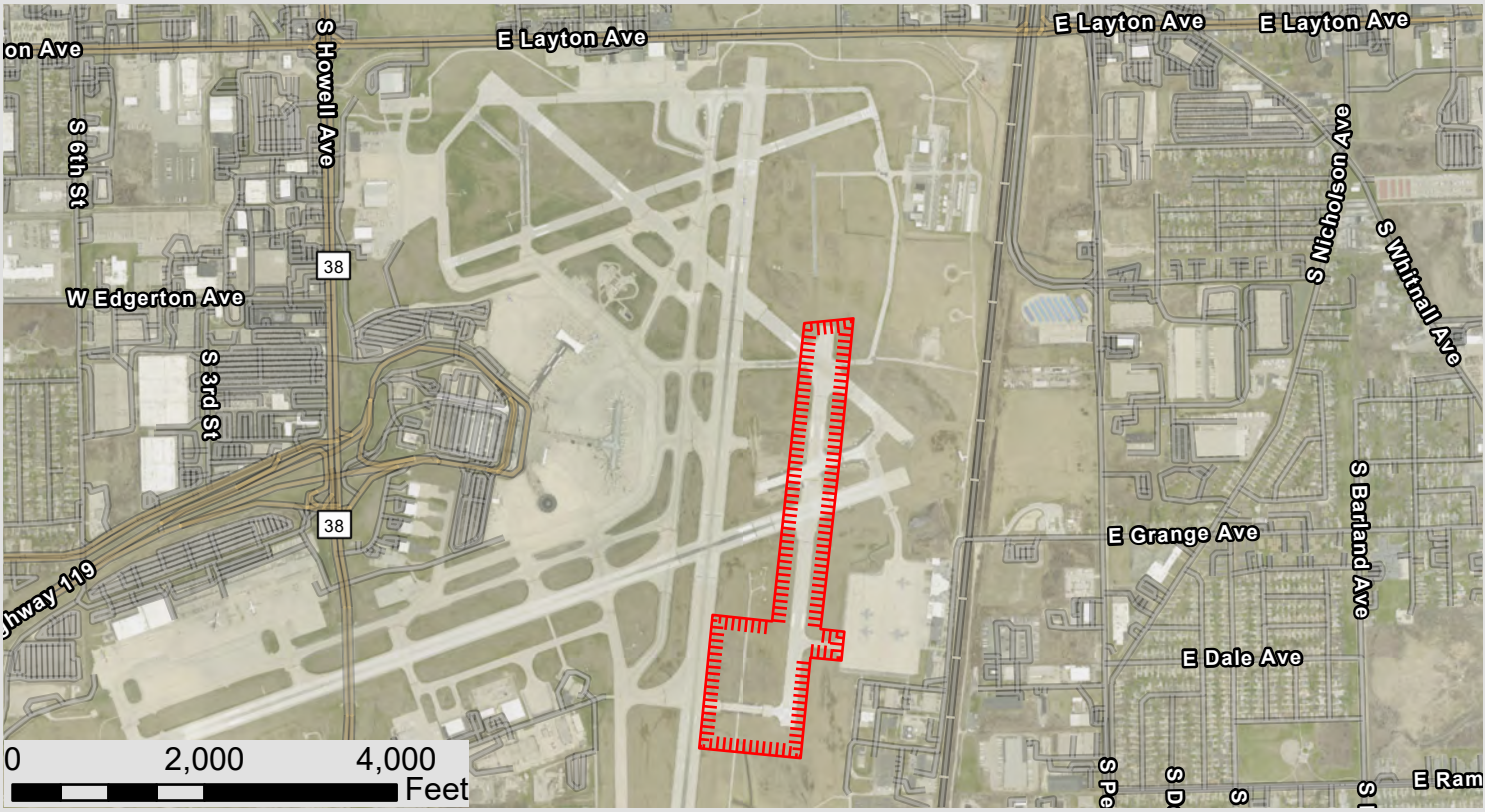
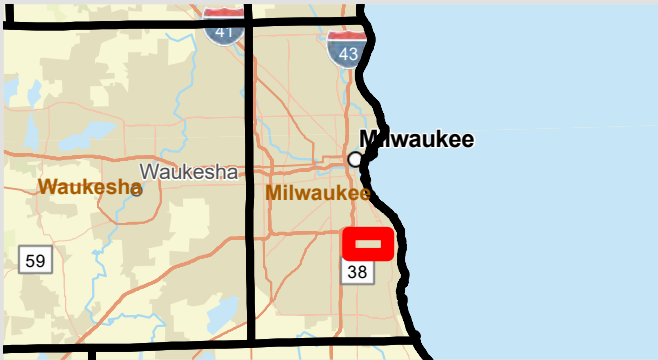
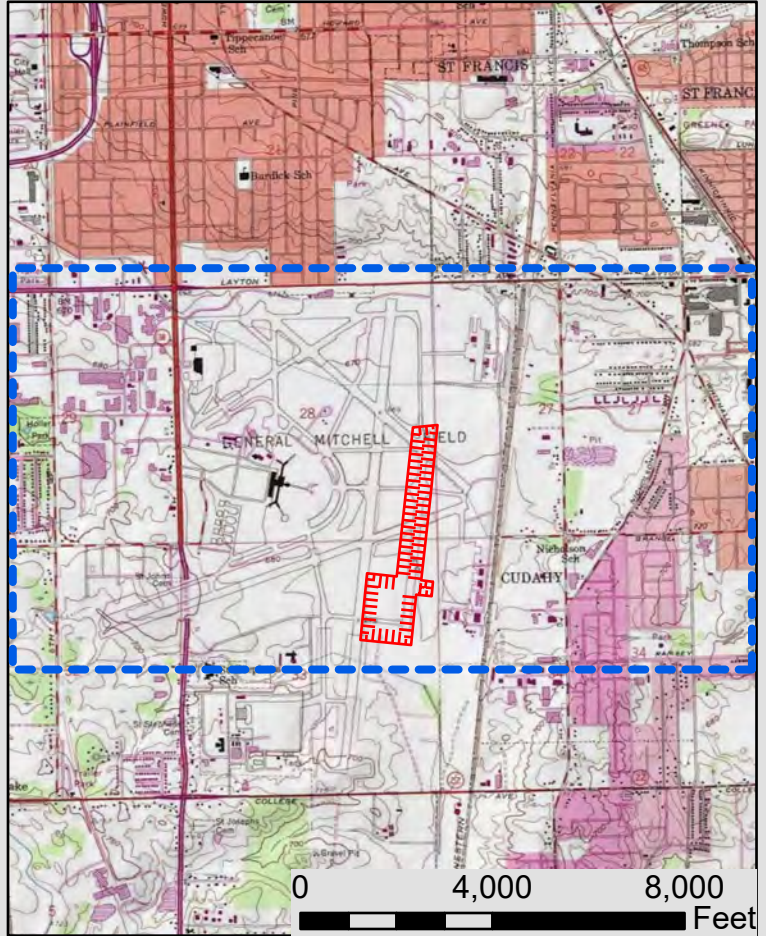
## 1.5 Anticipated Time Frame

The proposed time frame for completion of the proposed action, assuming funding is available, is decommissioning and removal beginning in 2027 with completion in 2028.

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<sup>14</sup> Milwaukee County, Department of Transportation: <https://county.milwaukee.gov/EN/Department-of-Transportation/Transportation-Services/Public-Involvement-Meetings>

<sup>15</sup> Southeast Transportation Region: <https://wisconsindot.gov/Pages/projects/by-region/se/default.aspx>



**Westwood**

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**MKE RUNWAY 1R-19L REMOVAL  
LOCATION MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**1-1**



Area of Potential Effects

# AIRPORT DIAGRAM

AL-262 (FAA)

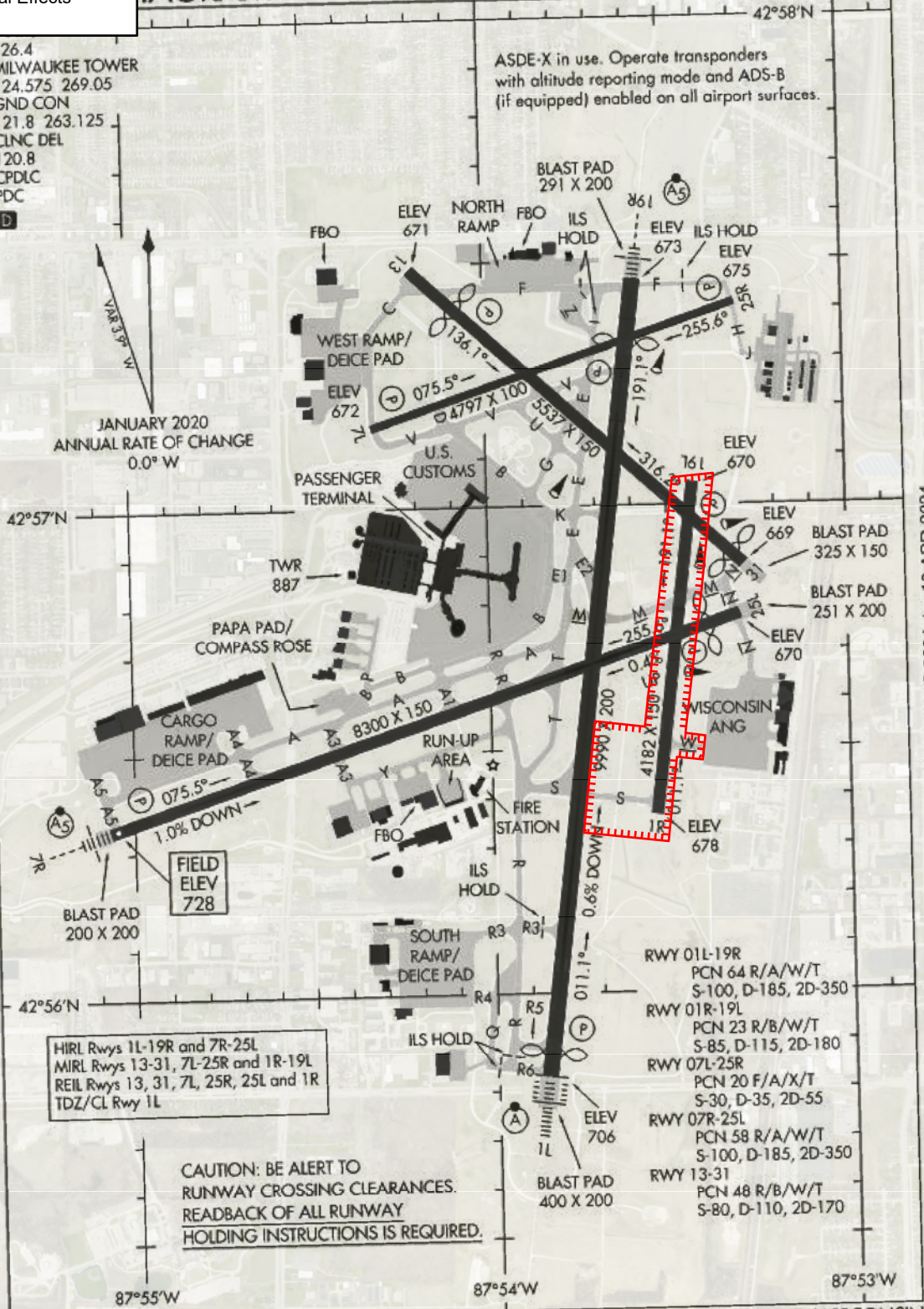
MILWAUKEE, WISCONSIN

126.4  
MILWAUKEE TOWER  
124.575 269.05  
GND CON  
121.8 263.125  
CLNC DEL  
120.8  
CPDLC  
PDC

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

EC-3, 21 MAR 2024 to 18 APR 2024

EC-3, 21 MAR 2024 to 18 APR 2024



HIRL Rwy 1L-19R and 7R-25L  
MIRL Rwy 13-31, 7L-25R and 1R-19L  
REIL Rwy 13, 31, 7L, 25R, 25L and 1R  
TDZ/CL Rwy 1L

CAUTION: BE ALERT TO  
RUNWAY CROSSING CLEARANCES.  
REDBACK OF ALL RUNWAY  
HOLDING INSTRUCTIONS IS REQUIRED.

## AIRPORT DIAGRAM

MILWAUKEE, WISCONSIN  
GENERAL MITCHELL INTL (MKE)

0 2,000 4,000  
Feet

Data Source:  
FAA (March/April 2024)

**Westwood**  
1 Systems Drive (920) 735-6900  
Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)



### MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**1-2**



## CHAPTER 2 - ALTERNATIVES

The objective of this chapter is to identify reasonable alternatives which accommodate the purpose and need identified in Chapter 1. The Council on Environmental Quality (CEQ) Regulations requires evaluation of alternatives (Sec. 1502.14) for projects to be compliant with NEPA<sup>16</sup>. FAA requirements of EAs for the analysis of alternatives are provided in FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions<sup>17</sup> and FAA Order 1050.1F, Environmental Impacts: Policies and Procedures<sup>18</sup>. In general, the greater degree of impacts the project would have the wider range of alternatives that should be evaluated. The objective of the alternatives analysis is to inform decision makers and the public on feasible alternatives, which accommodate the purpose and need, and avoid or minimize adverse impacts or enhance the quality of the human environment.

An alternative is considered not reasonable if it does not meet the identified purpose and need, or where the environmental impacts are excessive, particularly when compared to other alternatives. An alternative is also considered not feasible if it is neither reasonable nor practical to perform or where the cost of implementation would likely exceed the benefits.

### 2.1 Background

The Airport operates using a five-runway configuration, including two sets of parallel runways. The existing parallel runways are Runway 7L/25R and Runway 7R/25L orientated in an east/west direction and Runway 1L/19R and Runway 1R/19L orientated in a north/south direction. Runway 13/31 is orientated northwest/southeast. The Airport contains a vast taxiway network, numerous aprons, and vehicle service roads for airfield facility access.

The proposed action consists of decommissioning and removing Runway 1R/19L and modification of the supporting taxiway network. Runway 1R/19L primarily services military aircraft capable of operating on a 4,000 ft runway. The current runway critical aircraft is a Lockheed C-130 with an Aircraft Approach Category (AAC) C and Airplane Design Group (ADG) IV designations<sup>19</sup>. A pavement inspection was completed in 2023 and the Pavement Condition Index (PCI) values ranging from 16-50 (very poor to fair) were identified. Areas with PCI values of 0 – 40 are typically mitigated through a reconstruction. Thus, to maintain Runway 1R/19L at full operating capabilities, the runway would require reconstruction. **Figure 2-1** shows an overview of the PCI values and their

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<sup>16</sup> Council on Environmental Quality Regulations Section 1502.14: [https://www.ecfr.gov/current/title-40/part-1502/section-1502.14#p-1502.14\(a\)](https://www.ecfr.gov/current/title-40/part-1502/section-1502.14#p-1502.14(a))

<sup>17</sup> FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, U.S. Department of Transportation, Federal Aviation Administration, April 28, 2006: [https://www.faa.gov/sites/faa.gov/files/2022-07/5050-4B\\_complete.pdf](https://www.faa.gov/sites/faa.gov/files/2022-07/5050-4B_complete.pdf)

<sup>18</sup> FAA Order 105.1F, Environmental Impacts: Policies and Procedures, U.S. Department of Transportation, Federal Aviation Administration, July 16, 2015: [https://www.faa.gov/documentlibrary/media/order/faa\\_order\\_1050\\_1f.pdf](https://www.faa.gov/documentlibrary/media/order/faa_order_1050_1f.pdf)

<sup>19</sup> Master Plan Update, Section 4.2.1 (Critical Aircraft): <https://www.mkeupdate.com/application/files/9516/6372/8837/MPU-Section4-Requirements-Final-2022-09-20.pdf>

location on the runway. Additionally, Runway 1R/19L is close in proximity to the 128<sup>th</sup> WI Air National Guard (WI ANG) Unit. The unit currently operates KC-135 aircraft but due to the proximity to the runway surfaces, parking locations of aircraft are restricted due to tail heights<sup>20</sup>.

Currently, there are two taxiways connecting the 128<sup>th</sup> WI ANG Unit ramp to the rest of the airfield. Taxiway N connects the ramp to Runway 7R/25L north of the apron and Taxiway W connects the ramp to Runway 1R/19L west of the apron. **Figure 2-2** provides a graphic of the existing runway, taxiway, and apron layout and identifies the ANG Unit ramp and access taxiways. To maintain western airfield access for the ANG Unit Ramp, the taxiway network would be modified to include a partial parallel taxiway. The proposed taxiway (Taxiway CC) would connect the existing Taxiway W to Taxiway S allowing access to Taxiway R and Runway 1L/19R.

The proposed action of decommissioning Runway 1R/19L was evaluated through the recently completed MPU. Through the MPU process, public information workshops were held. The public information workshops included presentations of the MPU conclusions and opportunities for input and feedback<sup>21</sup>.

The proposed action of decommissioning Runway 1R/19L would change flight paths for the Airport. A noise analysis was completed to quantify the noise impacts associated with the decommissioning of Runway 1R/19L as operations would shift to other runways. This EA will evaluate the impacts of the decommissioning and removal of Runway 1R/19L and alternatives for Taxiway CC. **Table 2-1** provides a summary of the alternatives evaluated. **Figure 2-3** provides a graphic representation of the location of the proposed action on airport property.

**Table 2-1. Proposed Project Alternative Summary**

<b>Alternative</b>	<b>Remove and Decommission Runway 1R/19L</b>	<b>Taxiway Modification</b>
No Action Alternative	No	None
Sponsor Proposed Action	Yes	Convert Runway 1R/19L pavement south of Taxiway W into Taxiway CC. Taxiway CC would connect Taxiway W and Taxiway S.
Alternative B	Yes	Construct Taxiway CC west of existing Runway 1R/19L pavement. Taxiway CC would connect Taxiway W and Taxiway S.

<sup>20</sup> Master Plan Update, Section 2.7.9 (Connected Support Facilities):  
<https://www.mkeupdate.com/application/files/8116/6372/6841/MPU-Section2-Inventory-Final-2022-09-20.pdf>

<sup>21</sup> Master Plan Update, Section 11 (Community and Stakeholder Engagement):  
<https://www.mkeupdate.com/application/files/1416/6373/1756/MPU-Section11-CommunityStakeholderEngagement-Final-2022-09-20.pdf>

## 2.2 No Action Alternative

Runway 1R/19L would remain in its current condition. None of the improvements proposed as part of the project would occur. The land, which currently consists of a paved runway and taxiways, would remain unchanged.

The No Action alternative was determined not to be a viable option since the existing pavement would likely to fall into disrepair creating operational issues and debris hazardous to aircraft. This may require reconstruction or the closure of Runway 1R/19L to air traffic due to the safety hazards. If Runway 1R/19L would require reconstruction, direct capital expenses would be incurred.

While the No Action alternative does not meet the purpose and need for the proposed project, it does serve as a baseline for a comparison of impacts related to the Proposed Action and is retained for analysis.

## 2.3 Sponsor Proposed Action (SPA) - Decommission and Remove Runway 1R/19L and Convert into Parallel Taxiway CC (formerly referred to as Alternate A)

The SPA would decommission and remove Runway 1R/19L and convert the existing Runway 1R/19L pavement south of Taxiway W into Taxiway CC. Taxiway CC would connect the existing Taxiway W and Taxiway S to allow access to Runway 1L/19R from the 128<sup>th</sup> WI ANG Unit. The proposed converted taxiway would utilize the existing runway pavement footprint. **Figure 2-4** provides a graphic representation of the SPA.

The proposed runway removal and converted taxiway would be designed based on the guidance provided in the appropriate FAA's Advisory Circulars. Design for the removal and conversion into taxiway may include the following components:

- Pavement Removal –The existing pavement consists of concrete and asphalt pavements varying in depths up to 16” below existing surface<sup>22</sup>. Approximately 53,000 SY of concrete or asphalt pavement would be removed north of Taxiway W. Pavement removal may consist of removing existing concrete and/or asphalt pavement, placement of on-site or off-site fill (as required), topsoil placement, and restoration to turf. Concrete pavement removed from the project may be crushed onsite to be recycled as base course. Recycled base course may be used for pavement rehabilitation or reconstruction associated with the project or other projects on the airfield. It is anticipated that any excess concrete pavement or recycled base course would be transported offsite. Asphalt pavement may be pulverized or milled and transported offsite or recycled for use on other projects on the airfield. It is anticipated that any recycled materials transported offsite would become property of the contractor performing the work.

---

<sup>22</sup> Wisconsin 2021 IDEA Airport Pavement Management System: <https://idea.appliedpavement.com/hosting/wisconsin/airport-details/airport-details.html>

- Intersection Adjustments – Runway 1R/19L intersects Runway 7R/25L and Taxiway M. Depending on funding considerations, the adjacent concrete pavement at the intersections may remain in place as a concrete shoulder or removed and replaced to align with the typical asphalt paved shoulders. Additionally, Taxiway M was constructed using FAA fillet design geometry for aircraft turning movements, with the removal of Runway 1R/19L the additional pavement associated with the fillet design is no longer necessary for aircraft turning and may be removed.
- Conversion to Taxiway CC – To convert Runway 1R/19L between Taxiway W and Taxiway S the existing pavement footprint (approximately 33,000 SY of pavement) would be used. It is anticipated that the existing pavement structure of Runway 1R/19L, Taxiway W, and Taxiway S would be used for the converted taxiway. Portions of the pavement may require reconstruction or strengthening to ensure adequate support for aircraft taxiing. Taxiway CC would be constructed to meet the critical aircraft taxiway requirements and utilize FAA pavement fillet guidance for turning movements. Any soil excavated for the addition for FAA pavement fillets may be used as fill for the other Runway 1R/19L pavement removal areas that would be restored to turf.
- Navigational Aids (NAVAIDs) and Airfield Lighting Removal – Runway 1R/19L has Medium Intensity Runway Lights (MIRLs), guidance signage, and Runway End Identifier Lights (REILs) for Runway 1R. Runway lights, taxiway lights, guidance signs, REILs, and other associated electrical infrastructure would be removed. The associated wiring, handholes, and duct banks may be removed or abandoned.
- Airfield Lighting Replacement and Adjustments - Guidance signs associated with Runway 1R/19L along adjoining taxiways and runways would be either removed or adjusted. Additionally, due to runway pavement removal there may be a need to adjust intersecting runway and taxiway lighting to comply with FAA standards. New taxiway lighting would be installed along Taxiway CC, Taxiway S, and Taxiway W.
- Airfield Pavement Markings - Due to the Runway 1R/19L decommissioning pavement markings would need to be removed and repainted to meet FAA standards. This includes hold lines, centerlines, lead in lines, and Runway 1L/19R marking adjustments.
- Drainage Removals and Realignment – The proposed action is not anticipated to alter existing drainage on the airfield as the project intends to remove pavement, topsoil, and restore to turf. Though not anticipated, minor underdrain or culvert adjustments may be needed to facilitate Taxiway CC.
- Temporary Construction Impacts
  - Construction Haul Roads and Staging Areas – Construction haul roads are expected to be kept to a minimum. Preliminary planning anticipates the use of existing pavement or gravel access roads as haul roads. All staging area are anticipated to be located on the airport and within the limits of previous staging areas. **Figure 2-5** shows the anticipated location of construction haul roads and staging areas.
  - Construction Excess Material Sites – Construction excess material sites are anticipated to be located off-Airport property as determined by the awarded

contractor. However, recycled base course materials may be used on other Airport projects occurring during pavement removal.

After the completion of the proposed Runway 1R/19L removal, the Airport would operate using the remaining runways. In the future, the airport may optimize the taxiway network crossing or utilizing portions of the removed runway. The Airport intends to maintain the removed areas similar to other non-paved/grass areas on the airfield through mowing and other miscellaneous maintenance activities.

The decommissioning and removal of Runway 1R/19L allows for on-Airport expansion without the need for land acquisition while maintaining existing airfield capacity. Additionally, the removal of Runway 1R/19L pavement limits direct capital expenses associated with reconstruction and aligns pavement geometry and airfield configuration similar to what is shown in the most recent ALP update<sup>23</sup>. Decommission and Remove Runway 1R/19L and Convert into Parallel Taxiway CC is the sponsor proposed action.

#### **2.4 Alternative B - Decommission and Remove Runway 1R/19L and Construction of Partial Parallel Taxiway CC**

Similar to the SPA, Alternative B includes the decommissioning and removal of Runway 1R/19L. Alternative B consists of the construction of a partial parallel taxiway (Taxiway CC) connecting the existing Taxiway W and Taxiway S to allow access to Runway 1L/19R from the 128<sup>th</sup> WI ANG Unit. Taxiway CC would be relocated west of the existing Runway 1R/19L centerline. **Figure 2-6** provides a graphic representation of the Alternate B action detail map.

The proposed runway removal and taxiway would be designed based on the guidance provided in the appropriate FAA's Advisory Circulars. Design for the Runway 1R/19L decommissioning and removals is anticipated to be the same as described in Section 2.3. Additionally, the temporary construction haul roads and staging areas described in Section 2.3 are anticipated to be the same. Design components only relating to the construction of Alternate B may include:

- Pavement Removal and Adjustments - Approximately 73,000 SY of Runway 1R/19L of concrete or asphalt pavement will be removed. Pavement removal may consist of removing concrete and/or asphalt pavement, placement of on-site or off-site fill (as required), topsoil placement, and restoration to turf. Concrete pavement removed from Runway 1R/19L may be crushed onsite to be recycled as base course and asphalt pavement may be pulverized and used as recycled material for the construction of Taxiway CC.
- Partial Parallel Taxiway Construction – Taxiway CC would be constructed to meet the critical aircraft taxiway requirements and utilize FAA intersection fillet guidance for turning movements. The existing pavement structure of Taxiway W, and Taxiway S may be used to connect to Taxiway CC or may be reconstructed in order to facilitate FAA intersection fillets.

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<sup>23</sup> Master Plan Update, Section 5.6 (Evaluation Criteria and Methodology):  
<https://www.mkeupdate.com/application/files/6316/6374/4686/MPU-Section5-AlternativesAnalysis-4of4-Final-2022-09-20.pdf>

Soil excavated for the construction of Taxiway CC may be used as fill for the other Runway 1R/19L pavement removal areas that would be restored to turf.

- Airfield Lighting and Pavement Markings – New taxiway lighting and signage would be installed along Taxiway CC, Taxiway S, and Taxiway W. Additionally, pavement markings would be adjusted and installed.
- Drainage Removals and Realignment – The construction of Taxiway CC is not anticipated to significantly alter existing drainage on the airfield. Underdrain is anticipated to be installed along Taxiway CC. Underdrain additions and culvert adjustments may be needed to facilitate the Taxiway CC construction.

After the completion of the proposed Runway 1R/19L removal and construction of Taxiway CC, the airport will operate using the remaining runways. In the future, the airport may optimize the taxiway network crossing or utilizing portions of the removed runway. The airport intends to maintain the removed pavement areas similar to other non-paved/grass areas on the airfield through mowing and other miscellaneous maintenance activities.

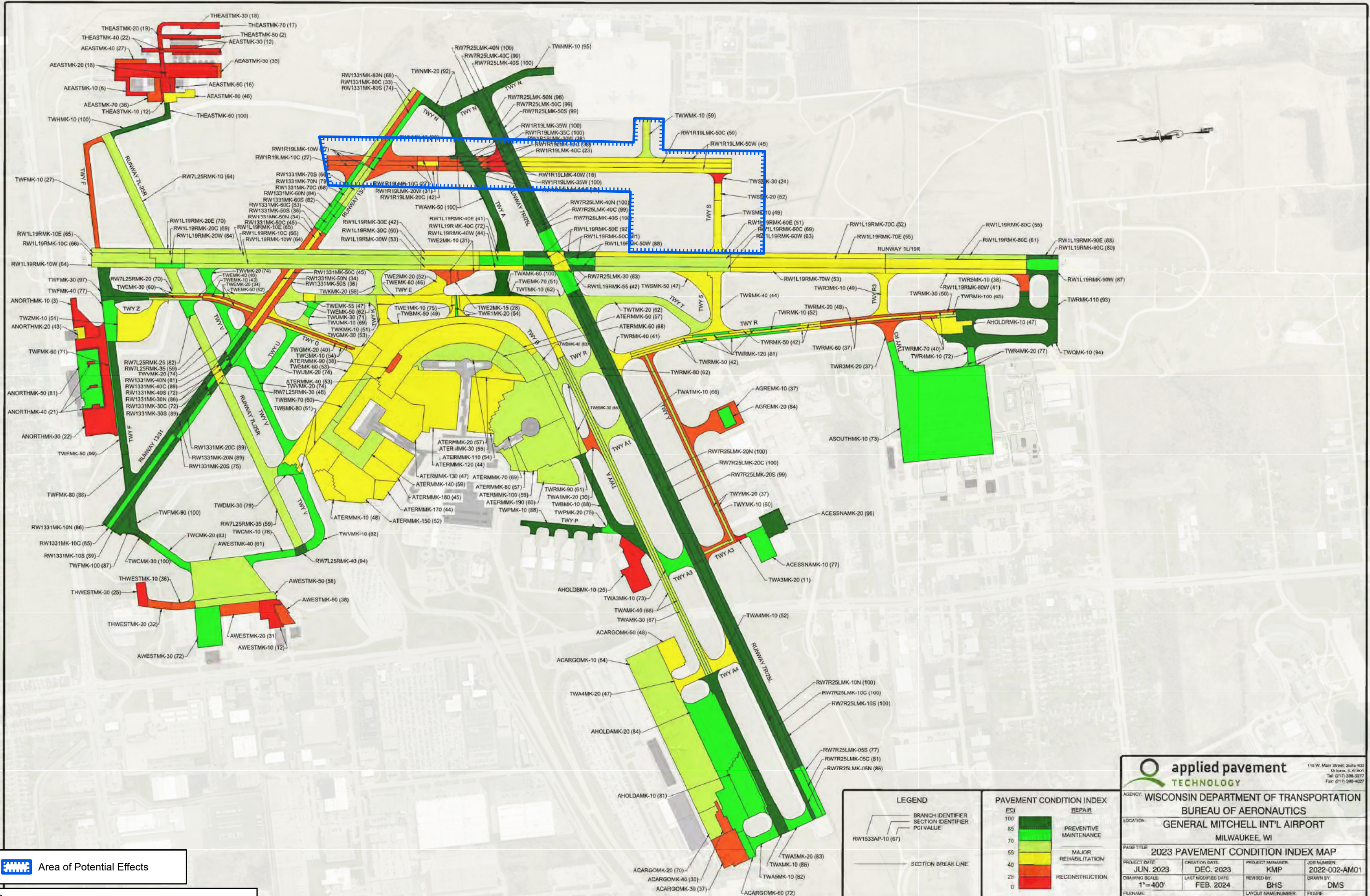
The decommissioning and removal of Runway 1R/19L allows for on-airport expansion without the need for land acquisition while maintaining existing airfield capacity. Additionally, the removal of Runway 1R/19L pavement limits direct capital expenses associated with reconstruction and aligns pavement geometry and airfield configuration similar to what is shown in the most recent ALP update<sup>24</sup>. Due to the increased cost of new construction of a parallel taxiway this alternative is not preferred by the sponsor. However, Alternative B is retained for analysis as future airfield expansion may include the construction of a parallel taxiway.

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<sup>24</sup> Master Plan Update, Section 5.6 (Evaluation Criteria and Methodology):  
<https://www.mkeupdate.com/application/files/6316/6374/4686/MPU-Section5-AlternativesAnalysis-4of4-Final-2022-09-20.pdf>



Project Manager: KMW  
 Project Engineer: KMW  
 Drawn By: KMW  
 Checked By: KMW  
 Date: 4/17/2024



Area of Potential Effects

Source:  
 2023 General Mitchell International Airport PCI Map

**LEGEND**

— BRANCH IDENTIFIER  
 — SECTION IDENTIFIER  
 — PCI VALUE

— SECTION BREAK LINE

**PAVEMENT CONDITION INDEX**

PCI	REPAIR
100	PREVENTIVE MAINTENANCE
85	PREVENTIVE MAINTENANCE
70	PREVENTIVE MAINTENANCE
55	MAJOR REHABILITATION
40	MAJOR REHABILITATION
25	RECONSTRUCTION
0	RECONSTRUCTION

**applied pavement TECHNOLOGY**  
 115 W. Main Street, Suite 400  
 Oshkosh, WI 54901  
 Tel: (917) 388-9377  
 Fax: (917) 388-9327

AGENCY: WISCONSIN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF AERONAUTICS  
 LOCATION: GENERAL MITCHELL INT'L AIRPORT  
 MILWAUKEE, WI

PAGE TITLE: 2023 PAVEMENT CONDITION INDEX MAP

PROJECT DATE: JUN. 2023	CREATION DATE: DEC. 2023	PROJECT MANAGER: KMP	JOB NUMBER: 2022-002-AM01
DRAWING SCALE: 1"=400'	LAST MODIFIED DATE: FEB. 2024	REVISED BY: BHS	DRAWN BY: DMS
FILENAME: MILWAUKEE-MKE.DWG	LAYOUT NAME/NUMBER: PCI	FIGURE: 7	

**MKE RUNWAY 1R-19L REMOVAL  
 2023 PAVEMENT CONDITION INDEX (PCI) MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN



SCALE: N/A  
 PROJECT NO. R3001844.00  
 FIGURE NO. 2-1

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Area of Potential Effects

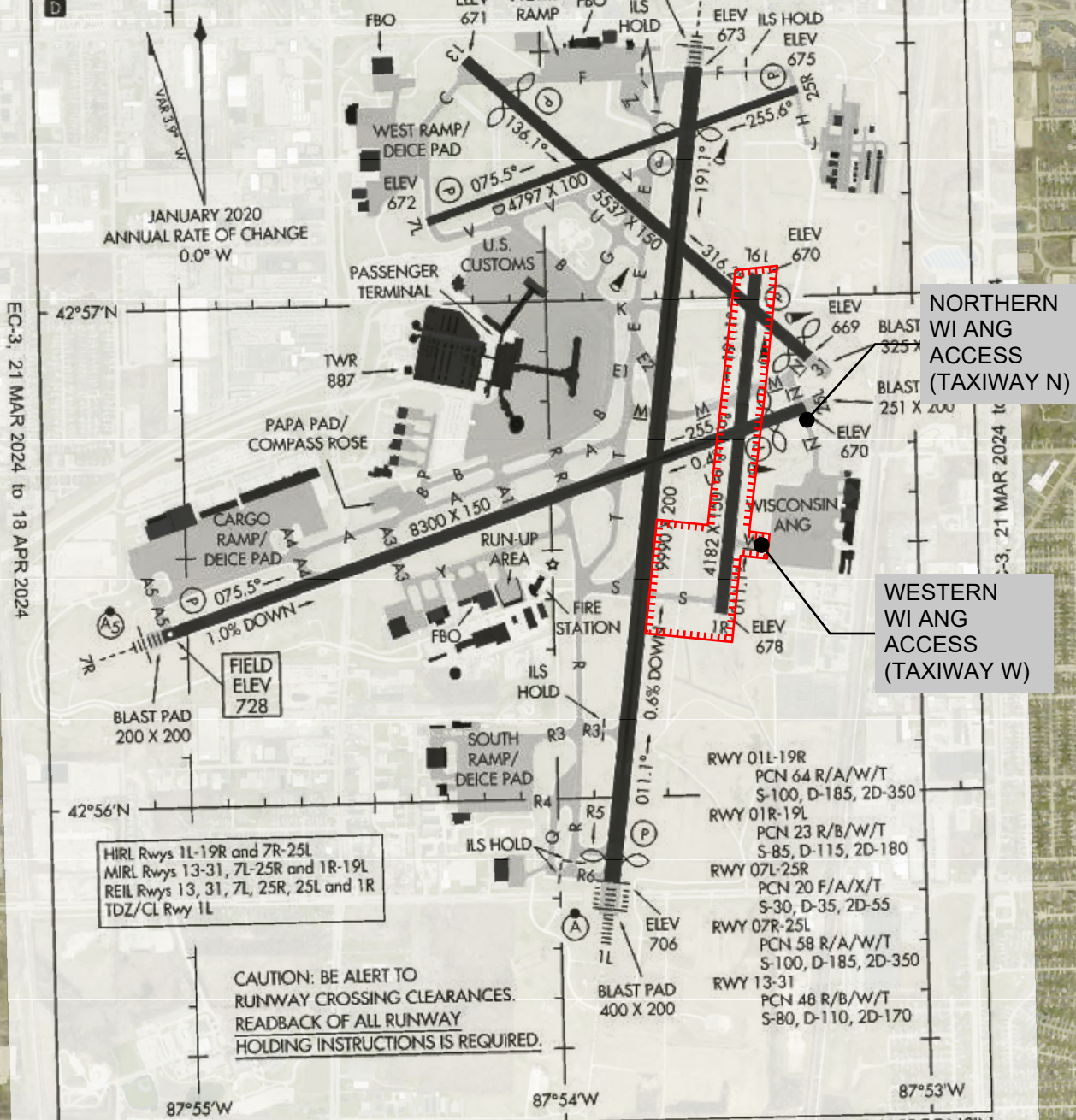
# AIRPORT DIAGRAM

AL-262 (FAA)

MILWAUKEE, WISCONSIN

126.4  
MILWAUKEE TOWER  
124.575 269.05  
GND CON  
121.8 263.125  
CLNC DEL  
120.8  
CPDLC  
PDC

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.



NORTHERN WI ANG ACCESS (TAXIWAY N)

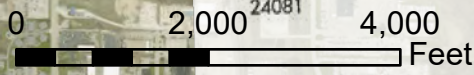
WESTERN WI ANG ACCESS (TAXIWAY W)

EC-3, 21 MAR 2024 to 18 APR 2024

EC-3, 21 MAR 2024 to 18 APR 2024

## AIRPORT DIAGRAM

MILWAUKEE, WISCONSIN  
GENERAL MITCHELL INTL (MKE)



Data Source:  
FAA (March/April 2024)

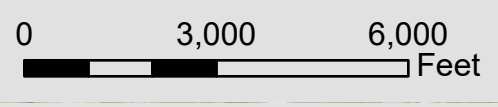
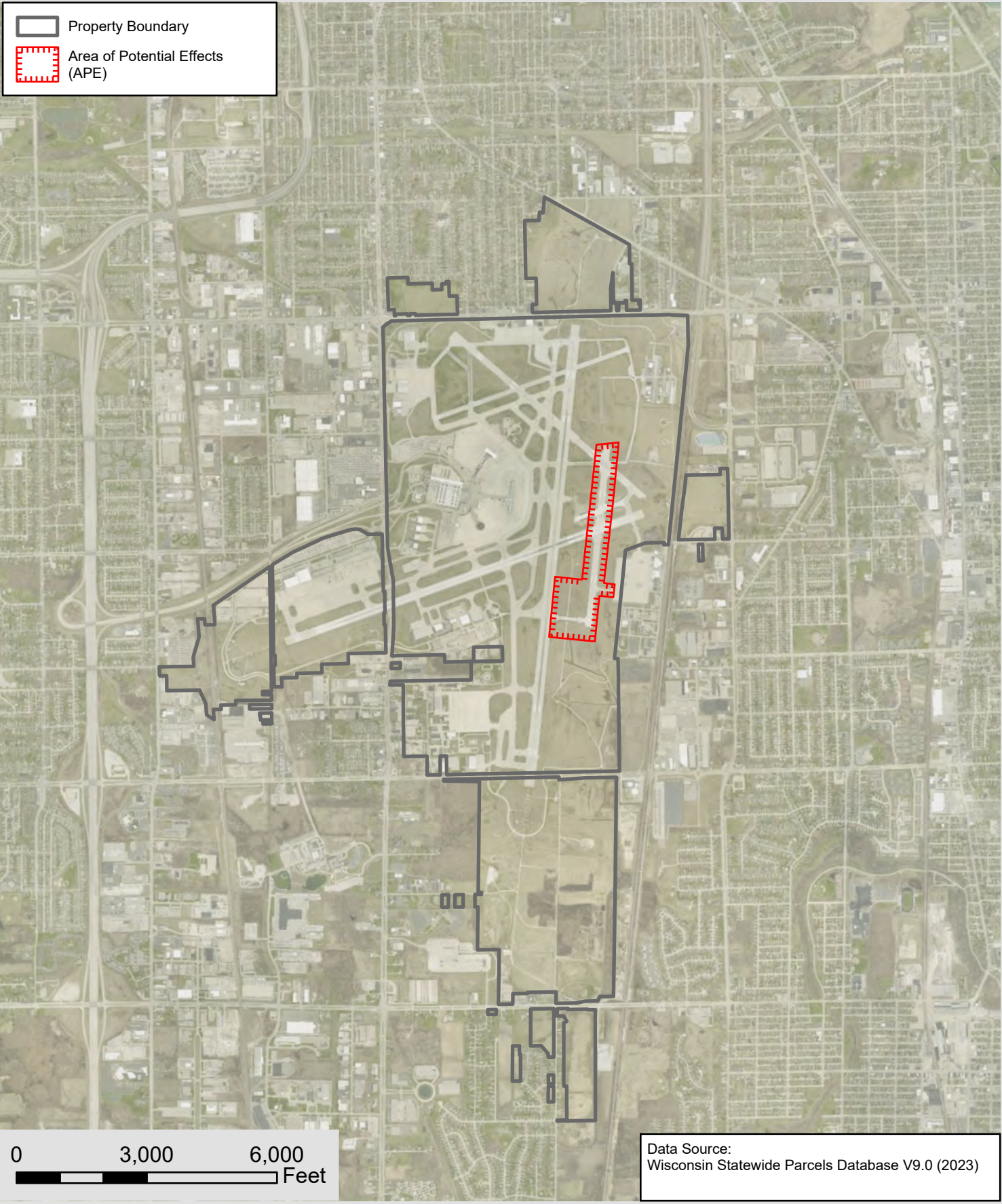
**Westwood**  
1 Systems Drive (920) 735-6900  
Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)



**MKE RUNWAY 1R-19L REMOVAL  
WI ANG UNIT  
CONNECTOR TAXIWAY MAP**  
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

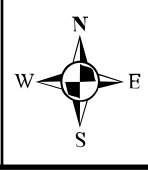
Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**2-2**



Data Source:  
Wisconsin Statewide Parcels Database V9.0 (2023)

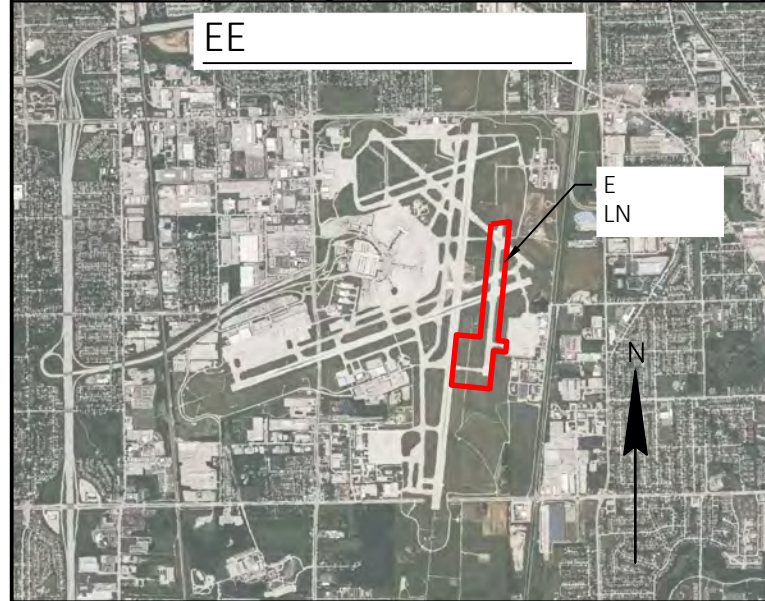
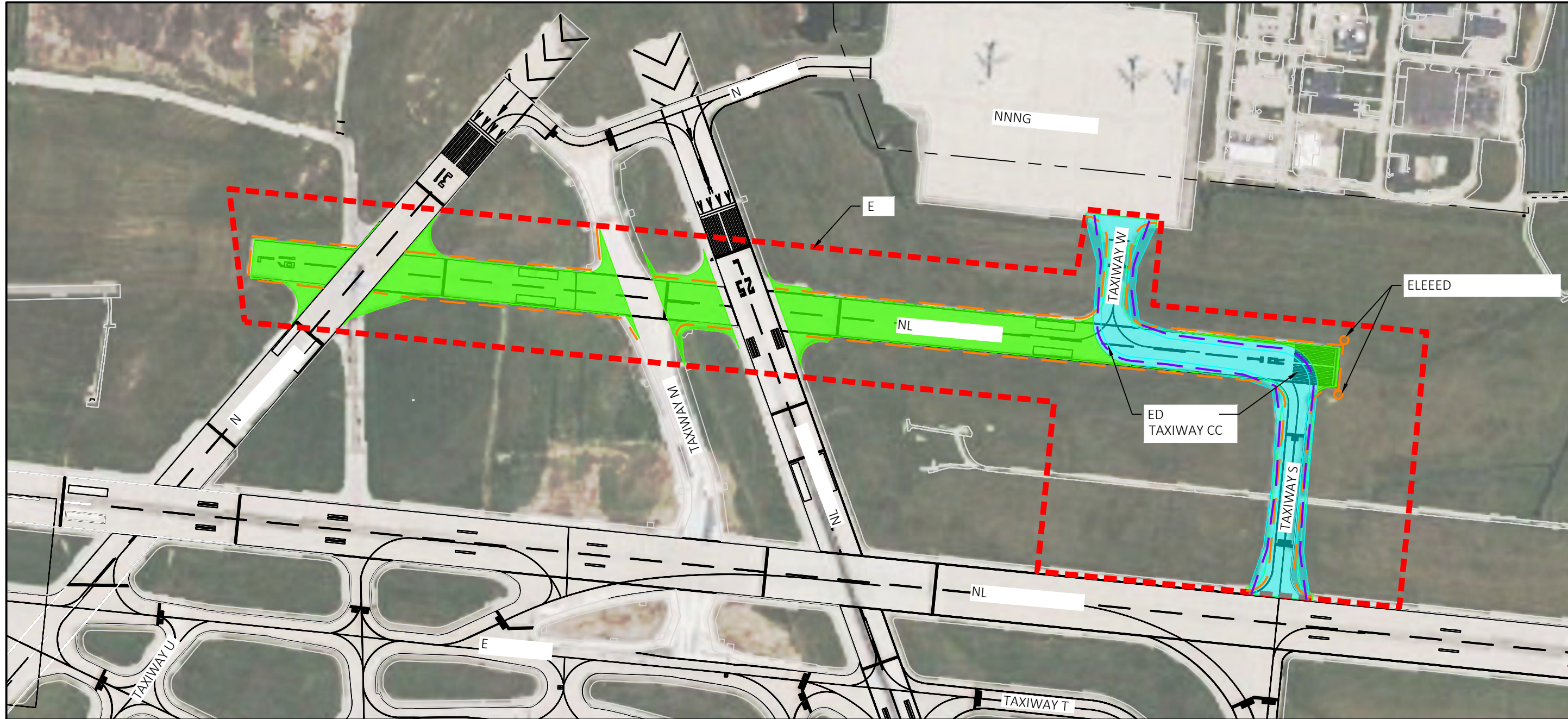
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Appleton, WI 54914 (920) 735-6900  
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**MKE RUNWAY 1R-19L REMOVAL  
AIRPORT PROPERTY MAP**  
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024

SCALE:  
1 in = 3,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**2-3**

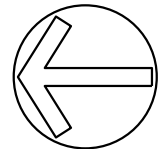


**LEGEND**

	AREA OF POTENTIAL EFFECTS (APE)
	ANTICIPATED PAVEMENT REMOVAL
	TAXIWAY CONVERSION
	AIRFIELD LIGHTING/NAVAID REMOVALS
	NEW AIRFIELD LIGHTING

**NOTE:**

- .. ELNLLNGEEDNEENGINEENG  
NLNDDEGNLLDENEELLGDNGL  
NGLNDELEL
- 2. NNNDL
  - 2.1. GDNGNDGNDNDELNN
  - 2.2. ELDGNGEELDENNDNENLLN
  - 2.3. EENNGDENNN









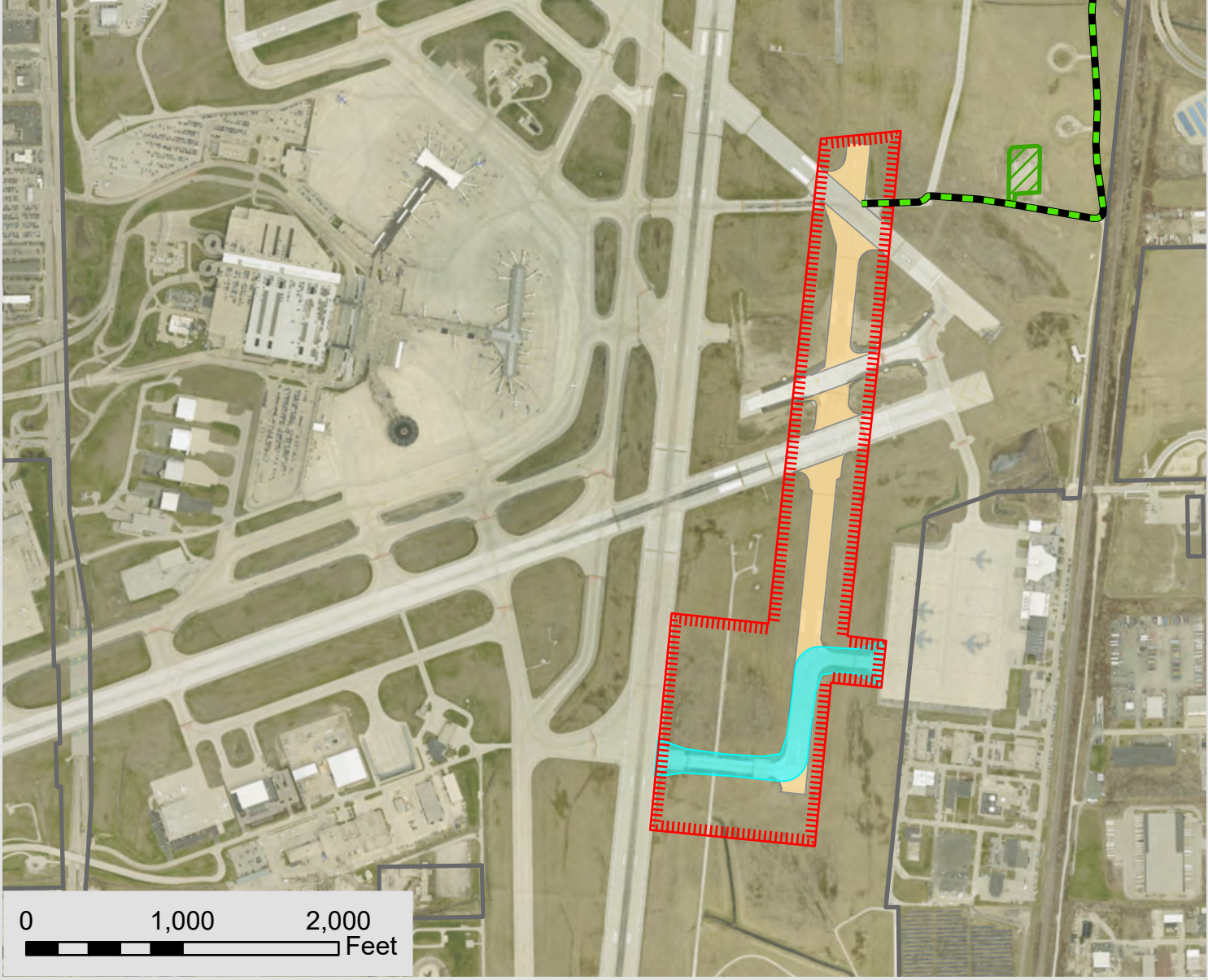
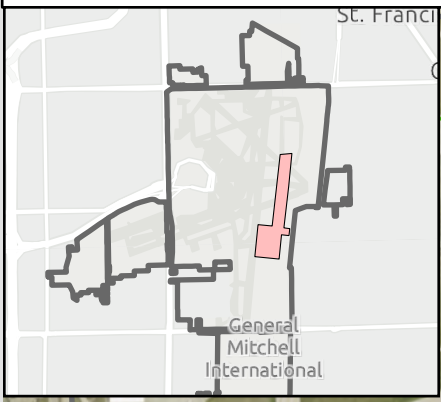
**Westwood**  
 ONE SYSTEMS DRIVE  
 APPLETON, WI 54914  
 PHONE: (920) 735-6900  
 FAX: (920) 830-6100

**MKE RUNWAY 1R-19L REMOVAL  
 SPONSOR - PROPOSED ACTION  
 DETAIL MAP**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

PROJECT NO: R3001844-00  
 DRAWN BY: KMW  
 DATE: 03/01/2024  
 FIGURE 2-4

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-  Property Boundary
-  Area of Potential Effects (APE)
-  Pavement Removal
-  Potential Haul Route (Existing paved/gravel access road)
-  Potential Staging Area (Existing Airport Construction Staging Areas)
-  Converted Parallel Taxiway (Proposed Action Alternative)



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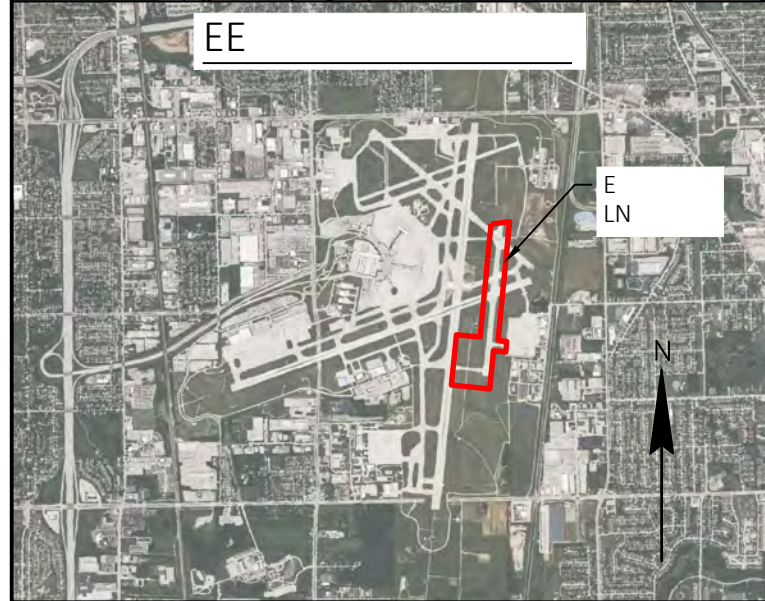
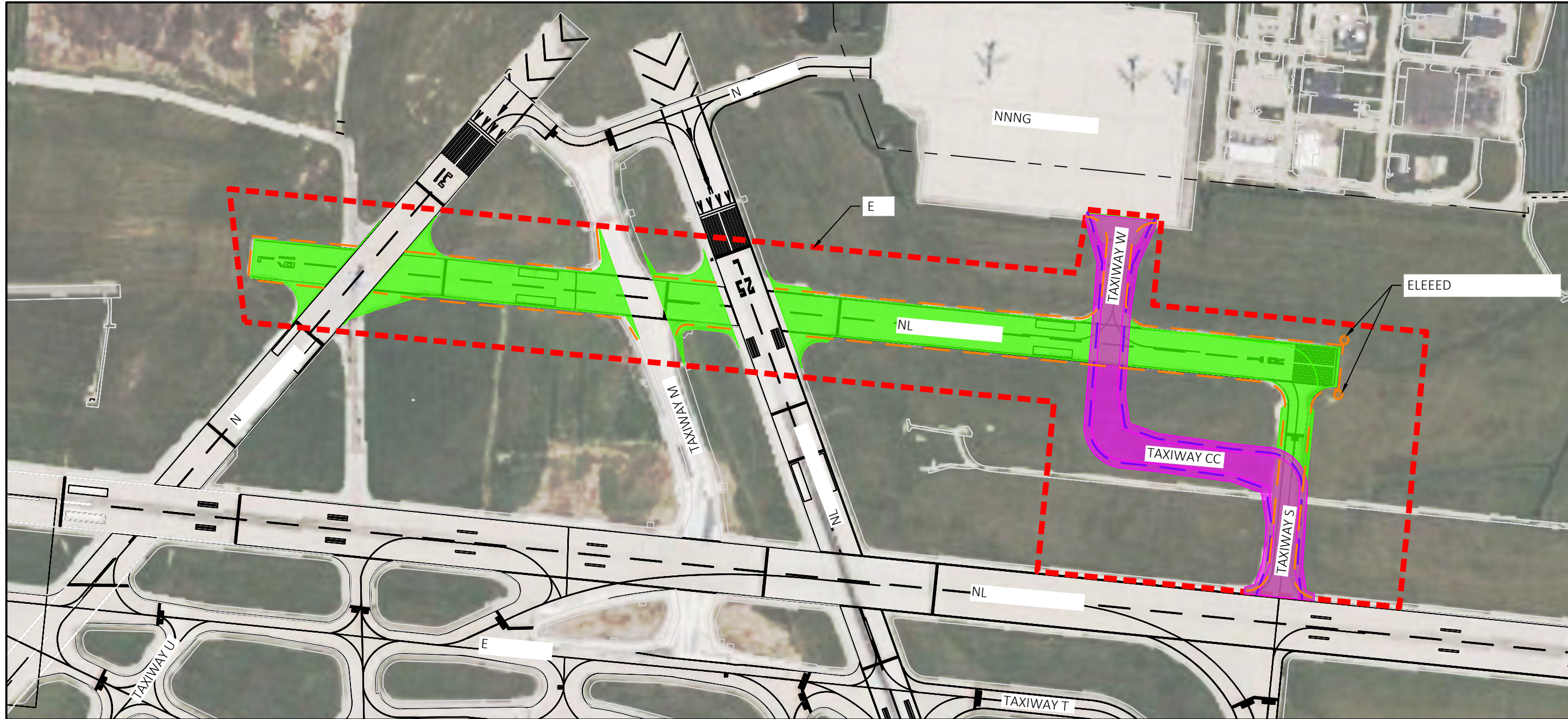
**MKE RUNWAY 1R-19L REMOVAL  
 PROPOSED ACTION LOCATION**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 1,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**2-5**

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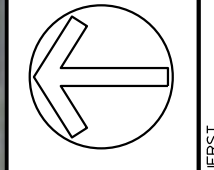


**LEGEND**

	AREA OF POTENTIAL EFFECTS (APE)
	PAVEMENT REMOVAL
	TAXIWAY RELOCATION AND CONSTRUCTION
	AIRFIELD LIGHTING/NAVAID REMOVALS
	NEW AIRFIELD LIGHTING

**NOTE:**

- .. ELNLLNGEEDNEENGINEENG  
NLNDDEGNLLDENEELLGDNGL  
NGLNDELEL
- 2. NNNDL
  - 2.1. GDNGNDGNDNDELNN
  - 2.2. ELDGNGEELDENNDNENLLN
  - 2.3. EENNGDENNN



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**MKE RUNWAY 1R-19L REMOVAL  
 ALTERNATE B - DETAIL MAP**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

PROJECT NO: R3001844-00  
 DRAWN BY: KMW  
 DATE: 03/01/2024  
 FIGURE 2-6

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## CHAPTER 3 - AFFECTED ENVIRONMENT

This chapter provides a background of the existing affected environment of the proposed project area. The potential environmental impacts of the proposed project are evaluated in Chapter 4, Environmental Consequences.

### 3.1 Airport Location and History

The Airport is located in the City of Milwaukee, Milwaukee County, Wisconsin; approximately two miles west of Lake Michigan and approximately five miles south of downtown Milwaukee. The Airport is located approximately 75 miles north of downtown Chicago. The Airport coordinates are latitude N42° 56' 48.955" and longitude W87° 53' 49.432"<sup>25</sup>. Specifically, the proposed project is located in Sections 28 & 33 of Township 6 North, Range 22 East, City of Milwaukee, Milwaukee County, Wisconsin<sup>26</sup>. **Figure 3-1** provides a graphic representation of the Airport's location.

The current Airport site was established in 1926 when land was purchased by Milwaukee County, who continues to own and operate the Airport<sup>27</sup>. The Airport is named in honor of Brigadier General William "Billy" Mitchell who was a Milwaukee native and military aviation pioneer<sup>28</sup>.

### 3.2 Proposed Project Location

The proposed project site would be located on approximately 70 acres of Airport land. The proposed project site would be located around and on pavement and in grassy areas around Runway 1R/19L, Taxiway S, and Taxiway W.

**Figure 3-2** shows the Airport property boundary in relation to the proposed project areas on the Airport and surrounding properties. **Figure 3-3** shows the location of the SPA and alternative, potential staging area, and potential haul routes.

### 3.3 Airport Facilities

Presently, the Airport operates five runways, including two sets of parallel runways. The existing parallel runways are Runway 7L/25R and Runway 7R/25L orientated in an east/west direction and Runway 1L/19R and Runway 1R/19L orientated in a north/south direction. Runway 13/31 is orientated northwest/southeast. **Table 3-1** lists runway characteristics, including length, width, lighting, and NAVAIDs.

---

<sup>25</sup> FAA Airport Data and Information Portal: <https://adip.faa.gov/agis/public/#/simpleAirportMap/MKE>

<sup>26</sup> WDNR Open Data, PLSS Quarter Sections: <https://data-wi-dnr.opendata.arcgis.com/maps/plss-quarter-sections>

<sup>27</sup> MKE Airport History: <https://www.mitchellairport.com/airport-information/history#Aviation-History>

<sup>28</sup> MKE Airport History: <https://www.mitchellairport.com/airport-information/history#General-Mitchell>

**Table 3-1. Runway Characteristics<sup>29</sup>**

Characteristics	Runway									
	1L	19R	1R	19L	7L	25R	7R	25L	13	31
Length (ft)	9990		4182		4797		8300		5537	
Width (ft)	200		150		100		150		150	
Navigational Aids	ALSF-2, TDZ/CL LIGHTS, GS, LOC, RVR, DME	MALSR, GS, LOC, RVR, DME	REIL	-	REIL	REIL	GS, LOC, DME	REIL, LOC, DME	REIL	REIL
Visual Aids	PAPI	PAPI	-	-	PAPI	PAPI	PAPI	PAPI	PAPI	PAPI
Lighting	HIRL		MIRL		MIRL		HIRL		MIRL	
Approach Minimums	1/2 mile	1/2 mile	1 mile	1 mile	1 mile	1 mile	1/2 mile	1 mile	1 mile	1 mile
Critical Aircraft	D/V/600		C/IV/5000		B/II/5000		D/V/5000		B/II/5000	
Approach RPZ Area (Acres)	78.9	78.9	29.5	29.5	13.8	13.8	78.9	29.5	13.8	13.8
<p>ALSF-2: Approach Lighting System with Sequence Flashing Lights            TDZ: Touchdown Zone            CL: Centerline            GS: Glide Slope            RVR: Runway Visual Range            DME: Distance Measuring Equipment            MALSR: Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights            LOC: Localizer            HIRL: High Intensity Runway Lighting            MIRL: Medium Intensity Runway Lighting            REIL: Runway End Identifier Lights            PAPI: Precision Approach Path Indicator</p>										

As a result of the proposed project, Runway 1R/19L will be changed from the existing state. No other runway is anticipated to be impacted as a result of the proposed project. **Table 3-2** lists runway characteristics, including length, width, lighting, and NAVAIDs after the SPA.

<sup>29</sup> MKE Airport Layout Plan: <https://www.mkeupdate.com/application/files/5016/6374/0496/MPU-AppendixF-AirportLayoutPlan-1of5-Final-2022-09-20.pdf>

**Table 3-2. Runway Characteristics After Proposed Action**

Characteristics	Runway									
	1L	19R	1R	19L	7L	25R	7R	25L	13	31
Length (ft)	9990		Decommissioned		4797		8300		5537	
Width (ft)	200				100		150		150	
Navigational Aids	ALSF-2, TDZ/CL LIGHTS, GS, LOC, RVR, DME	MALSR, GS, LOC, RVR, DME			REIL	REIL	GS, LOC, DME	REIL, LOC, DME	REIL	REIL
Visual Aids	PAPI	PAPI			PAPI	PAPI	PAPI	PAPI	PAPI	PAPI
Lighting	HIRL				MIRL		HIRL		MIRL	
Approach Minimums	1/2 mile	1/2 mile			1 mile	1 mile	1/2 mile	1 mile	1 mile	1 mile
Critical Aircraft	D/V/600				B/II/5000		D/V/5000		B/II/5000	
Approach RPZ Area (Acres)	78.9	78.9			13.8	13.8	78.9	29.5	13.8	13.8

The Airport operates a vast taxiway network, numerous aprons, and vehicle service roads for airfield facility access. **Table 3-3** lists the taxiways designations and functions located near or within the proposed project area. **Figure 3-4** provides a graphic representation of runway, taxiway, and apron layout.

**Table 3-3. Project Area Taxiway Characteristics**

Taxiway Designation	Taxiway Design Group	Taxiway Width (ft)	Taxiway Shoulder (ft)
M	5	75	30
W	5	75	N/A
S	5	75	30

As a result of the proposed project, the airport taxiway configuration may be altered. **Table 3-4** compares the current operating function of taxiways near or within the proposed project area to that of after the proposed action.

**Table 3-4. Taxiway Characteristics After Proposed Action**

Taxiway Designation	Taxiway Design Group	Taxiway Width (ft)	Taxiway Shoulder (ft)
M	5	75	30
W	5	75	30
S	5	75	30
CC	5	75	30

The airport is served by an FAA operated air traffic control tower (ATCT). The ATCT is located west of the terminal building.

### 3.4 Air Quality

Milwaukee County is designated as in a non-attainment zone for 8-hour ozone (moderate) and maintenance area for PM<sub>2.5</sub> per the Clean Air Act’s National Ambient Air Quality Standards (NAAQS)<sup>30</sup>. The NAAQS are health standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), 8-hour ozone(O<sub>3</sub>), particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>, and PM<sub>10-2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). **Figure 3-5** shows the NAAQS nonattainment areas in relationship to the proposed project location.

The Wisconsin Department of Natural Resources (WDNR) operates four air quality monitoring stations in Milwaukee County. **Table 3-5** displays the location of each monitoring station and NAAQS pollutants<sup>31</sup>.

**Table 3-5. Air Quality Monitoring Stations, Milwaukee County**

Site Name	AQS Site ID	City	Address	NAAQS Pollutants Monitored
Bayside	55-079-0085	Bayside	601 E. Ellsworth Ln.	O <sub>3</sub>
Milwaukee - College Ave. NR	55-079-0056	Milwaukee	1550 W. College Ave.	PM <sub>2.5</sub> , PM <sub>10</sub> , PM <sub>10-2.5</sub> , NO <sub>2</sub> , CO
Milwaukee Sixteenth St. Health Center	55-079-0010	Milwaukee	1377 S. 16th St.	O <sub>3</sub> , PM <sub>2.5</sub> , PM <sub>10</sub>
Milwaukee UWM U Park	55-079-0068	Milwaukee	4372 N. Humboldt Blvd.	O <sub>3</sub> , SO <sub>2</sub> , NO <sub>2</sub>

### 3.5 Biological Resources

Biotic communities consist of all organisms (flora and fauna) living on and contributing to a specific region. Flora is the plant life characteristic of a particular geographic area. Fauna is the grouping of animals present in a particular geographic area.

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<sup>30</sup> County-Level Multi-Pollutant Information: <https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information>.

<sup>31</sup> Wisconsin WDNR 2024 Air Monitoring Network Plan: <https://dnr.wisconsin.gov/sites/default/files/topic/AirQuality/FInal2024AnnualNetworkPlan.pdf>

The proposed project is located in the Milwaukee Forested Moraines Land Type Association (LTA)<sup>32</sup> of the Southern Lake Michigan Coastal ecological landscape<sup>33</sup>. The Milwaukee Forested Moraines land type association includes characteristic landform pattern is a rolling hummocky moraine with stream terraces, floodplains, and wetlands. Soils are predominantly well drained silt and clay over calcareous silty clay loam till<sup>34</sup>. **Figure 3-6** displays the ecological landscapes and land type association in relation to the proposed project area.

The Southern Lake Michigan Coastal ecological landscape is the most urbanized ecological landscape in Wisconsin. Previous landcover estimates indicate primarily agricultural (39%) and urban (24%) land uses with others being grassland (16%) and upland and lowland forest (12%).<sup>35</sup>

Most areas on the Airport are mowed to control trees and shrub species from colonizing. Trees are normally not allowed to grow to substantial heights on airport property in order to keep aircraft approach surfaces and safety zones clear. Additionally, the maintenance practices of limiting tree growth and mowing grass areas prevent concentrations of wildlife that would be hazardous to aircraft operations.

Primarily for security purposes, the perimeter fence surrounding the airport also limits wildlife from entering the air operations area. **Figure 3-7** shows that there are no critical habitats within Milwaukee County based on the U.S. Fish & Wildlife Service (USFWS) species active critical habitat Geographical Information System (GIS) mapping. **Figure 3-8** shows that there are no critical habitats or sensitive area designations in Milwaukee County based on the WDNR Wetland Plans and Habitat GIS mapping.

The USFWS Information for Planning and Consultation (IPaC) tool was accessed. The project area was input and a list of threatened and endangered species that may occur in the proposed project location or may be affected by the proposed project was generated.<sup>36</sup> The federal list for endangered, threatened, or candidate species includes the following: Northern Long-eared Bat, Tricolored Bat, and Monarch Butterfly. For all these species, there are no critical habitats found in or near the project area.

A Natural Heritage Inventory (NHI) review conducted by the WDNR was completed for the project area. The review identified no known state listed threatened or endangered species or suitable

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<sup>32</sup> WDNR Open Data, Land Type Associations: <https://data-wi-dnr.opendata.arcgis.com/datasets/wi-dnr::land-type-associations/about>

<sup>33</sup> WDNR Southern Lake Michigan Coastal: <https://dnr.wisconsin.gov/topic/lands/EcologicalLandscapes/SouthernLakeMichigan>

<sup>34</sup> WDNR Open Data, Land Type Associations: <https://data-wi-dnr.opendata.arcgis.com/datasets/wi-dnr::land-type-associations/about>

<sup>35</sup> Wisconsin Department of Natural Resources. 2015. The ecological landscapes of Wisconsin: An assessment of ecological resources and a guide to planning sustainable management. Chapter 19, Southern Lake Michigan Coastal Ecological Landscape. Wisconsin Department of Natural Resources, PUB-SS-1131U 2015, Madison: <https://dnr.wisconsin.gov/topic/Lands/Book.html>

<sup>36</sup> U.S. Fish and Wildlife Service, IPaC tool: <https://ipac.ecosphere.fws.gov>

habitats that could be impacted by the project. The results of the NHI review were included in the WDNR Initial Review Letter included in **Appendix 2**.

Both the USFWS IPaC tool and WDNR NHI review did not indicate there are any federally or state listed endangered species in the project area.

### 3.6 Climate

The climate at the Airport is typical of Wisconsin. Winters can be long, cold, and snowy; summers are warm and occasionally humid, and spring and fall are transitional seasons with varying weather conditions. Temperature extremes vary from a July average high of 82 °F to a January average low of 17 °F. The average annual rainfall is 34.6 inches and the average annual snowfall is 48.7 inches<sup>37</sup>.

Climate change can have local impacts such as warmer air temperatures, sea level rise, increase storm activity, and increased intensity during precipitation events<sup>38</sup>. The majority of the project area is airfield pavement and mowed grass fields with no structures and is not located directly on the Lake Michigan shoreline.

Greenhouse Gases (GHGs) are defined as “gases that trap heat in the atmosphere”. GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated gases (hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>)). Carbon dioxide (CO<sub>2</sub>) is the primary GHG and accounted for 79% of all GHGs in 2021. Carbon dioxide is produced through the burning of fossil fuels, biological materials, chemical reactions, or solid waste<sup>39</sup>. Transportation accounts for 35% and electricity counts for 31% of the total United States (U.S.) carbon dioxide emissions<sup>40</sup>.

In 2018, the Airport published a Sustainability Management Plan<sup>41</sup>. The sustainability baseline quantified scope 1 and scope 2 emissions. Scope 1 emissions are direct emissions from owned or controlled sources and scope 2 emissions are indirect emissions from generation of purchased energy, scope 3 emissions associated with airport operations but generated by tenants (airlines) were not included in the baseline. The baseline inventory estimated 33,921 metric tons of carbon dioxide were generated in 2015. It was also identified that electricity accounts for close to 80% of the overall GHG emissions. Currently, Runway 1R/19L contains runway lights that consume electricity when illuminated.

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<sup>37</sup> National Weather Service: <https://www.weather.gov/wrh/Climate?wfo=mkx>

<sup>38</sup> FAA 1050.1F, Chapter 3: [https://www.faa.gov/sites/faa.gov/files/about/office\\_org/headquarters\\_offices/apl/3-climate.pdf](https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/3-climate.pdf)

<sup>39</sup> Environmental Protection Agency (EPA), Overview of Green House Gases: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

<sup>40</sup> Environmental Protection Agency (EPA), Carbon Dioxide Emissions: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#carbon-dioxide>

<sup>41</sup> Milwaukee County’s General Mitchell International Airport Sustainability Management Plan: [https://www.mitchellairport.com/application/files/1815/2909/4575/MKE\\_SMP\\_Final\\_Report.pdf](https://www.mitchellairport.com/application/files/1815/2909/4575/MKE_SMP_Final_Report.pdf)

The Environmental Protection Agency (EPA) has identified that infrastructure such as buildings and roads absorb and re-emit the sun's heat more than natural landscapes. Urban areas often have limited natural landscapes and vegetation and become “islands” of higher temperatures known as “heat islands.” In 2022, the WDNR in partnership with Groundwork Milwaukee and the Milwaukee Metropolitan Sewerage District completed a mapping campaign to map heat across the City of Milwaukee. The campaign identified the hottest temperatures were recorded in dense urban areas<sup>42</sup>. Within the proposed project area, the existing runway pavement consists of asphalt and concrete which both can contribute to higher temperatures. **Figure 3-9** shows the results of the WDNR study for evening temperatures. The airfield pavements are visible as obtaining a higher temperature as opposed to the surrounding natural (grass) vegetation.

### **3.7 Coastal Resources**

Milwaukee County is listed as a coastal county because it borders Lake Michigan and is subject to the Wisconsin Coastal Management Program (WCMP)<sup>43</sup>. **Figure 3-10** shows Wisconsin's coastal counties that border either Lake Superior or Lake Michigan.

The Coastal Barriers Resources Act (CBRA) conserves and protects land units designated as the Coastal Barrier Resources System (CBRS)<sup>44</sup>. The proposed project area is not located within or adjacent to a CBRS<sup>45</sup>.

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

The proposed project is located entirely within the Airport property. No public parks, national lands, state lands, or historic sites were identified within the project area. **Figure 3-11** displays the location of public parks in relation to the proposed project area.

The closest publicly owned park is the Cudahy Woods State Natural Area located south of the Airport, specifically south of College Avenue and east of Howell Avenue. Cudahy Woods is owned by Milwaukee County and is a 42-acre State Natural Area<sup>46</sup> with dry-mesic, lowland, and mesic forest communities<sup>47</sup>.

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<sup>42</sup>“DNR Shares Results From Summer 2022 Milwaukee Heat Mapping Campaign”:  
<https://dnr.wisconsin.gov/newsroom/release/66256>

<sup>43</sup> Wisconsin Department of Administration, Wisconsin Coastal Management Program:  
[https://doa.wi.gov/DIR/Coastal\\_County-Map.pdf](https://doa.wi.gov/DIR/Coastal_County-Map.pdf)

<sup>44</sup> USFWS Coastal Barrier Resource Act: <https://www.fws.gov/program/coastal-barrier-resources-act>

<sup>45</sup>USFWS Coastal Barrier Resources System Mapper: <https://fwsprimary.wim.usgs.gov/CBRSMapper-v2/>

<sup>46</sup> Milwaukee County Parks: <https://county.milwaukee.gov/EN/Parks/Explore/Find-a-Park>

<sup>47</sup> WDNR Cudahy Woods State Natural Area: <https://dnr.wisconsin.gov/topic/statenaturalareas/CudahyWoods>

### 3.9 Farmlands

The proposed project area is currently pavement and mowed grass fields with no structures. Proposed project site photographs illustrating current land use are included in **Appendix 1**.

The Wisconsin Department of Agriculture, Trade and Consumer Protection, Farmland Preservation Planning Program Map was analyzed. There were no identified Agricultural Enterprise Areas (AEAs) located in or near the proposed project area. Additionally, the proposed project is not located within a Farmland Preservation Plan Area<sup>48</sup>.

### 3.10 Hazardous Materials, Solid Waste, and Pollution Prevention

A Phase I Environmental Site Assessment<sup>49</sup> (ESA) was conducted for the proposed project area. The Phase I ESA included a visual reconnaissance survey of the proposed project area that was completed on September 11, 2023. Environmentally significant conditions such as hazardous substances, storage tanks, odors, wastewater, wells, solid waste, etc. were not observed in the project area during the visual reconnaissance survey.

Due to the nature of airport operations, pipelines, petroleum products, storage tanks, and other hazardous materials are present near the project area.

Through the Phase I ESA an environmental records review was conducted. The environmental records review accessed the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web. BRRTS on the Web is a searchable database containing information on the investigation and cleanup of potential and confirmed contamination to soil and groundwater in Wisconsin. The Remediation and Redevelopment Sites Map is a GIS web-based mapping system that provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin. Both databases are inter-linked through the WDNR's Contaminated Lands Environmental Action Network (CLEAN), which provides informational access to contaminated properties in Wisconsin. Additionally, an independent environmental records search was provided by Environmental Risk Information Services (ERIS) which gathered information from multiple environmental databases.

The ERIS report called out multiple database listings for the project area; however, after further review, the listings appeared to be related to releases across the airport property and not the proposed project area. Reviewed listings include, underground storage tanks, hazardous material (petroleum products) spills, leaking underground storage tanks, environmental repair sites and more. After further review of the nearby listings, hazardous materials do not appear to be impacting the project area due to multiple factors, including the anticipated soil and ground disturbance associated with the proposed project. If evidence of soil contamination is detected during removal and construction

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<sup>48</sup> Wisconsin Department of Agriculture, Trade, and Consumer Protection: <https://datcpGIS.wi.gov/maps/?viewer=fpp>

<sup>49</sup> Phase I Environmental Site Assessment, Milwaukee Mitchell International Airport – Runway 1R-19L, prepared by Westwood Professional Services, Inc., dated March 11, 2024.



activities, the work in the suspected area should be discontinued and the Airport should be notified. The WDNR should also be notified and the contamination properly managed.

The results of the Phase I Environmental Site Assessment indicated that it was unlikely that the proposed project areas had been directly contaminated with hazardous materials from either on-site activities or off-site operations. Further information regarding the environmental records review is included in Phase I ESA.

### **3.11 Historical, Architectural, Archeological, and Cultural Resources**

An architecture history survey site visit was completed on September 12, 2023. An initial literature review was conducted to identify weather historic resources within one mile of the Area of Potential Effects (APE) have been recorded in the Wisconsin Historical Society's (WHS) Architecture History Inventory (AHI). Twenty-nine historic resources within one mile of the APE. No historic-age National Register of Historic Places (NRHP) listed or eligible resources are present in the APE.

A Phase I Archeological Reconnaissance Survey was conducted on September 12, 2023, at the Airport. The survey was conducted to determine if significant cultural resources are located within the APE. The APE for Archeological Reconnaissance Survey was defined to encompass the areas of proposed ground disturbance. There are no known cultural resources present in the APE and no new cultural resources were identified.

Preliminary tribal notification email was sent to Tribal Historic Preservation Officers (THPOs)/Tribal leaders to familiarize them with the proposed project and to solicit their interest and concerns regarding historical, archeological, and cultural resources. The tribal notification email is included in **Appendix 2**.

A Preliminary coordination letter was sent to the Milwaukee County Historical Society to familiarize them with the proposed project and to solicit their interest and concerns regarding historical, archeological, and cultural resources. Milwaukee County Historical Society preliminary coordination letters are included in **Appendix 2**.

The architecture history and archeological investigations were submitted to the State Historic Preservation Officer (SHPO). The SHPO concurred that there are no properties listed in or eligible for the NRHP within the APE for the proposed project.

### 3.12 Land Use

Airport property encompasses approximately 2,270 acres located in the east-central portion of Milwaukee County. **Figure 3-12** shows the existing land uses surrounding the airport. 2020 General Land Use data was obtained from the Southeastern Wisconsin Regional Planning Commission Interactive Mapping Application.<sup>50</sup>

The majority of the area within Airport property is listed as the transportation land use. South of College Avenue, some areas of airport property are listed as agricultural, recreational, and open lands. Residential land use, mostly densely populated single and multi-family developments, are present north of airport. Residential areas are also located east of the airport in Cudahy and South Milwaukee, in Greenfield and Greendale west of Interstate 41, and south of the airport in Oak Creek.

Future land use identified the proposed project area to remain transportation. According to the 2020 update of “VISION 2050” adopted by the Southeastern Wisconsin Regional Planning Commission (SWRPC)<sup>51</sup>, the airport is listed as to be retained and potentially expanded.

### 3.13 Natural Resources and Energy Supply

Existing known public utility providers that currently serve the airport is listed in **Table 3-6**.

**Table 3-6. Known Utility Providers<sup>52</sup>**

Utility	Supplied By
Electric	We Energies
Natural Gas	We Energies
Water	City of Milwaukee
Sanitary Sewer	City of Milwaukee, Milwaukee Metropolitan Sewerage District, and Milwaukee County

The proposed project is anticipated to recycle the existing asphalt and concrete pavement as millings or aggregate for the construction of Taxiway CC. Additional recycled pavements would be hauled offsite by the contractor and may be stockpiled or recycled for other infrastructure projects. Other resources that may be required may include water, asphalt, or virgin aggregate. Mineral sources such as sand, aggregate, bentonite, and cement, used for the construction of the proposed project are not anticipated to require new pits or put a limit on existing resources.

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<sup>50</sup> Southeastern Wisconsin Regional Planning Commission Interactive Web Mapping Application: <https://www.sewrpc.org/SEWRPC/DataResources/Regional-Land-Information/Regional-Mapping.htm>

<sup>51</sup> Southeastern Wisconsin Regional Planning Commission VISION 2050: [https://www.sewrpc.org/SEWRPC/VISION\\_2050/2050RegLandUseTranspPlan.htm](https://www.sewrpc.org/SEWRPC/VISION_2050/2050RegLandUseTranspPlan.htm)

<sup>52</sup> Master Plan Update, Section 2.8 (Utilities): <https://www.mkeupdate.com/application/files/8116/6372/6841/MPU-Section2-Inventory-Final-2022-09-20.pdf>

### 3.14 Noise

A Noise Technical Report was prepared for this EA to assess potential noise impacts<sup>53</sup>. The noise assessment evaluated impacts associated with the proposed action of decommissioning and removing Runway 1R/19L (SPA and Alternate B) compared to the No Action alternative. Aircraft operation data was obtained from the Airport’s NOMS database for November 2022 through October 2023 and was scaled to the FAA-reported tower counts for calendar year (CY) 2023. CY2023 operations (96,755) were used as the existing condition for the noise analysis. The noise assessment evaluated noise changes for two periods, CY2028 and CY2033. The CY2023 existing condition data was scaled for the CY2028 and CY2033 analysis. It was assumed that the distribution of day/night split would remain the same from the existing conditions. The noise technical report further describes the regulatory setting, existing conditions, methodology, assumptions, and analysis is included in **Appendix 4**.

### 3.15 Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks

The Airport is located within the City of Milwaukee and is surrounded by the neighboring political jurisdictions of St. Francis, Cudahy, and Oak Creek. Additionally, the City of South Milwaukee is located within 1 mile of the eastern airport property boundary. The U.S. Census Bureau provides the results of the decennial census, when compared to the 2010 census data, the 2020 population of the City of Milwaukee decreased by 2.18% while the 2020 population of Milwaukee County (county) decreased by 0.87%<sup>54</sup>. **Table 3-7** shows the population change from 2000 to 2020 for the City of Milwaukee, neighboring political jurisdictions, county, and State of Wisconsin (state).

**Table 3-7. Population Change, 2000 - 2020**

Location	2000 <sup>55</sup>	2010 <sup>56</sup>	2020 <sup>57</sup>
State of Wisconsin	5,363,675	5,686,986	5,893,718
Milwaukee County	940,164	947,735	939,489
City of Milwaukee	596,956	594,833	577,222
City of St. Francis	8,663	9,365	9,161
City of Cudahy	18,429	18,267	18,204
City of South Milwaukee	21,195	21,156	20,795
City of Oak Creek	28,456	34,451	36,497

<sup>53</sup> Noise Technical Report prepared by Harris Miller Miller & Hansen, Inc. See Appendix 4.

<sup>54</sup> Calculated by Westwood with population data obtained from the U.S. Census Bureau as shown in Table 3-7.

<sup>55</sup> U.S. Census Bureau, 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-2-51, Wisconsin Washington, DC, 2003

<sup>56</sup> U.S. Census Bureau, 2010 P1 Data Table: <https://data.census.gov/profile>

<sup>57</sup> U.S. Census Bureau, 2020 P1 Data Table : <https://data.census.gov/profile>

The distribution of people by demographic background for the neighboring political jurisdictions of St. Francis, Cudahy, South Milwaukee, and Oak Creek is similar to that of the state. When the demographic background of the City of Milwaukee and Milwaukee County compared to the state, there is a significant difference. **Table 3-8** shows the demographic background for the City of Milwaukee, neighboring political jurisdictions, county, and state.

**Table 3-8. 2020 U.S. Census Data – Demographic Background<sup>58</sup>**

Demographic Composition	State of Wisconsin	Milwaukee County	City of Milwaukee	City of St. Francis	City of Cudahy	City of South Milwaukee	Oak Creek
White	80.4%	52.0%	36.1%	80.40%	77.1%	81.2%	78.7%
Black or African American	6.4%	26.2%	38.6%	3.7%	4.6%	3.6%	3.6%
Native American and Alaska Native	1.0%	0.8%	0.9%	0.9%	0.9%	0.9%	0.5%
Asian	3.0%	4.9%	5.2%	1.9%	1.6%	1.6%	6.9%
Native Hawaiian and Other Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Some Other Race	3.1%	6.8%	9.0%	4.3%	5.4%	3.8%	2.7%
Two or More Races	6.1%	9.3%	10.1%	8.7%	10.5%	8.8%	7.6%

The EPA’s Environmental Justice Screening and Mapping Tool (EJScreen) was used to produce a community report for a three-mile radius around the project area. There is a population of 102,234 people within the three-mile radius. **Table 3-9** shows the demographic background for the three-mile radius around the project area. The EJScreen Community Report can be found in **Appendix 3**.

The distribution of people by ethnicity for the City of Milwaukee and neighboring political jurisdictions is similar to that of Milwaukee County. When compared to the state, Milwaukee County has a higher percentage of Hispanic of Latino Americans. The state population of Hispanic of Latino Americans is 7.6%; Milwaukee County is 16.3%. **Table 3-10** shows the ethnicity population composition for the City of Milwaukee, neighboring political jurisdictions, county, and state.

<sup>58</sup> U.S. Census Bureau, Demographic Profile (DP1) Data Table, Vintage 2020 : <https://data.census.gov/profile>

**Table 3-9. 3-Mile Project Radius – Demographic Background<sup>59</sup>**

White	73%
Black or African American	3%
Native American and Alaska Native	0%
Asian	3%
Native Hawaiian and Other Pacific Islander	0%
Some Other Race	0%
Two or More Races	3%
Hispanic	17%

**Table 3-10 Ethnicity Composition, 2020<sup>60</sup>**

Ethnicity Composition	State of Wisconsin	Milwaukee County	City of Milwaukee	City of St. Francis	City of Cudahy	City of South Milwaukee	City of Oak Creek
Hispanic or Latino	7.6%	16.3%	20.1%	12.5%	15.4%	13.0%	9.4%
Non-Hispanic or Latino	92.4%	83.7%	79.9%	87.5%	84.6%	87.0%	90.6%

Housing Tenure for Milwaukee County is 47.9% owner-occupied housing and 52.1% renter-occupied housing. The City of Milwaukee has a greater percentage of renter-occupied housing at 60.5%. Both the City of Milwaukee and Milwaukee County have a greater percentage of renter-occupied housing units than the state. **Table 3-11** shows the housing tenure for the City of Milwaukee, neighboring political jurisdictions, county, and state. The EJScreen community report (**Appendix 3**) identified 61% of housing is owner-occupied for a three-mile radius around the project area.

<sup>59</sup> EPA Environmental Justice Screening and Mapping Tool: <https://www.epa.gov/ejscreen>

<sup>60</sup> U.S. Census Bureau, Demographic Profile (DP1) Data Table, Vintage 2020: <https://data.census.gov/profile>

**Table 3-11 Housing Tenure, 2020<sup>61</sup>**

Housing Tenure	State of Wisconsin	Milwaukee County	City of Milwaukee	City of St. Francis	City of Cudahy	City of South Milwaukee	City of Oak Creek
Owner-occupied housing units	66.3%	47.9%	39.5%	50.1%	57.3%	58.5%	58.4%
Renter-occupied housing units	33.7%	52.1%	60.5%	49.9%	42.7%	41.5%	41.6%

The ongoing American Community Survey assists local officials and leaders in identifying community changes on an annual basis<sup>62</sup>. The 2022 American Community Survey provides estimates of the population in the labor force (16 years and over) for communities. **Table 3-12** shows the estimated population in the labor force for the City of Milwaukee, neighboring political jurisdictions, county, and state. The EJScreen community report (**Appendix 3**) identified an unemployment rate of 4% for a three-mile radius around the project area.

**Table 3-12 Population in Labor Force, 2022<sup>63</sup>**

	Population 16 years and over	Percent in Labor Force	Percent not in Labor Force	Unemployment Rate
State of Wisconsin	4,802,830	65.1%	34.9%	2.8%
Milwaukee County	726,918	65.4%	34.6%	3.9%
City of Milwaukee	442,909	65.1%	34.9%	5.0%
City of St. Francis	8,337	55.0%	45.0%	1.0%
City of Cudahy	15,319	65.9%	34.1%	2.3%
City of South Milwaukee	16,749	64.7%	35.3%	3.5%
City of Oak Creek	29,574	72.2%	27.8%	1.4%

<sup>61</sup> U.S. Census Bureau, Demographic Profile (DP1) Data Table, Vintage 2020: <https://data.census.gov/profile>

<sup>62</sup> U.S. Census Bureau, American Community Survey: <https://www.census.gov/programs-surveys/acs>

<sup>63</sup> U.S. Census Bureau, American Community Survey (DP03) Data Table, Vintage 2022: <https://data.census.gov/profile>

The 2022 American Community Survey estimates the educational attainment. **Table 3-13** shows the education attainment for the City of Milwaukee, neighboring political jurisdictions, county, and state. The EJScreen community report (**Appendix 3**) identified approximately 9% of the population has less than a high school education for a three-mile radius around the project area.

**Table 3-13 Education Attainment, 2022**

	State of Wisconsin	Milwaukee County	City of Milwaukee	City of St. Francis	City of Cudahy	City of South Milwaukee	City of Oak Creek
High School or Higher	93.5%	90.1%	86.3%	93.7%	93.4%	92.4%	95.3%
Bachelor's Degree or Higher	33.2%	34.4%	27.7%	27.2%	26.4%	25.9%	38.4%

The American Community Survey also estimates the per capita income. **Table 3-14** shows the per capita change from 2010 to 2022 for the City of Milwaukee, neighboring political jurisdictions, county, and state. The EJScreen community report (**Appendix 3**) identified a per capita income of \$34,917 for a three-mile radius around the project area.

The EJScreen Community Report (**Appendix 3**) identified approximately 20% of the project 3-mile radius population is from ages 1 to 18, equivalent to an estimated 20,447 children<sup>64</sup>. 32 schools are located within the three-mile radius of the project area<sup>65</sup>. **Figure 3-13** shows the location of schools relative to the project area.

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<sup>64</sup> Calculated by Westwood using the population estimate of 102,234 from the EPA EJScreen Community Report.

<sup>65</sup> The EJScreen Community Report only includes public elementary and secondary schools.

**Table 3-14 Per Capita Income Change<sup>66</sup>**

	<b>2010</b>	<b>2015</b>	<b>2022</b>
State of Wisconsin	\$25,458	\$29,563	\$40,188
Milwaukee County	\$22,420	\$26,128	\$35,219
City of Milwaukee	\$17,912	\$21,089	\$29,250
City of St. Francis	\$26,409	\$27,159	\$39,278
City of Cudahy	\$23,587	\$24,085	\$37,232
City of South Milwaukee	\$26,265	\$25,369	\$35,100
City of Oak Creek	\$30,325	\$32,123	\$44,994

### **3.16 Visual Effects**

The existing Runway 1R/19L includes runway and taxiway lighting. Runway 1R also includes the NAVAID of REILs. A REIL systems consists of two synchronized, unidirectional flashing lights positioned at the end of a runway. The REIL is effective in identifying a runway during reduced visibility. Depending on the type of equipment, a REIL has an approximate range of three miles in daylight and twenty miles at night<sup>67</sup>.

### **3.17 Water Resources**

#### **3.17.1 Wetlands**

A wetland delineation was performed on September 11, 2023 at the proposed project location<sup>68</sup>. The delineation identified wetlands on the southern end of the project area. **Figure 3-14** shows the delineated wetlands within the proposed project area.

#### **3.17.2 Topography and Drainage**

Topography at the Airport generally slopes uphill from northeast to southwest. Elevations vary from approximately 730 feet to 670 feet above mean sea level (MSL). The established airport elevation is 728 MSL and is defined by the FAA as the highest point on any paved landing surface. This

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<sup>66</sup> U.S. Census Bureau, American Community Survey (DP03) Data Table, Vintage 2010, 2015, & 2022: <https://data.census.gov/profile>

<sup>67</sup> FAA, Runway End Identifier Lights: [https://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/techops/navservices/lsg/reil](https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/reil)

<sup>68</sup> A Wetland Delineation Report was prepared by Quest Civil Engineers, LLC, dated September 11, 2023



elevation occurs near the approach end of Runway 7R. **Figure 3-15** is an aerial view of the proposed project area with a topographic map overlay.

Stormwater is controlled by topography, storm sewer structures and pipes, channels, and ditches. Depending on the location on the Airport, stormwater will drain to one of three primary basins and release points. The proposed project area lies within two of the primary drainage basins. The majority of the project area lies within the northern drainage basin. The northern drainage basin flows southeast to northwest by overland flow, a series of storm sewer pipes, and concrete lined channels. Stormwater from the northern drainage basin exits the airport at a box culvert under Howell Avenue near the intersection with Layton Avenue. The outfall is at Wilson Park Creek which drains to the Kinnikinic River that drains to Lake Michigan. The project area south of Taxiway S lies within the southern drainage basin. The southern drainage basin flows east to west by a ditch line (Mitchell Field Drainage Ditch) and storm sewer piping. Stormwater in the Mitchell Field Drainage Ditch exits the southeast corner of airport property under College Avenue. Stormwater flows to Oak Creek (approximately 1.75 miles south of College Avenue) that drains approximately 2 miles before entering Lake Michigan<sup>69</sup>. **Figure 3-16** shows the storm sewer and airport drainage utilities.

### 3.17.3 Floodplains

Flood insurance rate maps prepared by the Federal Emergency Management Agency (FEMA) determine the limits of base floodplains (100-year flood areas). Flood insurance rate maps prepared by FEMA were reviewed to determine the limits of base floodplains associated with the Proposed Project. **Figure 3-17** graphically represents Flood Hazard Zones from FEMA's Web Map Services overlaid onto an aerial view of the proposed project area.

The majority of proposed project is outside the 100-year flood area except for a small portion of the proposed project area south of Taxiway S. This area includes the high-risk area, Zone AE and the moderate-risk area Zone X with a 0.2% annual chance flood hazard<sup>70</sup>.

### 3.17.4 Surface Water

The WDNR surface water viewer shows the Wilson Park Creek crossing Runway 1R/19L. The WDNR initial concurrence letter indicated that Wilson Park Creek is located in an enclosed underground culvert pipe near Runway 13/31<sup>71</sup>. **Figure 3-18** shows an aerial view of the proposed project areas with the 24K Hydro Waterbodies (lakes)/Flowline (rivers, streams) map overlaid. The Wilson Park Creek and associated tributaries are considered navigable waterways. The WDNR

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<sup>69</sup> Master Plan Update, Section 2.8.6 (Storm Sewer Utilities and Airport Drainage): <https://www.mkeupdate.com/application/files/8116/6372/6841/MPU-Section2-Inventory-Final-2022-09-20.pdf>

<sup>70</sup> FEMA Flood Mapping Center: <https://msc.fema.gov/portal/home>

<sup>71</sup> WDNR Surface Water Data Viewer: <https://dnrmapping.wi.gov/H5/?Viewer=SWDV>

initial concurrence letter further indicated that Wilson Park Creek is classified as a cool warm headway stream and an impacted waterway for acute aquatic toxicity<sup>72</sup>.

The Airport is located in both the Milwaukee River Basin and Southeast (Root-Pike) Basins. The basin boundary is located approximately at the southern end of Runway 1R/19L and runs east/west through the airport property<sup>73</sup>. Specifically, the majority of the project area is located within Kinnickinnic River Watershed (MI01)<sup>74</sup> which flows to Lake Michigan. South of the southern end of Runway 1R/19L is the boundary of the Oak Creek Watershed (SE05)<sup>75</sup> which flows to Lake Michigan. **Figure 3-19** shows watershed boundaries.

### 3.17.5 Groundwater

Monitoring wells were recently installed at various locations around airport property apart of a site investigation to evaluate source areas at the Airport for potential releases of per-and polyfluoroalkyl substances (PFAS). Wells were installed near the cargo ramp, west ramp area, burn pit and former fire training areas, and the Airport fire department and maintenance area. Ground water elevations associated with all sites were recorded between 2.07 ft and 11.79 ft below ground surface.

The closest evaluation site to the proposed project is the burn pit and former fire training areas located approximately 0.25 miles northeast of the proposed project area. In this area, groundwater elevates were recorded between 3.32 ft and 10.44ft below ground surface. Groundwater flow direction in this area was determined to be northeast.

Localized groundwater flow direction can be influenced by underground utilities, underground structures, fill materials, and soil conditions. Regionally, groundwater flow direction is expected to be in an easterly direction towards Lake Michigan.

The EPA monitors Sole Source Aquifers (SSA) in the United States. A SSA is an aquifer that “supplies at least 50 percent of the drinking water for it’s service area” and “no reasonable available alternative drinking water sources should the aquifer become contaminated”<sup>76</sup>. The EPA’s interactive mapping tool of SSAs was accessed, there are no identified SSAs in the State of Wisconsin and Northern Illinois<sup>77</sup>.

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<sup>72</sup> WDNR Initial Review Letter (1/10/2024), See Attachment 2.

<sup>73</sup> WDNR Wisconsin Basins and Watersheds: <https://dnr.wisconsin.gov/topic/Watersheds/basins>

<sup>74</sup> WDNR Watershed Details, Kinnickinnic River:  
<https://apps.dnr.wi.gov/Water/watershedDetail.aspx?code=MI01&Name=Kinnickinnic%20River>

<sup>75</sup> WDNR Watershed Details, Oak Creek: <https://apps.dnr.wi.gov/Water/watershedDetail.aspx?code=SE05&Name=Oak%20Creek>

<sup>76</sup> EPA Sole Source Aquifer Program Overview: [https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#What\\_Is\\_SSA](https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#What_Is_SSA)

<sup>77</sup> EPA Interactive Map of Sole Source Aquifers:  
<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

### 3.17.6 Wild and Scenic Rivers

The State of Wisconsin is home to two rivers in the National Wild and Scenic Rivers System<sup>78</sup>. The St. Croix River and the Wolf River are both located in northern Wisconsin. No rivers located in Southeastern Wisconsin are included in the National Wild and Scenic Rivers System.

### 3.18 Geology, Bedrock, and Soils

The proposed site overlies bedrock formed during the Silurian Period and bedrock in the area is comprised of Racine Formation<sup>79</sup>. Bedrock is expected to be greater than 100 feet from the land surface<sup>80</sup>.

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey was accessed on November 3, 2023<sup>81</sup>. Soils at the Airport are primarily classified as Clayey Land. The proposed project area is located in soils primarily classified as Clayey Land. **Figure 3-20** is an aerial view of the proposed project area with a soil map overlay.

A geotechnical investigation for the proposed project has not been completed.

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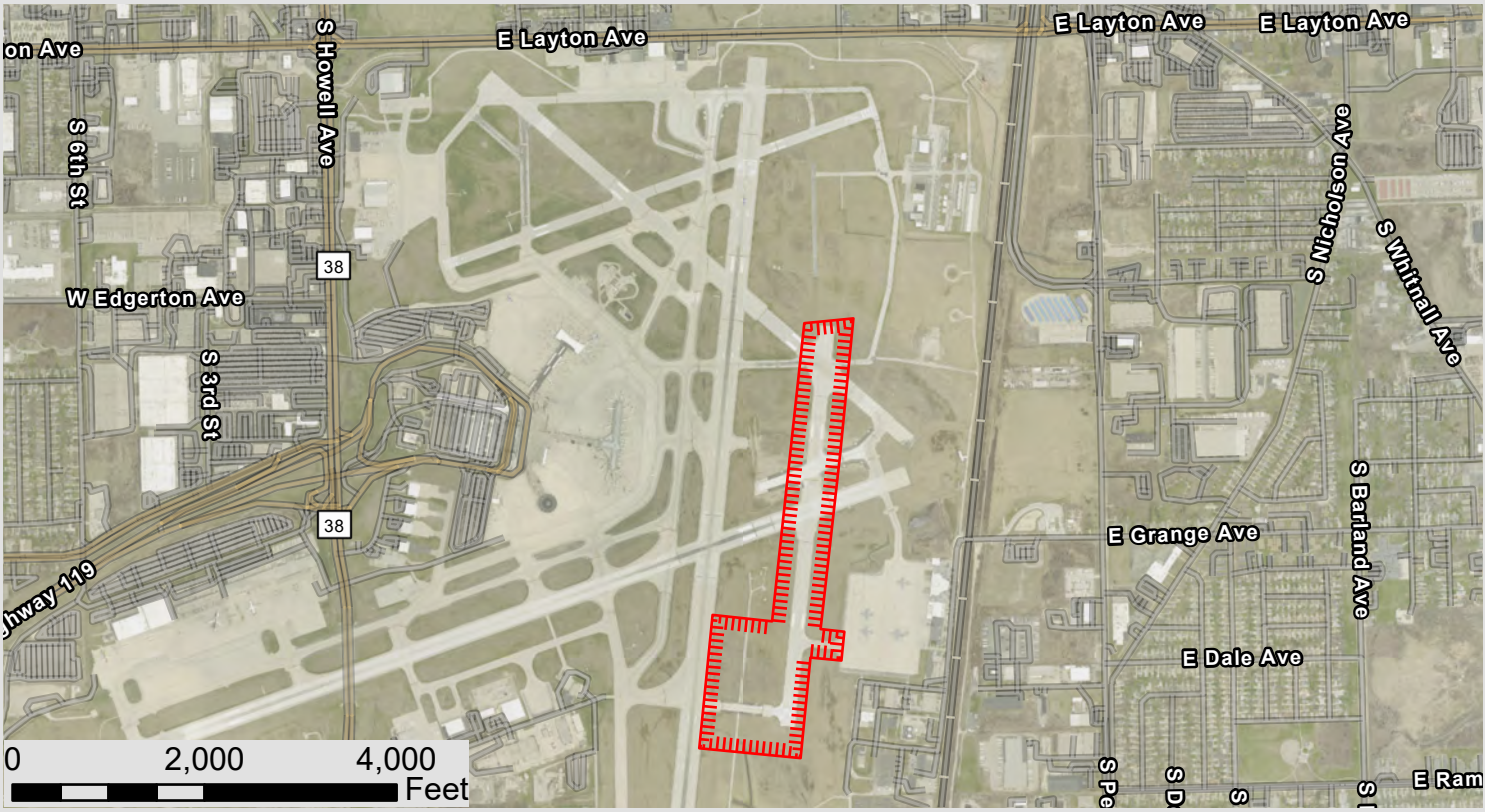
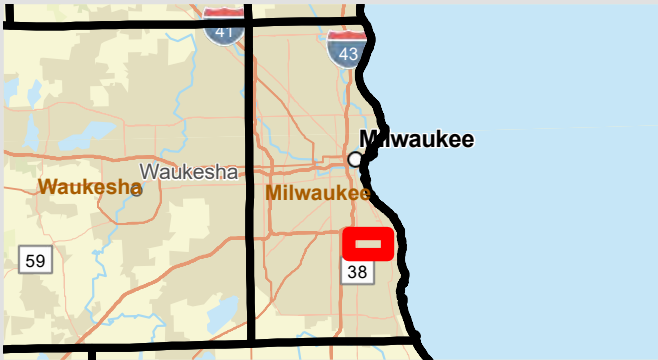
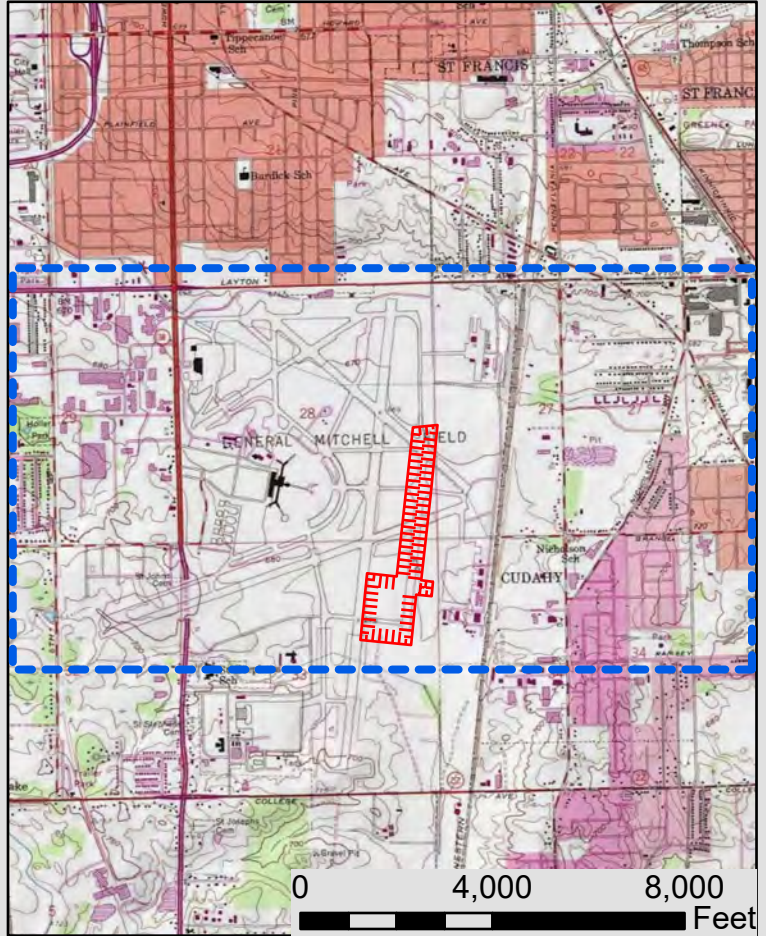
<sup>78</sup> National Wild and Scenic Rivers System: <https://www.rivers.gov/>

<sup>79</sup> Wisconsin Geological and Natural History Society, Preliminary Bedrock Geologic Map of Milwaukee County: <https://wgnhs.wisc.edu/catalog/publication/000847/resource/wofr200414a>

<sup>80</sup> WDNR Ecological Landscapes of Wisconsin, Depth to Bedrock Map: [https://p.widenedn.net/fsronj/Map\\_S14\\_Bedrock\\_Depth](https://p.widenedn.net/fsronj/Map_S14_Bedrock_Depth)

<sup>81</sup> USDA Natural Resources Conservation Service, Web Soil Survey: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

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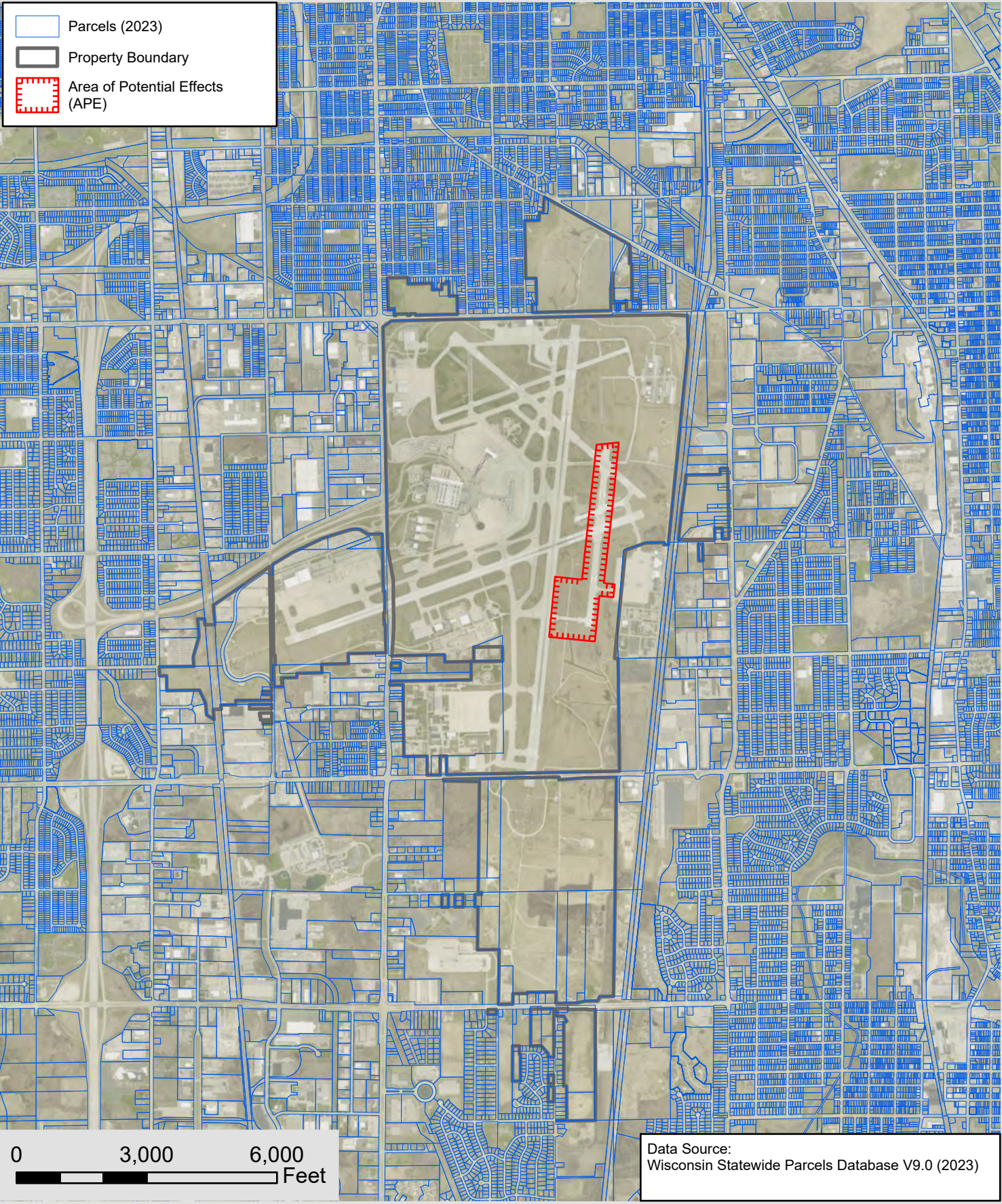
**MKE RUNWAY 1R-19L REMOVAL  
LOCATION MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

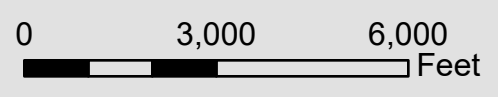
Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-1**



Parcels (2023)  
 Property Boundary  
 Area of Potential Effects (APE)



Data Source:  
Wisconsin Statewide Parcels Database V9.0 (2023)








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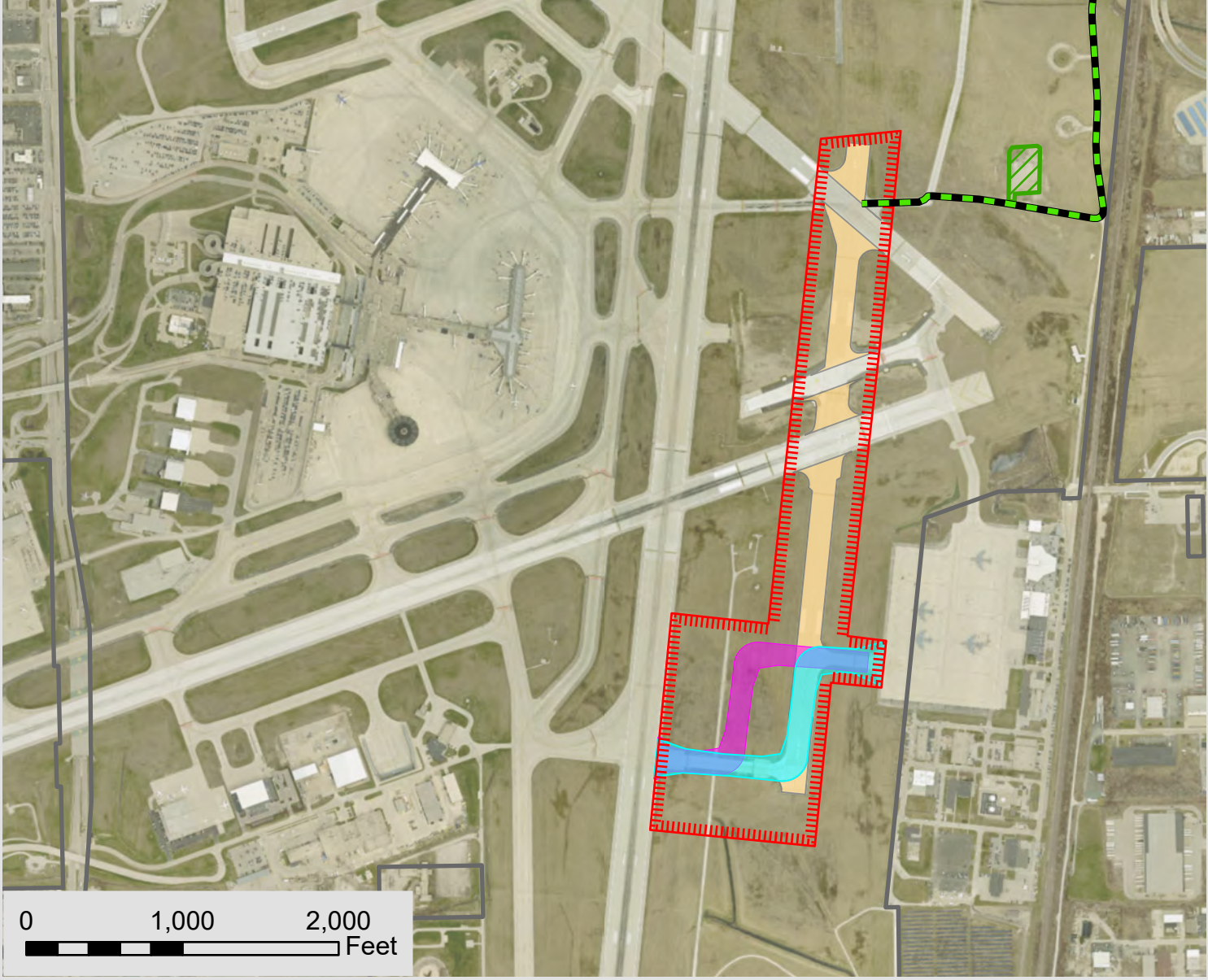
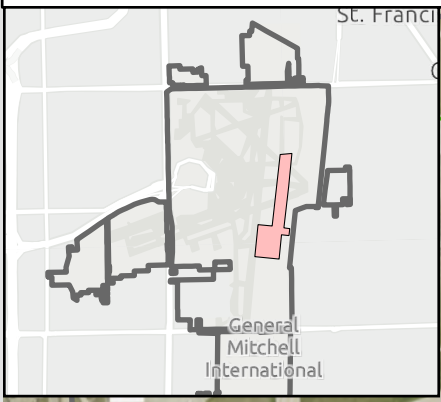


**MKE RUNWAY 1R-19L REMOVAL**  
**AIRPORT AND SURROUNDING**  
**PROPERTY MAP**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 3,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**3-2**

-  Property Boundary
-  Area of Potential Effects (APE)
-  Pavement Removal
-  Potential Haul Route (Existing paved/gravel access road)
-  Potential Staging Area (Existing Airport Construction Staging Areas)
-  Converted Parallel Taxiway (Proposed Action Alternative)
-  Relocated Parallel Taxiway CC (Alternative B)



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**MKE RUNWAY 1R-19L REMOVAL  
PROPOSED ACTION LOCATION**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 1,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-3**



Area of Potential Effects

# AIRPORT DIAGRAM

AL-262 (FAA)

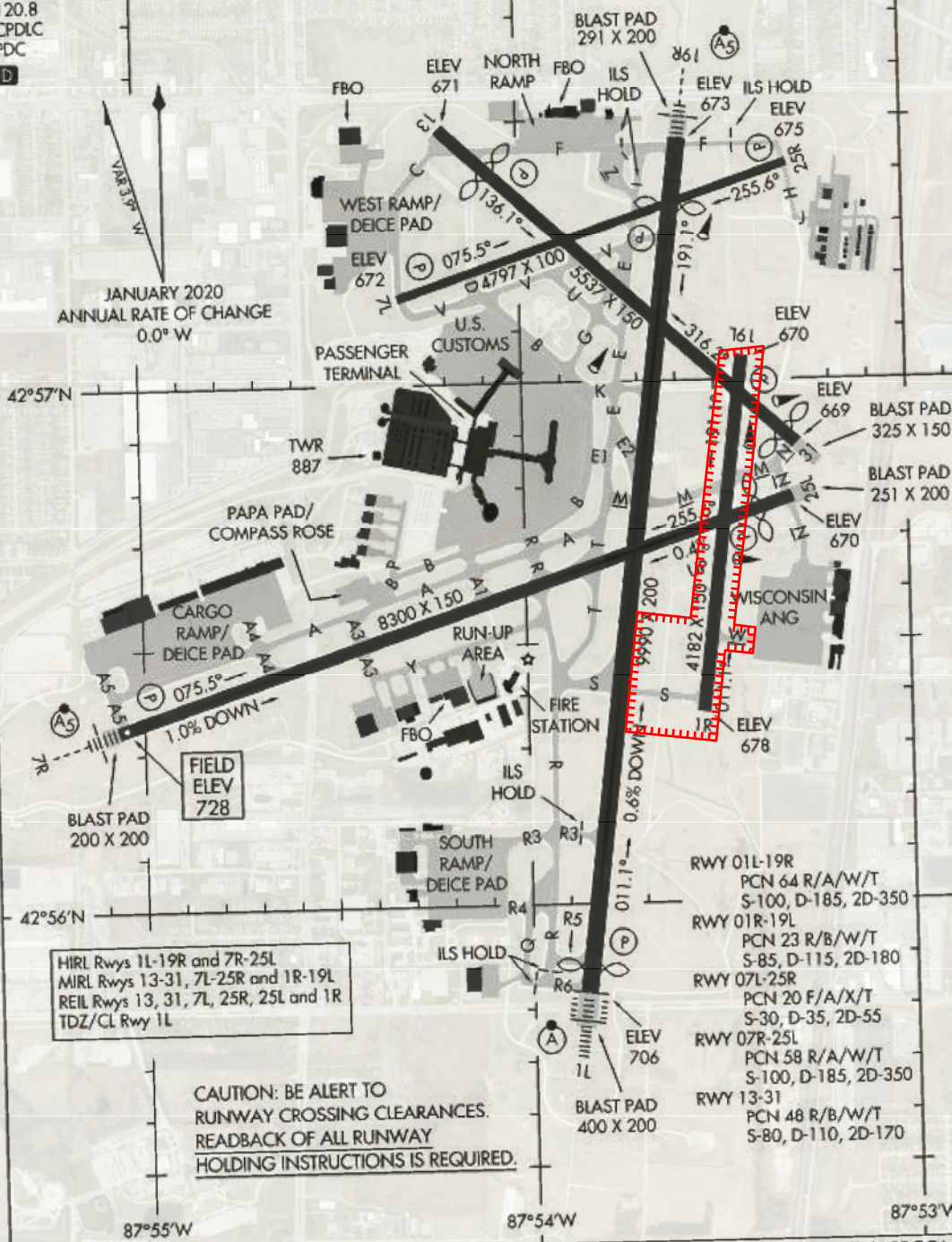
MILWAUKEE, WISCONSIN

126.4  
MILWAUKEE TOWER  
124.575 269.05  
GND CON  
121.8 263.125  
CLNC DEL  
120.8  
CPDLC  
PDC

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

EC-3, 21 MAR 2024 to 18 APR 2024

EC-3, 21 MAR 2024 to 18 APR 2024



JANUARY 2020  
ANNUAL RATE OF CHANGE  
0.0° W

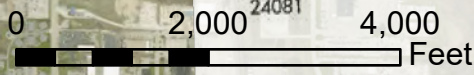
FIELD  
ELEV  
728

HIRL Rwy 1L-19R and 7R-25L  
MIRL Rwy 13-31, 7L-25R and 1R-19L  
REIL Rwy 13, 31, 7L, 25R, 25L and 1R  
TDZ/CL Rwy 1L

CAUTION: BE ALERT TO  
RUNWAY CROSSING CLEARANCES.  
REDBACK OF ALL RUNWAY  
HOLDING INSTRUCTIONS IS REQUIRED.

## AIRPORT DIAGRAM

MILWAUKEE, WISCONSIN  
GENERAL MITCHELL INTL (MKE)



Data Source:  
FAA (March/April 2024)

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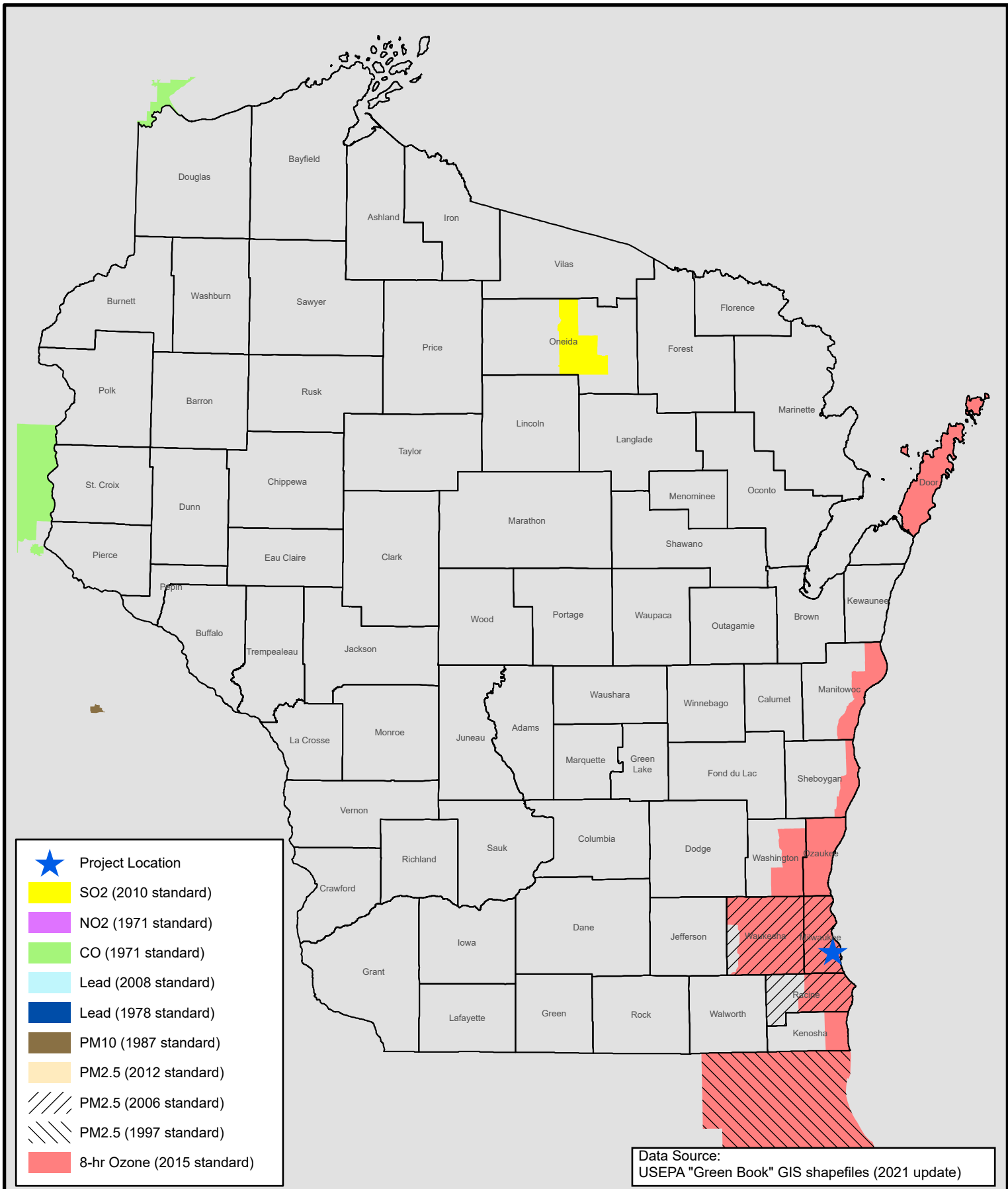
### MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP












GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-4**

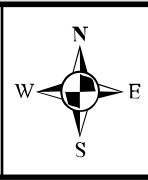




-  Project Location
-  SO2 (2010 standard)
-  NO2 (1971 standard)
-  CO (1971 standard)
-  Lead (2008 standard)
-  Lead (1978 standard)
-  PM10 (1987 standard)
-  PM2.5 (2012 standard)
-  PM2.5 (2006 standard)
-  PM2.5 (1997 standard)
-  8-hr Ozone (2015 standard)

Data Source:  
USEPA "Green Book" GIS shapefiles (2021 update)

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**MKE RUNWAY 1R-19L REMOVAL  
 NAAQS NONATTAINMENT AREAS**

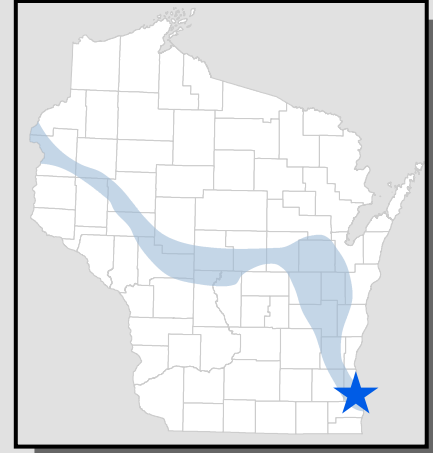
GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

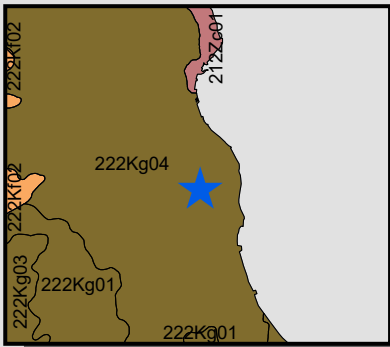
SCALE:  
 1 in = 208,333 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**3-5**

★ Project Location

Tension Zone (Curtis 1959)



Land Type Associations (LTAs)



222Kq04 - Milwaukee Forested Moraines

Data Source: DNR GeoData  
Ecological Landscapes (updated 2019)  
Landtype Associations (updated 2020)

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**MKE RUNWAY 1R-19L REMOVAL  
ECOLOGICAL LANDSCAPES**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 215,401 ft

PROJECT NO.  
**R3001844.00**

FIGURE NO.  
**3-6**

★ Project Location

USFWS Critical Habitat

■ Critical Habitat - Final

— Critical Habitat - Final

■ Critical Habitat - Proposed

— Critical Habitat - Proposed

No identified Critical Habitat Areas within Milwaukee County.

West Bend

Hine's emerald dragonfly

Watertown

Poweshiek skipperling

Milwaukee



Racine

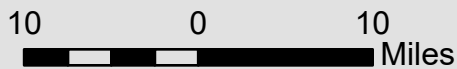
Waukesha

Kenosha

Piping Plover

Grass Lake

Waukegan



Data Source:  
US Fish & Wildlife Service "Critical Habitat" ArcGIS Feature Service

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**MKE RUNWAY 1R-19L REMOVAL  
USFWS CRITICAL HABITAT AREAS**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

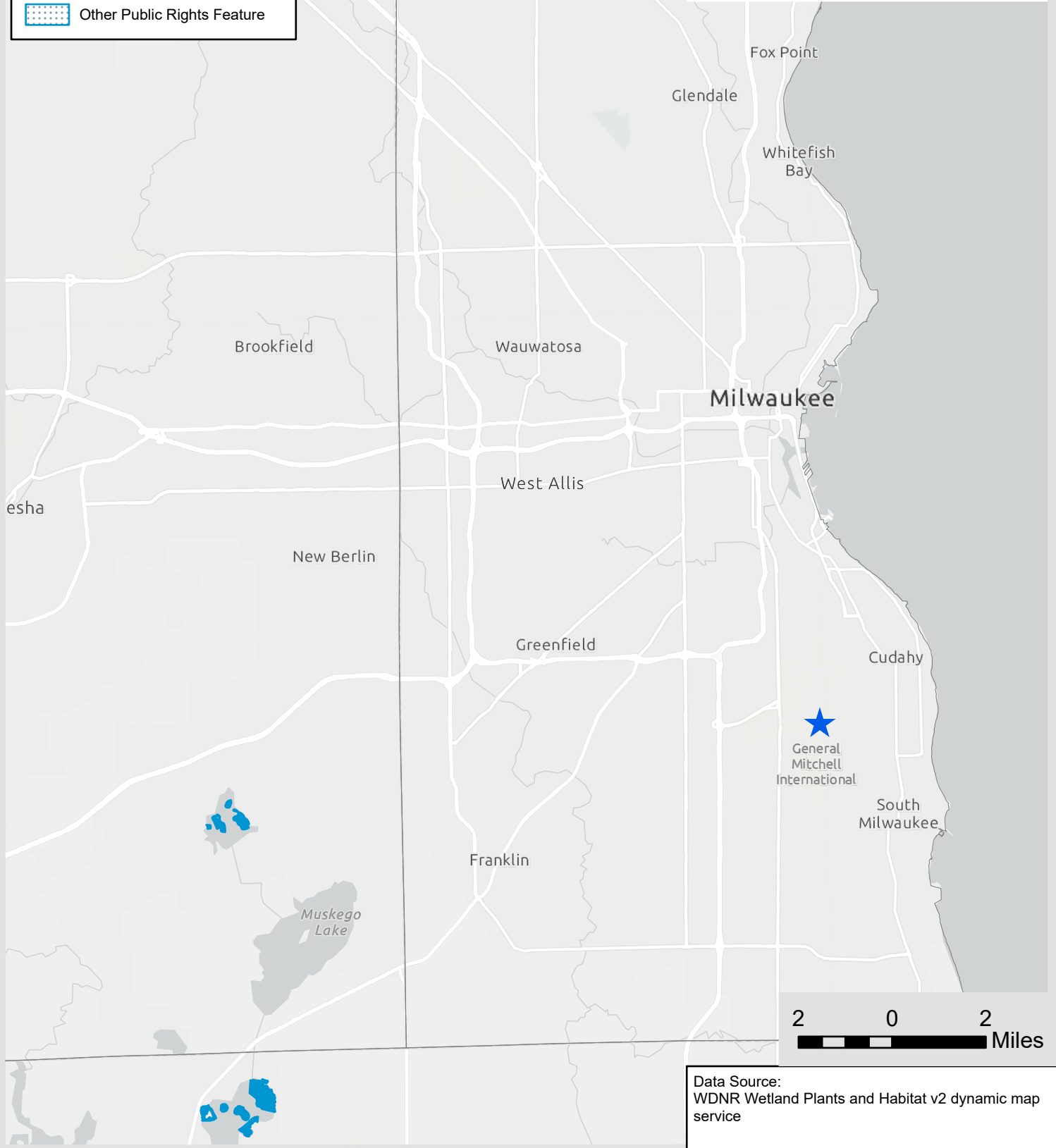
Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 58,208 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-7**

-  Project Location
-  WDNR Critical Habitat Areas
-  Sensitive Area Designation
-  Other Public Rights Feature

No identified Critical Habitat Areas within Milwaukee County.



Data Source:  
WDNR Wetland Plants and Habitat v2 dynamic map service

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**MKE RUNWAY 1R-19L REMOVAL  
WDNR CRITICAL HABITAT AREAS**

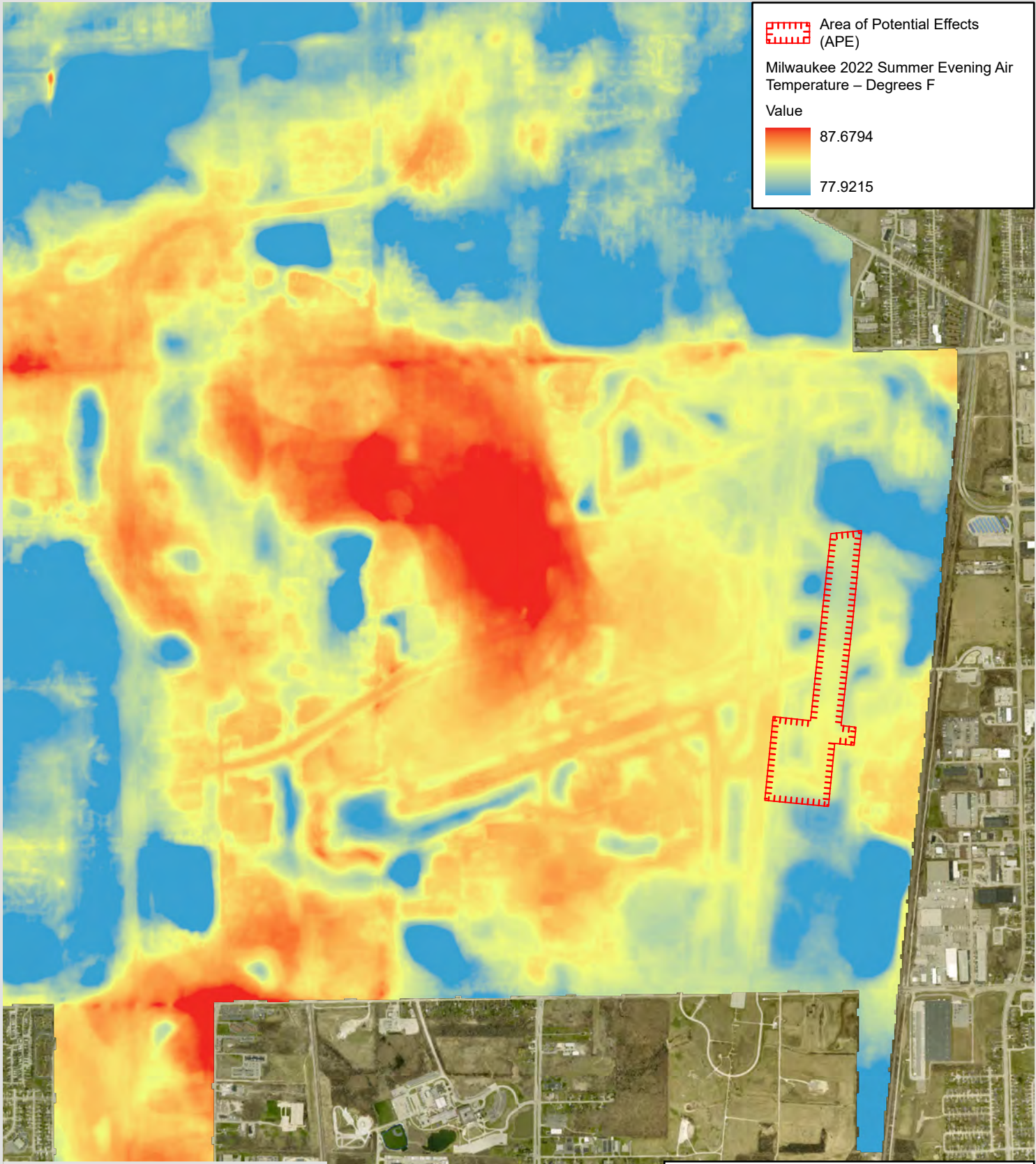
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN


Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 15,259 ft  
PROJECT NO.  
**R3001844.00**


FIGURE NO.  
**3-8**



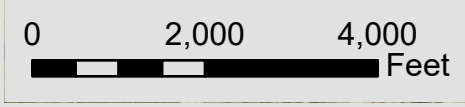
 Area of Potential Effects (APE)

Milwaukee 2022 Summer Evening Air Temperature – Degrees F

Value

 87.6794

77.9215



Data Source:  
 WDNR Open Data Milwaukee 2022 Summer Evening Air Temperature - Degrees F (updated 12/2022)

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**MKE RUNWAY 1R-19L REMOVAL**

**SUMMER EVENING TEMPERATURE DISTRIBUTION**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 2,224 ft

PROJECT NO.  
**R3001844.00**

FIGURE NO.  
**3-8**

	Counties
	Coastal Counties



Data Source:  
 WI Department of Administration - Wisconsin  
 Coastal Management Program

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**MKE RUNWAY 1R-19L REMOVAL  
 WISCONSIN COASTAL COUNTIES**

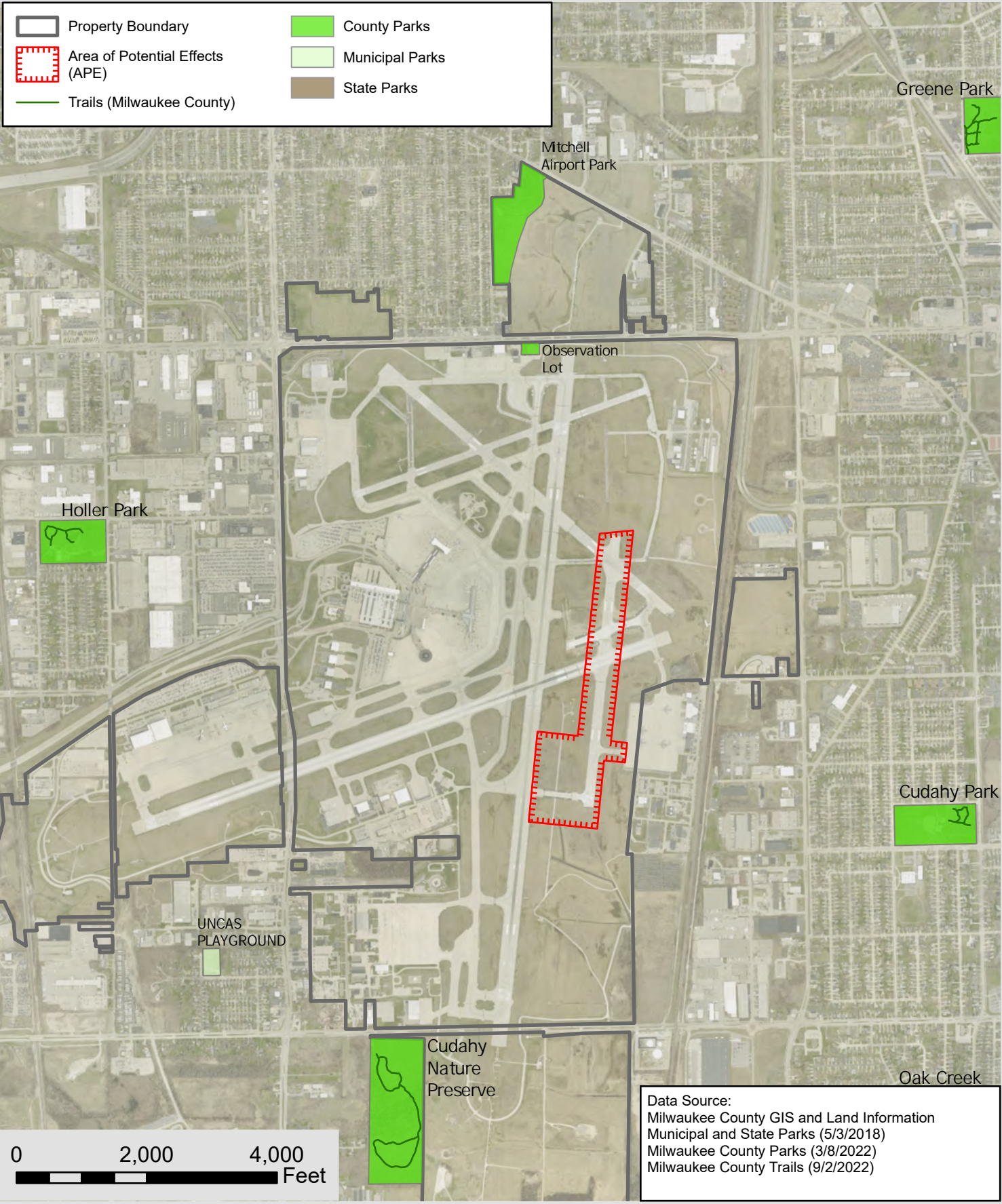
GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: KMW  
 Checked By:

Date: 4/17/2024

SCALE:  
**N/A**  
 PROJECT NO.  
**R3001844.00**

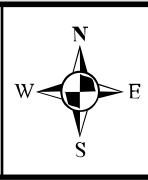
FIGURE NO.  
**3-10**



	Property Boundary		County Parks
	Area of Potential Effects (APE)		Municipal Parks
	Trails (Milwaukee County)		State Parks

Data Source:  
 Milwaukee County GIS and Land Information  
 Municipal and State Parks (5/3/2018)  
 Milwaukee County Parks (3/8/2022)  
 Milwaukee County Trails (9/2/2022)



































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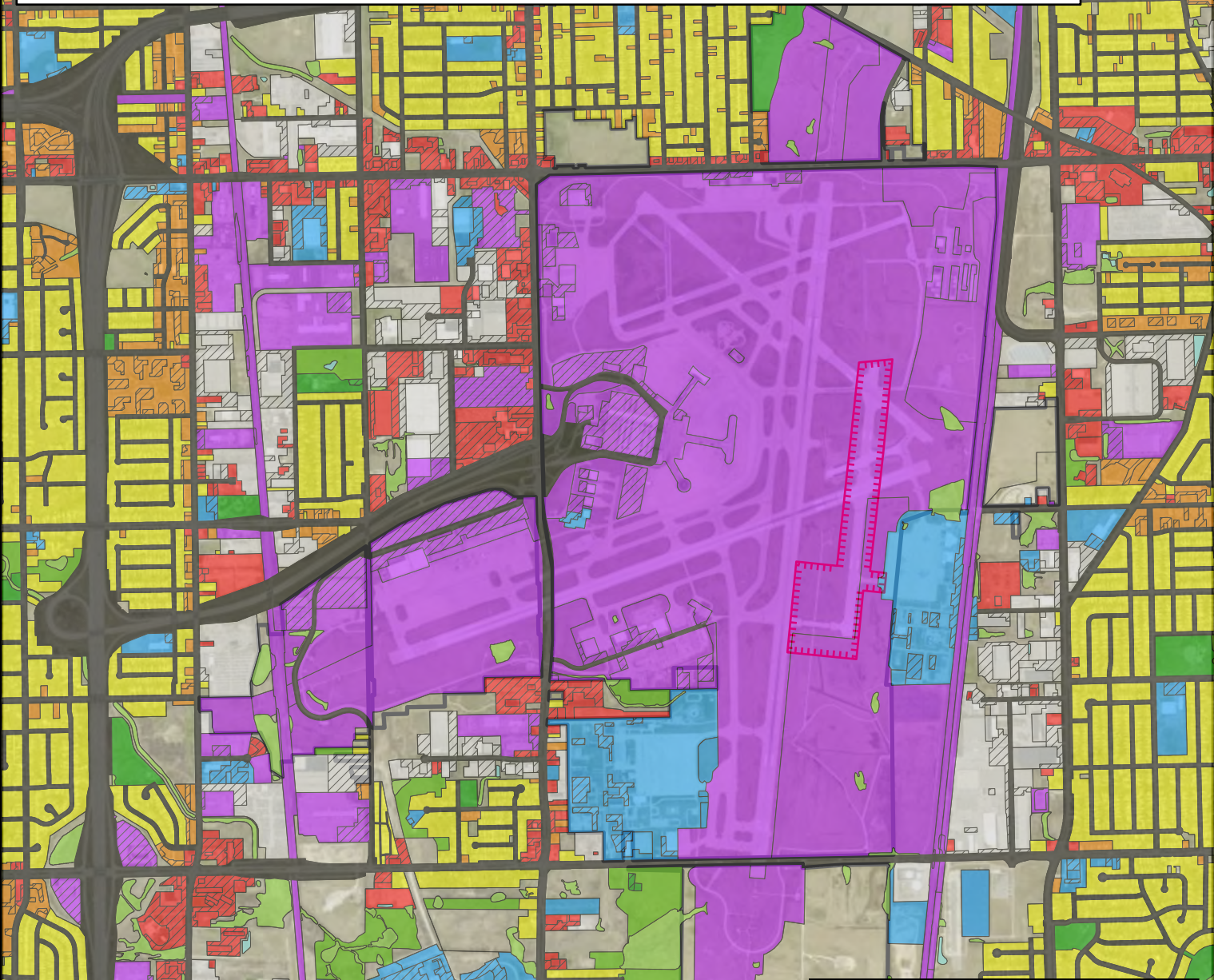


**MKE RUNWAY 1R-19L REMOVAL  
 PARKS AND TRAILS MAP**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 2,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**3-11**

-  Property Boundary
-  Area of Potential Effects (APE)
-  Residential: Single-Family
-  Residential: Multi-Family
-  Residential: Mobile Homes
-  Residential: Land Under Development
-  Commercial: Retail Sales & Service
-  Industrial: Manufacturing
-  Industrial: Wholesaling & Storage
-  Industrial: Extractive
-  Industrial: Land Under Development
-  Transportation: Motor Vehicle-Related
-  Transportation: Motor Vehicle-Related
-  Transportation: Off-Street Parking: Multiple Land Use-Related
-  Transportation: Off-Street Parking: Residential-Related
-  Transportation: Off-Street Parking: Retail Sales & Service-Related
-  Transportation: Off-Street Parking: Industrial-Related
-  Transportation: Off-Street Parking: Transportation-Related
-  Transportation: Off-Street Parking: Communication & Utilities-Related
-  Transportation: Off-Street Parking: Government & Institution-Related
-  Transportation: Off-Street Parking: Recreation-Related
-  Transportation: Rail-Related
-  Transportation: Air-Related
-  Transportation: Air-Related: Land Under Development
-  Communication & Utilities
-  Government & Institutional
-  Recreational
-  Agricultural
-  Open Lands: Wetlands
-  Open Lands: Unused Lands: Urban
-  Open Lands: Unused Lands: Rural
-  Open Lands: Land Fills & Dumps
-  Open Lands: Woodlands
-  Open Lands: Surface Water



Data Source:  
Southeastern Wisconsin Regional Planning  
Commission Interactive Mapping Application

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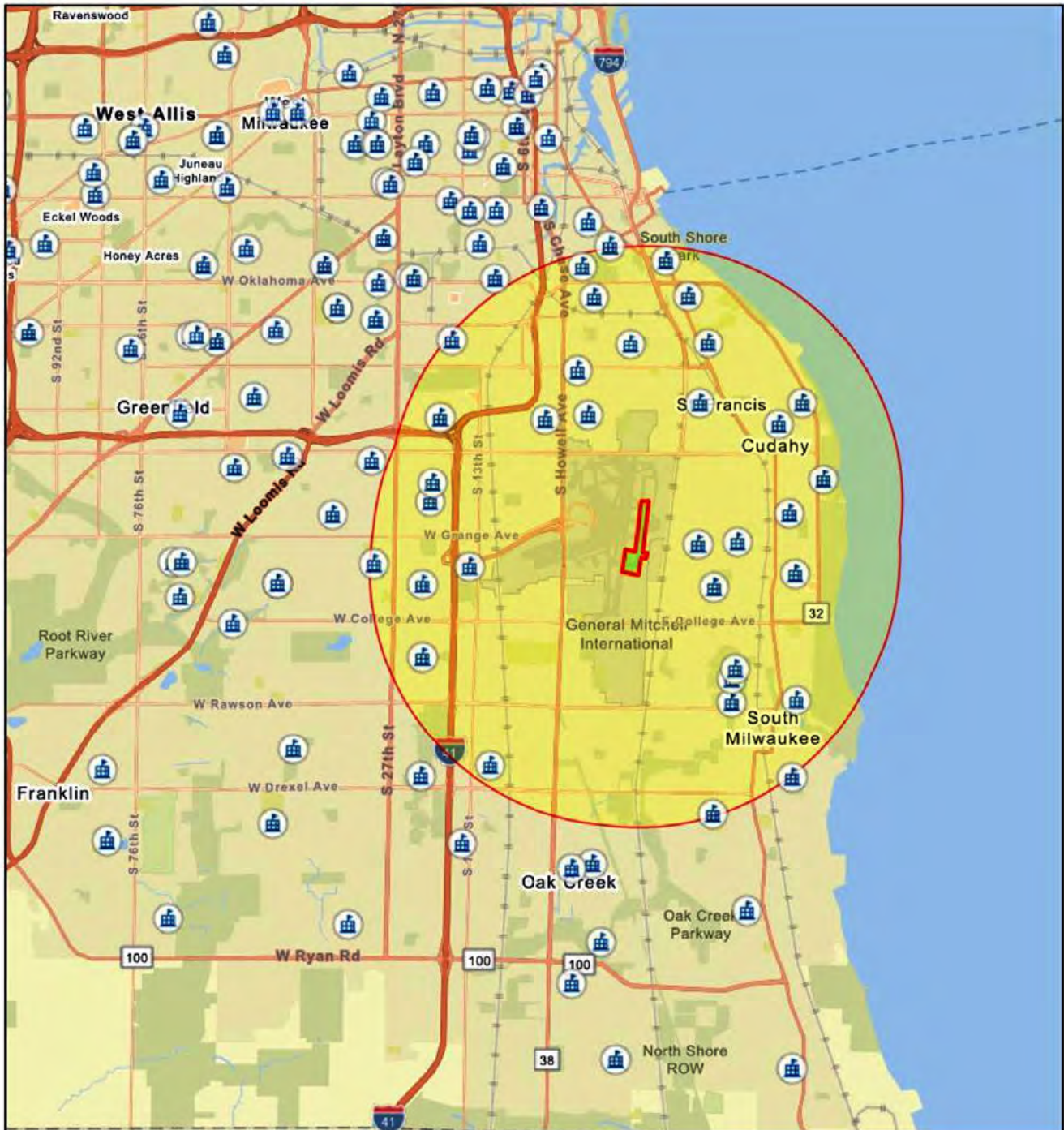
**MKE RUNWAY 1R-19L REMOVAL  
2020 EXISTING LAND USE MAP**  
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024



SCALE:  
1 in = 2,344 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-12**



# RWY 1R-19L



4/17/2024

-  Schools
-  RWY 1R-19L EA

Data Source:  
 EPA EJScreen Mapping Tool  
<https://ejscreen.epa.gov/mapper>

Milwaukee County Land Info, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

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### MKE RUNWAY 1R-19L REMOVAL 3-MILE PROJECT RADIUS - SCHOOL LOCATION MAP

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

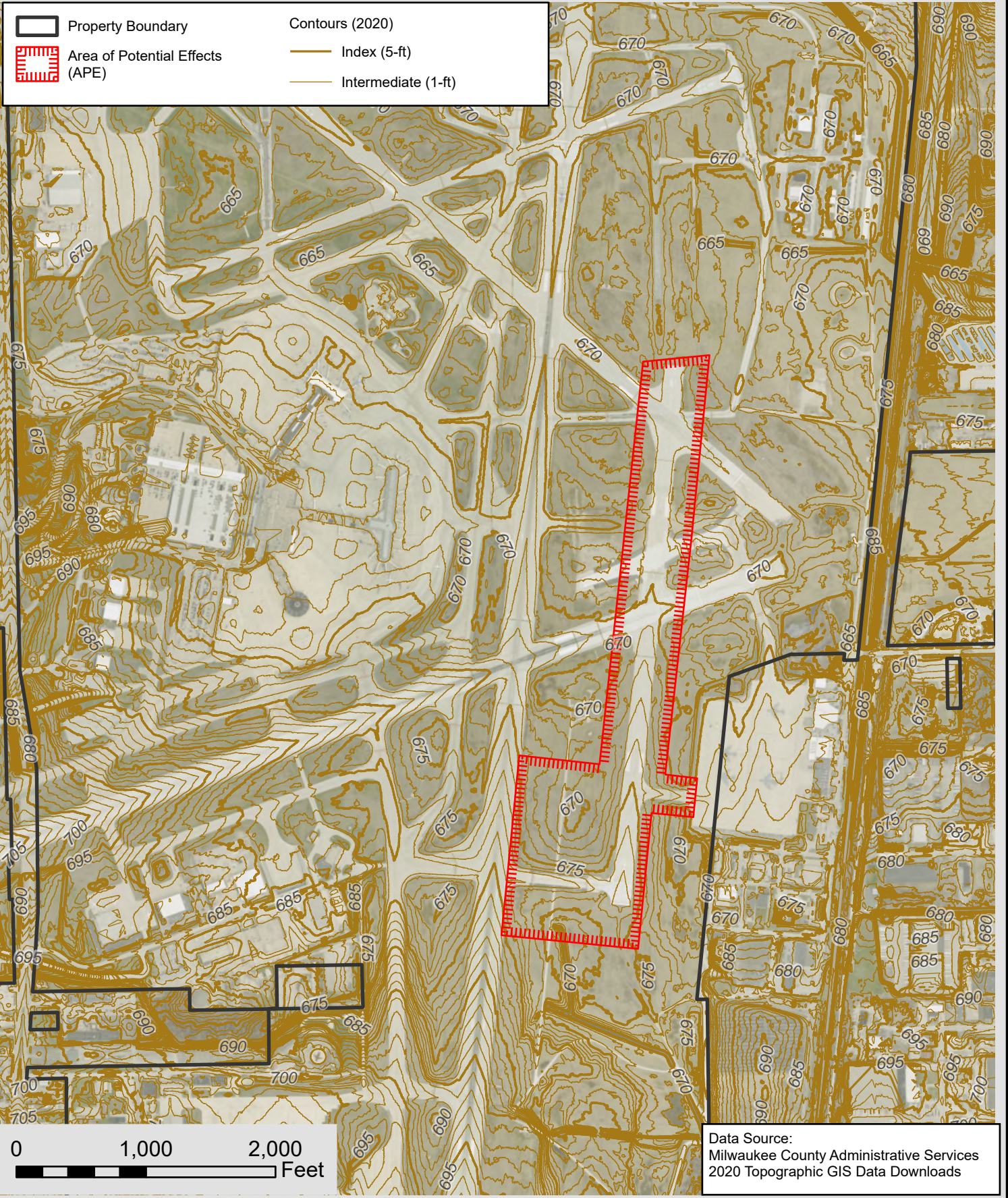
Project Manager:  
 Project Engineer:  
 Drawn By: KMW  
 Checked By:

Date: 4/17/2024

SCALE: <b>N/A</b>
PROJECT NO. <b>R3001844.00</b>
FIGURE NO. <b>3-13</b>



<p>Wetland Map</p>		<p>City of Milwaukee Milwaukee County, WI</p>	<p>Figure <b>3-14</b></p>
<p>MKE Airport Runways 1R-19L &amp; 13-31</p>	<p>By: BWK Date: 9/12/2023</p>	<p><b>QUEST</b> Civil Engineers, LLC</p>	<p>320 W Grand Ave., Suite 302 Wisconsin Rapids, WI 54495 715-423-3525</p>



Data Source:  
Milwaukee County Administrative Services  
2020 Topographic GIS Data Downloads

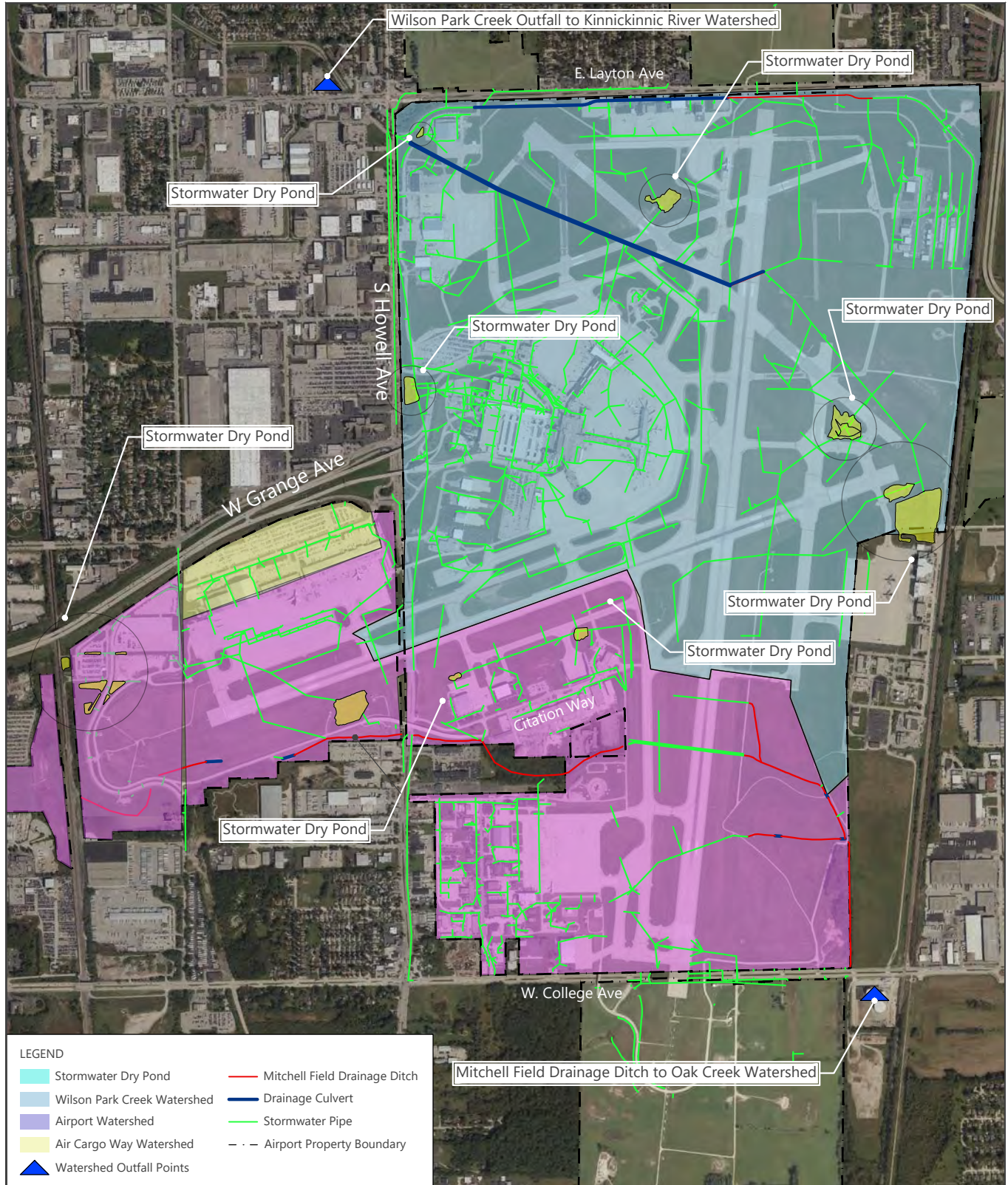
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**MKE RUNWAY 1R-19L REMOVAL  
TOPOGRAPHIC MAP**  
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024

SCALE:  
1 in = 1,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-15**



SOURCES: Quantum Spatial, September 2018 (aerial imagery); Milwaukee Mitchell International Airport Geographic Information System (data provided November 2018).

**EXHIBIT 2-45**



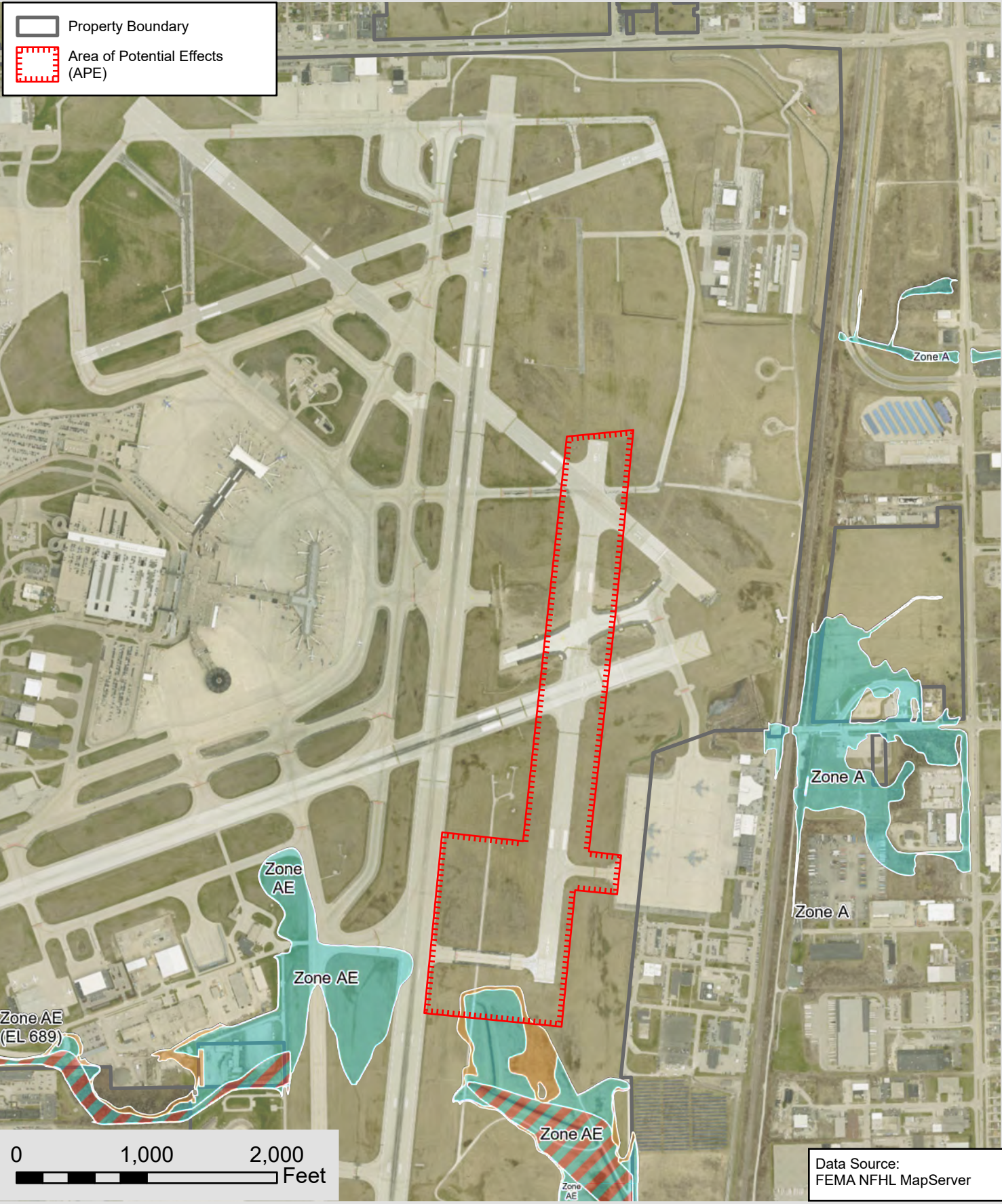
Drawing: P:\Project-Chicago\MKEMKE Master Plan Update\Master Plan Project 2018\03 - Inventory of Existing Conditions\3.23 - Working Exhibit 2-45 Plotted: Sep 23, 2019, 01:52PM

Master Plan Update

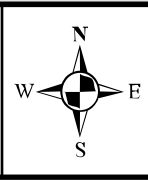
**STORM SEWER AND AIRPORT DRAINAGE UTILITIES**

**FIGURE 3-16  
Storm Sewer and Airport Drainage Utilities**

Map Source: <https://www.mkeupdate.com/application/files/8116/6372/6841/MPU-Section2-Inventory-Final-2022-09-20.pdf>



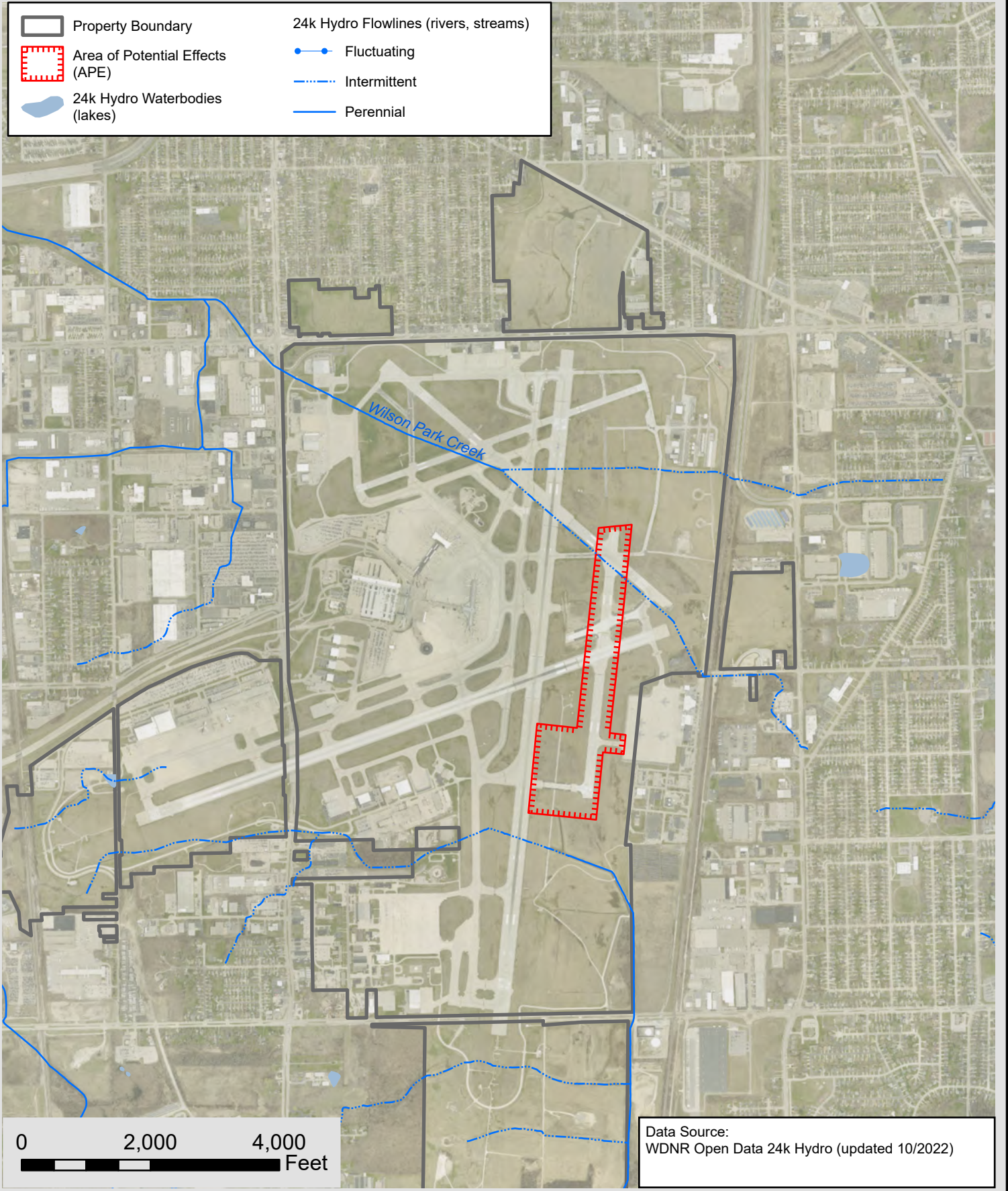
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**MKE RUNWAY 1R-19L REMOVAL  
 FLOODPLAIN MAP**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 1,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**3-17**



Data Source:  
WDNR Open Data 24k Hydro (updated 10/2022)

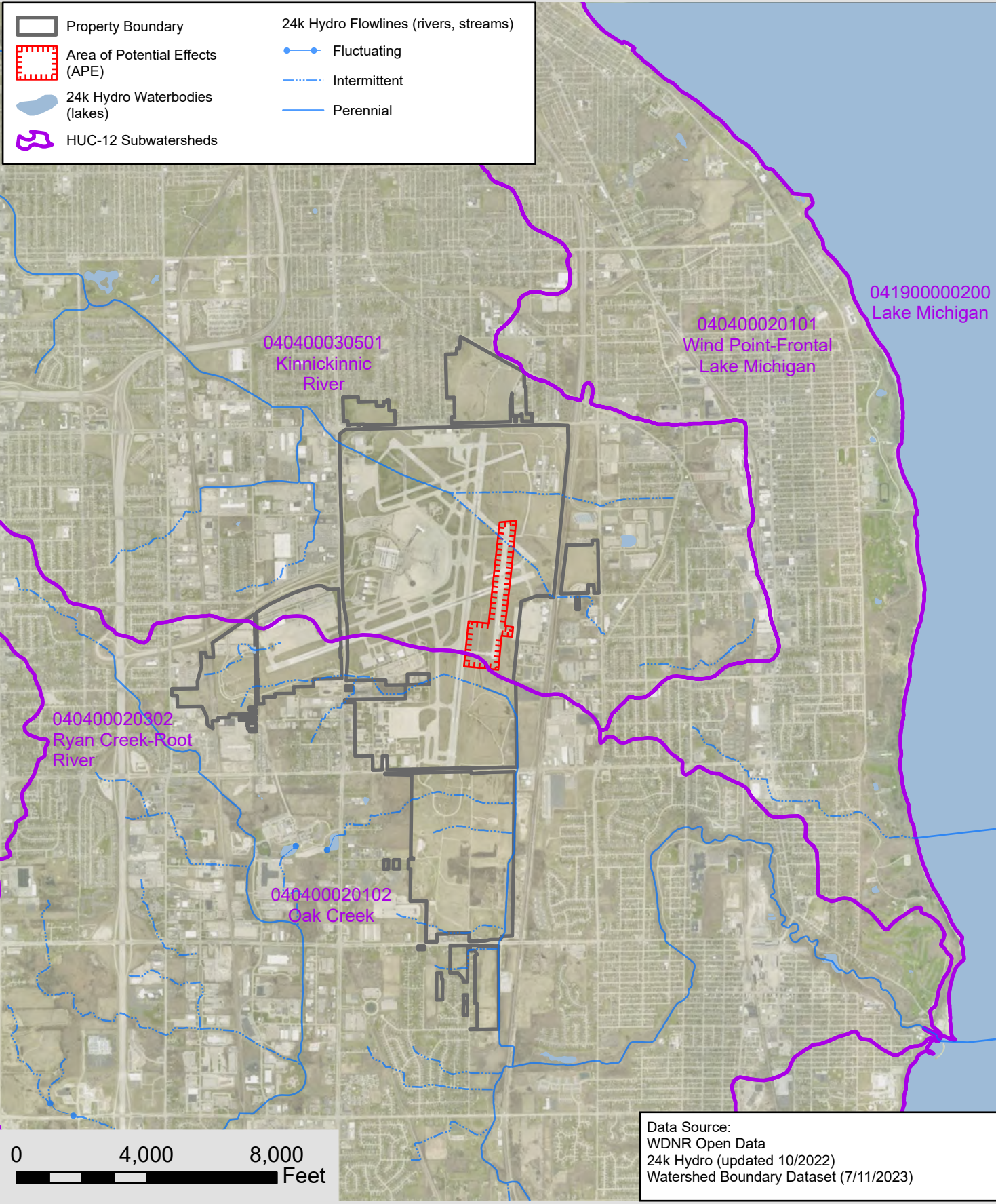
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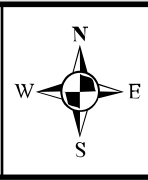
**MKE RUNWAY 1R-19L REMOVAL  
WATERWAY MAP (24K HYDRO)**  
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:  
Date: 4/17/2024

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**3-18**



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**MKE RUNWAY 1R-19L REMOVAL  
 WATERSHED MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 4,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**3-19**



Area of Potential Effects (APE)



Property Boundary



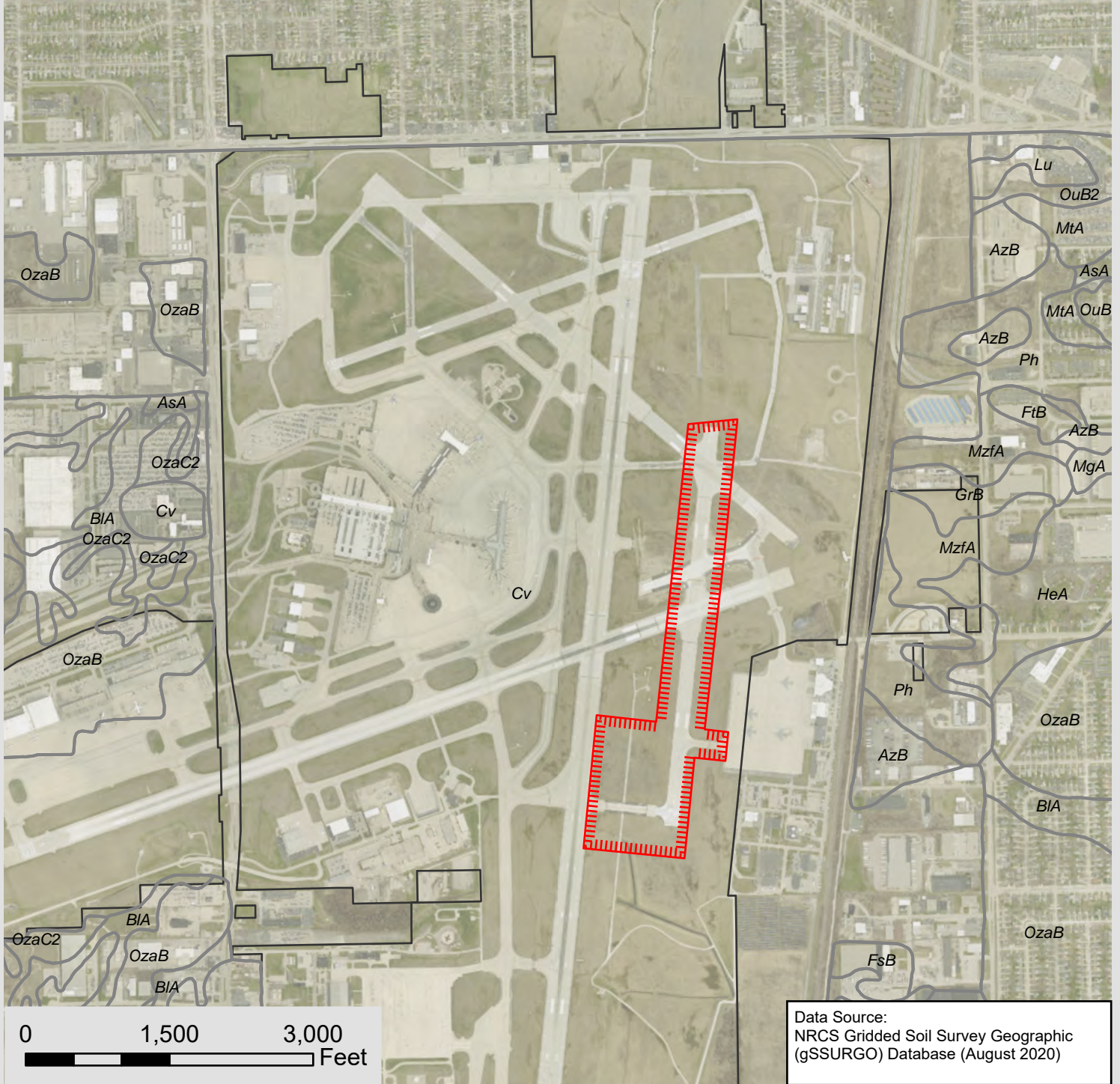
NRCS Soil Survey

AsA (Ashkum silty clay loam, 0 to 2 percent slopes)  
 AzB (Aztalan loam, 2 to 6 percent slopes)  
 BIA (Blount silt loam, 1 to 3 percent slopes)  
 Cv (Clayey land)  
 FsB (Fox silt loam, 2 to 6 percent slopes)  
 FtB (Fox silt loam, loamy substratum, 2 to 6 percent slopes)

GrB (Grays silt loam, 2 to 6 percent slopes)  
 HeA (Hebron loam, 0 to 2 percent slopes)  
 Lu (Loamy land)  
 MgA (Martinton silt loam, 1 to 3 percent slopes)  
 MtA (Mequon silt loam, 1 to 3 percent slopes)  
 MzfA (Mundelein silt loam, 0 to 3 percent slopes)

OuB (Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes)  
 OuB2 (Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded)  
 OzaB (Ozaukee silt loam, 2 to 6 percent slopes)  
 OzaB2 (Ozaukee silt loam, 2 to 6 percent slopes, eroded)

OzaC2 (Ozaukee silt loam, 6 to 12 percent slopes, eroded)  
 Ph (Pella silt loam, 0 to 2 percent slopes)  
 PRa (Pistakee silt loam, 1 to 3 percent slopes)  
 UA (Unmapped area)



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## MKE RUNWAY 1R-19L REMOVAL SOILS MAP

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 1,500 ft

PROJECT NO.  
**R3001844.00**

FIGURE NO.  
**3-20**



## CHAPTER 4 – ENVIRONMENTAL CONSEQUENCES

The Airport is proposing to decommission and remove Runway 1R/19L and modify the supporting taxiway network to align the airfield configuration with the ALP and remove underutilized and obsolete pavements. This Chapter describes the environmental consequences of the SPA of removal of Runway 1R/19L and the conversion to a parallel taxiway.

In accordance with the technical guidelines set forth in FAA Orders 1050.1F and 5050.4B and the CEQ Regulations, this chapter describes the environmental consequences of the alternatives that were outlined in Chapter 2 and the affected environment in Chapter 3. Impact is determined by combining the anticipated environmental conditions after development to the environmental conditions should no development take place.

For the purposes of this EA, the environmental consequences were determined for the No Action Alternative, the SPA, and Alternative B.

### 4.1 Air Quality

The Clean Air Act (CAA) is the federal law that regulates air emissions from area, stationary, and mobile sources. The first CAA, passed in 1967, required that air quality criteria necessary to protect the public health and welfare be developed. There have been several revisions to the CAA since 1967. The CAA Amendment of 1990 represents the fifth major effort to address clean air legislation. The CAA authorizes the EPA to establish NAAQS to protect public health and the environment. The State Implementation Plan (SIP) is used by a state to control air pollution so that NAAQS will be met.

The EPA Office of Air Quality Planning and Standards has set NAAQS for six principal pollutants, which are called "criteria" pollutants: carbon monoxide, lead, nitrogen dioxide, particulate matter less than 2.5 micrometers in diameter, ozone, and sulfur oxides<sup>82</sup>. Under the General Conformity Rule<sup>83</sup>, federal agencies must work with state and local governments in a non-attainment or maintenance area (for air quality) to ensure that federal actions conform to the initiatives established in the SIP. Milwaukee County is designated as a non-attainment zone for 8-hour ozone (moderate) and maintenance area for PM<sub>2.5</sub>.

The EPA has defined categories of federal actions that are exempt from the General Conformity Rule<sup>84</sup> that result in no emissions increase or low emission increases. Actions that fall under the exemptions are not subject to further analysis under the General Conformity Rule. Further, the FAA

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<sup>82</sup> National Ambient Air Quality Standards: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

<sup>83</sup> General Conformity Rule: <https://www.epa.gov/general-conformity/basic-information-about-general-conformity-rule>.

<sup>84</sup> 40 CFR 93.153(c)(2): <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-93/subpart-B/section-93.153>

has provided clarification on airport-related actions and activities that may qualify for exemption<sup>85</sup>. The proposed project action of decommissioning and removing Runway 1R/19L is not anticipated to increase the capacity of the airport or significantly change the operational environment due to the minimal existing aircraft operations that utilize Runway 1R/19L. Additionally, the decommissioning of Runway 1R/19L consists of pavement removal which is presumed to conform under the FAA's identified exempted actions under 40 CFR 93.153(c)(2). Non-runway pavement work, including taxiway construction, are included in the FAA's Presumed to Conform Actions under General Conformity issued July 30, 2007<sup>86</sup>. The SPA includes the conversion of Runway 1R/19L into a taxiway. The proposed taxiway conversion is not anticipated to affect runway use or increase capacity. It is anticipated that aircraft movements will be similar to that of the existing conditions. Alternate B includes the construction of a parallel taxiway. Similar to the Proposed Action, the proposed taxiway is not anticipated to affect runway use or increase capacity.

Air quality could be impacted during construction activities of the Proposed Action and Alternative B. Impacts may cause temporary impacts as a result of construction activities, exclusively during the construction period. Estimated construction GHG emissions are evaluated for each alternate in Section 4.3, Climate.

To reduce the potential for air quality impacts during construction, the special provisions for this project would require that motorized equipment shall be operated in compliance with all applicable local, state, and federal laws and regulations.

The SPA and Alternative B would not substantially impact air quality and are exempt from conformity or presumed to conform actions. The No Action alternative would not have an impact on air quality.

## **4.2 Biological Resources**

### **4.2.1 Federally Listed Endangered and Threatened Species**

Section 7 of the Endangered Species Act of 1973<sup>87</sup>, as amended, requires each federal agency to ensure that "...any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or results in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee..." Section 7a(3) further requires that "each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the

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<sup>85</sup> FAA Federal Presumed to Conform Actions Under General Conformity: <https://www.federalregister.gov/documents/2007/02/12/E7-2241/federal-presumed-to-conform-actions-under-general-conformity>

<sup>86</sup> FAA Federal Presumed to Conform Actions Under General Conformity: <https://www.federalregister.gov/documents/2007/02/12/E7-2241/federal-presumed-to-conform-actions-under-general-conformity>

<sup>87</sup> Endangered Species Act of 1973: [https://www.fws.gov/sites/default/files/documents/endangered-species-act-accessible\\_7.pdf](https://www.fws.gov/sites/default/files/documents/endangered-species-act-accessible_7.pdf)

continued existence of any species proposed to be listed under Section 4 or results in the destruction or adverse modification of critical habitat proposed to be designated for such species.”

The USFWS Threatened & Endangered Species Active Critical Habitat Report was reviewed. There were no areas identified within the mapped extents. **Figure 4-1** shows the Airport property boundary, the proposed project locations on the Airport, and critical habitat areas, if present.

The USFWS IPaC online planning tool was used to obtain a list of species and habitat that could potentially be impacted<sup>88</sup>. The federal list for endangered, threatened, or candidate species includes the following: Northern Long-eared Bat, Tricolored Bat, and Monarch Butterfly. For all these species, there are no critical habitats found in or near the project area. There were no critical habitats identified within the proposed project area.

The U.S. Fish & Wildlife Service's, Environmental Conservation Online System (ECOS) was referenced for the listed species<sup>89</sup>. Information pages on the listed species were reviewed. **Table 4-1** is a summary of the federally listed species evaluation.

USFWS coordination under the Endangered Species Act is not required for this project because the project will not result in impacts to federally listed species, proposed species, or designated or proposed critical habitat.

Based on information reviewed and consultation with the agencies, the SPA and Alternative B would not have a substantial effect on federally listed, proposed, or candidate species or federally designated or proposed critical habitat, or otherwise sensitive species, natural plant communities, or natural features. The No Action alternative would not have a substantial effect on federally listed, proposed, or candidate species or federally designated or proposed critical habitat, or otherwise sensitive species, natural plant communities, or natural features.

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<sup>88</sup> U.S. Fish & Wildlife Service, Information for Planning: <https://ipac.ecosphere.fws.gov>

<sup>89</sup> U.S. Fish & Wildlife Service, Environmental Conservation Online System: <https://ecos.fws.gov/ecp/>

**Table 4-1. IPaC Effect Determination Summary**

SPECIES (COMMON NAME)	SCIENTIFIC NAME	LISTING STATUS	HABITAT	PRESENT IN PROJECT AREA	EFFECT DETERMINATION	JUSTIFICATION
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Endangered	Hibernates in caves and mines-swarming in surrounding wooded areas in autumn. During summer, roosts and forages in upland forests.	No	No effect	There is no suitable habitat in the project area. NLEB Range wide Determination Key Completed, Consistency Letter Obtained 01/23/2024.
Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered	Hibernates in caves and mines. During spring, summer, and fall; found in forested areas.	No	No effect	There is no suitable habitat in the project area. Minnesota-Wisconsin Endangered Species Determination Key, Consistency Letter Obtained 01/23/2024.
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	Wherever found	No	No effect	There is no critical habitat in the project area. Minnesota-Wisconsin Endangered Species Determination Key, Consistency Letter Obtained 01/23/2024.
Date of Official Species List: January 23, 2024						

#### 4.2.2 State Listed Fish, Wildlife, and Plants

The proposed project area was entered into the WDNR’s NHI Public Portal. No endangered resources have been recorded for the proposed development areas. No further actions were required/recommended.

The WDNR through the Wisconsin NHI Program, is working to locate and document occurrences of rare species and natural communities, including state and federal endangered and threatened species. Occurrences are mapped in general terms to protect the species from destruction<sup>90</sup>. Based on a WDNR review of the NHI Portal on December 1, 2023, for the proposed project areas, they concluded that “there are no known state listed threatened or endangered species or suitable habitat

<sup>90</sup> WDNR Natural Heritage Inventory Program: <https://dnr.wisconsin.gov/topic/NHI/Methods>

that could be impacted by this project.” Resource information from the NHI report is being redacted from this document due to the sensitive and confidential nature of its content (s. 23.27(3)(b) Wis. Stats.). The WDNR correspondence is included in **Appendix 2**.

Visual observations of the proposed project areas noted mowed grass and disturbed land. Active streams<sup>91</sup>, critical habitats, or trees were not observed. Current Airport operating procedures actively discourages migratory bird concentrations because of safety concerns. Proposed project area photographs are included in **Appendix 1**.

The SPA or Alternative B would take place in previously disturbed areas. No state listed threatened or endangered species have been identified on the proposed project location. The SPA and Alternative B would not have an effect on state listed threatened or endangered species. The No Action alternative would not have an effect on state listed threatened or endangered species.

### 4.3 Climate

The CEQ<sup>92</sup> developed guidance in response to Executive Order 13990<sup>93</sup>. The CEQ guidance instructs federal agencies to evaluate impacts from GHG emissions during environmental reviews to ensure the consideration of climate impacts in federal decision making<sup>94</sup>.

The SPA and Alternative B were identified through the MPU. The MPU identified that the airfield capacity can remain the same with the removal of the runways<sup>95</sup>. The SPA or Alternative B is not anticipated to increase consumption of fuel by aircraft due to changes in ground movements or run-up times; by aircraft due to changes in flight patterns; or by ground vehicles due to changes in movement patterns for Airport service or other vehicles. Through an analysis of 2022-2023 radar flight track data, Runway 1R/19L is used for 0.1% of daytime arrivals, 0.0% of nighttime arrivals, 0.2% of daytime departures, and 0.1% of nighttime departures<sup>96</sup>. The Runway 1R/19L use is minimal in scale compared to other Airport runways, thus the impacts of increased taxi times are negligible. Currently, aircraft movements associated with the 128<sup>th</sup> ANG utilize Taxiway W, Runway 1R/19L, and Taxiway S for ground taxi movements to access Taxiway R and Runway

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<sup>91</sup> The Wilson Park Creek does cross the project area underground in a storm sewer pipe. The Mitchell Field Drainage Ditch is present in the far southern area of the project.

<sup>92</sup> The CEQ was established by NEPA in 1969: <https://www.whitehouse.gov/ceq/>

<sup>93</sup> Executive Order 13990: <https://www.federalregister.gov/documents/2021/01/25/2021-01765/protecting-public-health-and-the-environment-and-restoring-science-to-tackle-the-climate-crisis>

<sup>94</sup> Biden-Harris Administration Releases New Guidance to Disclose Climate Impacts in Environmental Reviews: <https://www.whitehouse.gov/ceq/news-updates/2023/01/06/biden-harris-administration-releases-new-guidance-to-disclose-climate-impacts-in-environmental-reviews/>

<sup>95</sup> Master Plan Update, Section 5.3.1 (Airfield Facilities Component Alternatives): <https://www.mkeupdate.com/application/files/4316/6373/1754/MPU-Section5-AlternativesAnalysis-1of4-Final-2022-09-20.pdf>

<sup>96</sup> Data obtained from Noise Technical Report, Table 8 - See Appendix 4

1L/19R. The proposed Taxiway CC, Taxiway W, and Taxiway S would continue to provide access to the 128<sup>th</sup> ANG.

Surrounding the areas of only pavement removal (north of Taxiway W) runway lights would be removed. Airfield lighting would be reconfigured as taxiway lighting for the Taxiway CC. It is anticipated that the amount of taxiway lights along the reconfigured taxiway would be less than the existing runway lights, resulting in a net decrease in energy consumption for airfield lighting.

Infrastructure such as buildings and roads absorb and re-emit the sun's heat more than natural landscapes. Due to the increased density of infrastructure in urban areas, they become "islands" of higher temperatures, often referred to as "heat islands."<sup>97</sup> The proposed project is anticipated to remove approximately 53,000 SY of pavement and restore to turf, increasing the natural landscape. The EPA identifies increasing vegetation cover as a strategy for heat island cooling with the added benefit of reducing stormwater runoff<sup>98</sup>.

The SPA and Alternative B would not increase airport capacity or significantly change aircraft surface movements. There is no anticipated GHG emission increase when compared to the No Action alternative<sup>99</sup>. The No Action Alternative would not result in a change in GHG emissions from the existing conditions. The existing emissions associated with maintenance and repairs of pavement, lighting, and NAVAIDs would remain with the No Action Alternative.

Although there is no anticipated GHG emission increase as a result of the SPA or Alternative B, construction operations such as the hauling materials, equipment operation, and production of construction materials would temporarily increase GHG emissions. Construction GHG emissions would likely be carbon dioxide (CO<sub>2</sub>) emissions from heavy equipment such as dozers, excavators, pavers, and dump trucks. An engineers estimate for total diesel fuel needed for construction of both the SPA and Alternative B was produced and converted to metric-tons (MT) of CO<sub>2</sub> equivalent, MT of methane (CH<sub>4</sub>) equivalent, and MT of nitrous oxide (N<sub>2</sub>O) equivalent. Estimates of GHG emissions are shown in **Table 4-2**. Additionally, the production of construction materials would likely increase CO<sub>2</sub> emissions. The Federal Highway Administration (FHWA) LCA Pave Tool was used to calculate estimated CO<sub>2</sub> emissions associated with the production of concrete and asphalt materials for both the Proposed Action Alternative and Alternative B. Results of estimated CO<sub>2</sub> emissions are shown in **Table 4-2**. **Appendix 6** shows the calculations and assumptions for the construction equipment emission estimates and LCA Pave Tool. The No Action Alternative would not result in construction emissions. The No Action alternative would not realize the benefits of decreased future construction emissions associated pavement repairs and eventual pavement rehabilitation or reconstruction.

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<sup>97</sup> EPA, Heat Islands: <https://www.epa.gov/heatislands/learn-about-heat-islands>

<sup>98</sup> EPA, Heat Island Cooling Strategies: <https://www.epa.gov/heatislands/heat-island-cooling-strategies>

<sup>99</sup> FAA Order 1050.1F indicates that if "The proposed action or alternative(s) would not result in a net increase in GHG emissions, a brief statement describing the factual basis for this conclusion is sufficient."

**Table 4-2. Temporary Construction Emissions**

		<b>Sponsor Proposed Action</b>	<b>Alternate B</b>	<b>No Action Alternative</b>
Equipment Emissions	Diesel Fuel Consumption (gal)	84,640 gal	88,240 gal	0 gal
	Carbon Dioxide, CO <sub>2</sub> Equivalent (metric tons)	861 MT-CO <sub>2</sub> e	898 MT-CO <sub>2</sub> e	0 MT-CO <sub>2</sub> e
	Methane, CH <sub>4</sub> Equivalent (metric tons)	0.085 MT-CH <sub>4</sub> e	0.089 MT-CH <sub>4</sub> e	0 MT-CH <sub>4</sub> e
	Nitrous Oxide, N <sub>2</sub> O Equivalent (metric tons)	0.080 MT-N <sub>2</sub> Oe	0.083 MT-N <sub>2</sub> Oe	0 MT-N <sub>2</sub> Oe
Construction Material (Concrete and Asphalt) Production Emissions	Carbon Dioxide, CO <sub>2</sub> Equivalent (metric tons)	3,081 MT -CO <sub>2</sub> e	3,090 MT -CO <sub>2</sub> e	0 MT -CO <sub>2</sub> e

Note: The No Action Alternative does not account for future emissions associated with continued maintenance, repairs, and rehabilitation or reconstruction of Runway 1R/19L pavement and utilities.

## 4.4 Coastal Resources

### 4.4.1 Coastal Management Program

The Wisconsin Coastal Management Program (WCMP) was established in 1978 under the Federal Coastal Zone Management Act to protect and achieve a balance between natural resources preservation and economic development along Lake Michigan and Lake Superior.<sup>100</sup> The fifteen counties in Wisconsin that are adjacent to Lake Michigan and Lake Superior fall under the WCMP. Milwaukee County is listed as a coastal county because it borders Lake Michigan. The Wisconsin Department of Administration oversees the WCMP and was notified of the proposed project, correspondence is included in **Appendix 2**.

The SPA and Alternative B would not result in any foreseeable effects to coastal resources and would not be constructed along the Lake Michigan coastline. Additionally, the SPA and Alternative

<sup>100</sup> Wisconsin Coastal Management Program: <https://doa.wi.gov/Pages/LocalGovtsGrants/CoastalManagement.aspx>.

B are anticipated to remain consistent with existing regional drainage patterns. The No Action alternative would not have an impact on coastal resources under the WCMP.

#### 4.4.2 Coastal Barriers

Coastal barriers occur on the coastlines of the United States and are protected by the Coastal Barriers Resources Act (CBRA)<sup>101</sup>. The Airport is not located within or adjacent to the Coastal Barrier Resource System (CBRS). Therefore, the provisions of the CBRA do not apply. There are no coastal barriers impacts with either the SPA, Alternative B, or the No Action alternative.

#### 4.5 Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966, as amended, provides that the Secretary of Transportation shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land of a historic site of national, state or local significance as determined by the officials having jurisdiction thereof unless there is no feasible and prudent alternative to the use of such land and such program or project includes all possible planning to minimize harm resulting from the use<sup>102</sup>.

The federal government established the Land and Water Conservation Fund Program in 1965 to increase the net quantity of public, outdoor recreational space. Section 6(f) of this Act provides matching funds to states or municipalities for planning, improvements, or acquisition of outdoor recreational lands. Section 6(f) provides protection to ensure that lands acquired or developed with Land and Water Conservation Funds remain available for public outdoor recreation unless there are compelling reasons and appropriate processes for conversion to other uses.

The proposed project would be located on Airport property. No public parks, recreational areas, national lands, state lands, or historic sites were identified immediately adjacent to the project area outside the Airport. **Figure 4-2** shows the Airport property boundary, the proposed project locations on the Airport, and surrounding parks and trails.

No Section 4(f) lands or Section 6(f) lands would be acquired for permanent or temporary occupancy for construction related activities with the SPA, Alternative B, or the No Action alternative.

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<sup>101</sup> Coastal Barriers Resources: <https://www.fws.gov/program/coastal-barrier-resources-act>.

<sup>102</sup> Department of Transportation Act of 1966: <https://www.govinfo.gov/content/pkg/STATUTE-80/pdf/STATUTE-80-Pg931.pdf>



## 4.6 Farmlands

The Farmland Protection Policy Act<sup>103</sup> (FPPA) authorizes the Department of Agriculture to develop criteria for identifying the effects of Federal programs on the conversion of farmland to nonagricultural uses. Federal agencies are directed to use the guidelines established by the Department of Agriculture to: 1) identify and take into account the adverse effects of Federal programs on the preservation of farmland, 2) consider appropriate alternative actions which could lessen adverse effects, and 3) assure that such Federal programs, to the extent practicable, are compatible with state, local government, and private programs and policies to protect farmland.

A project that involves the acquisition of farmland, which will be converted to nonagricultural use, must determine whether any of that land is protected by the FPPA. Farmland protected by the FPPA is classified as either prime farmland (which is not already committed to urban development or water storage), unique farmland, or farmland, which is of state or local importance (as determined by appropriate state or local government agency with the concurrence of the Secretary of Agriculture).

The land is currently a mowed grass field and disturbed areas with no structures on them. Proposed project site photographs, illustrating current land use, are included in **Appendix 1**.

The Airport already owns the land where the SPA and Alternative B would be located. There would be no acquisition of farmland for the SPA or Alternative B. There are no farmland impacts associated with the No Action alternative.

## 4.7 Hazardous Materials, Solid Waste, and Pollution Prevention

A Phase I ESA<sup>104</sup> was conducted on the proposed project areas. The results of the Phase I Environmental Site Assessment indicated that it was unlikely that the proposed project areas had been directly contaminated with hazardous materials from either on-site activities or off-site operations.

The Phase I ESA included an environmental records review. Additionally, an independent environmental records search was provided by ERIS, which gathered information from multiple environmental databases. The ERIS report called out multiple database listings for the project area; however, after further review, the listings appeared to be related to releases across the airport property and not the proposed project area. Reviewed listings include, underground storage tanks, hazardous material (petroleum products) spills, leaking underground storage tanks, environmental repair sites and more. After further review of the nearby listings, hazardous materials do not appear to be impacting the project area due to multiple factors, including the anticipated soil and ground disturbance associated with the proposed project.

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<sup>103</sup> Farmland Protection Policy Act: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>

<sup>104</sup> Phase I Environmental Site Assessment, Milwaukee Mitchell International Airport – Runway 1R-19L, prepared by Westwood Professional Services, Inc., dated March 11, 2024.

Due to magnitude of historical environmental records associated with the Airport, there is the potential for a gap in adequate hazardous material data. Though not anticipated, it is recommended that project plans and specifications include guidance if evidence of soil contamination is detected during removal and construction activities. Project specifications may include a special provision describing notification procedures, excavation, loading, hauling, and disposing of contaminated soil.

Concrete pavement removed from the project may be crushed onsite to be recycled as base course. Recycled base course may be used for pavement rehabilitation or reconstruction associated with the project or other projects on the airfield. It is anticipated that any excess concrete pavement or recycled base course would be transported offsite. Asphalt pavement may be pulverized or milled and transported offsite or recycled for use for other projects on the airfield. It is anticipated that any recycled materials transported offsite would become property of the contractor performing the work.

It is anticipated that any soil materials excavated for the rehabilitation or construction of Taxiway CC for the Proposed Action Alternative or Alternative B would be recycled as soil fill material for the pavement removal areas north of Taxiway W that would be restored to turf.

The proposed project is not anticipated to include any direct relationship to pollution prevention or solid waste collection, control, or disposal other than that associated with the construction itself. The proposed project is not anticipated to change current solid waste handling.

There are no substantial hazardous materials, pollution prevention or solid waste impacts anticipated with the SPA or Alternative B. There are no hazardous materials, pollution prevention or solid waste impacts with the No Action alternative.

#### **4.8 Historical, Architectural, Archeological, and Cultural Resources**

Determination of an environmental impact of what a project might have to historic, architectural, archeological, or cultural resources is made under the guidance contained in the National Historic Preservation Act of 1966, as amended<sup>105</sup>, and the Archaeological and Historic Preservation Act of 1974<sup>106</sup>.

The National Historic Preservation Act established the Advisory Council on Historic Preservation to advise the President and the Congress on historic preservation matters, to recommend measures to coordinate federal historic preservation activities, and to comment on federal actions affecting properties included or eligible for inclusion in the NRHP. Section 106 requires federal agencies to consider the effects of their undertakings on properties on or eligible for inclusion in the NRHP. Compliance with Section 106 requires consultation with the SHPO and/or the THPOs.

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<sup>105</sup> National Historic Preservation Act of 1966, as amended: <https://www.achp.gov/digital-library-section-106-landing/national-historic-preservation-act>

<sup>106</sup> Archaeological and Historic Preservation Act: [https://dahp.wa.gov/sites/default/files/Moss\\_Bennett\\_Act\\_ArchHistPres.pdf](https://dahp.wa.gov/sites/default/files/Moss_Bennett_Act_ArchHistPres.pdf)

The Archaeological and Historic Preservation Act provides for the survey, recovery, and preservation of important scientific, pre-historical, historical, archeological, or paleontological data when such data may be destroyed or irreparably lost due to a federal, federally licensed, or federally funded project.

An APE is defined by 36 CFR 800.16(d)<sup>107</sup> as being “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.” An undertaking has an effect on a historic property when the undertaking may alter characteristics that may qualify the property for inclusion in the NRHP. Adverse effects include, but are not limited to:

- Physical destruction, damage, or alteration of all or part of the property;
- Alterations of a property that is not consistent with the standards for treatment of historic properties;
- Removal of the property from its historic location;
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance;
- Introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s important historic features;
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of the property; and
- Transfer lease, or sale of the property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic importance.

The definition of the APE for the proposed project involved the construction areas and adjacent project areas. Delineation of the APE involved the following considerations:

- The physical construction of the proposed project would be located within the existing Airport boundaries.
- Terrain, vegetation, and intervening buildings around the Airport would remain.

The determination of the proposed project’s APE and the evaluation of listed or eligible properties are subject to review and evaluation by the SHPO.

For this EA, literature and records reviews were completed to determine if any properties in or eligible for inclusion in the NRHP were within the APE. Additionally, a Phase I Archaeological Reconnaissance Survey and Architecture/History site visit and was conducted on September 12, 2023. The Phase I Archaeological Reconnaissance Survey involved a pedestrian inventory within the proposed project APE. The objective of the inventory was to identify unrecorded cultural resources.

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<sup>107</sup>36 CFR 800.16(d): [https://www.ecfr.gov/current/title-36/part-800#p-800.16\(d\)](https://www.ecfr.gov/current/title-36/part-800#p-800.16(d))

No cultural resources were identified during the pedestrian survey.<sup>108</sup> The Architecture/History site visit observed no historic-age resources that would be considered eligible for the NRHP within the proposed project APE.

Preliminary tribal notification email was sent to THPOs/Tribal leaders to familiarize them with the proposed project and to solicit their interest and concerns regarding historical, archeological, and cultural resources. The tribal notification email is included in **Appendix 2**.

A Preliminary coordination letter was sent to the Milwaukee County Historical Society to familiarize them with the proposed project and to solicit their interest and concerns regarding historical, archeological, and cultural resources. The Historical Society preliminary coordination letter is included in **Appendix 2**.

The architecture history and archeological investigations were submitted to the SHPO. The SHPO concurred that there are no properties and/or archeological sites listed in or eligible for the NRHP within the APE for the proposed project. A copy of the SHPO concurrence is included in **Appendix 5**.

Since no architecture/history and archeology resources were identified, there are no anticipated impacts with either the SPA, Alternative B, or the No Action Alternative for historical, architectural, archeological, and cultural resources.

#### **4.9 Compatible Land Use**

The compatibility of existing and planned land uses surrounding an airport is usually associated with the extent of noise impacts and effect on safe aircraft operations. Land uses such as landfills, wetland mitigation, and wildlife refuges may attract wildlife species that are hazard to aircraft operation.

Preliminary planning for the SPA and Alternative B includes the removal of pavement, placement of fill, topsoil, and restoration to turf. Following completion of the proposed project the Airport would maintain the project area similar to other non-paved/grass areas on the airfield through mowing to minimize the potential for wildlife hazards. Additionally, the drainage of the proposed project area is anticipated to not significantly alter existing drainage on the airfield. The SPA also consists of the conversion of pavement to a taxiway, a parallel taxiway to Runway 1L/19R is shown on the ALP. Alternative B consists of the construction of a parallel taxiway to Runway 1L/19R, which is shown on the ALP. Either taxiway conversion or construction project would be located solely on Airport property.

The SPA and Alternative B construction activities are located solely on Airport property thus, would not substantially impact land uses surrounding the Airport. The No Action Alternative would not have an impact on compatible land use.

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<sup>108</sup> Archaeological Reports Inventory - WHS Project #23-1600

A noise study has been conducted for the proposed project, compatible land use regarding noise impacts is discussed in Section 4.11 and **Appendix 4**.

#### **4.10 Natural Resources and Energy Supply**

The Energy Independence and Security Act of 2007, was established “to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes.”<sup>109</sup>

The SPA or Alternative B is not anticipated to increase consumption of fuel by aircraft due to changes in ground movements or run-up times; by aircraft due to changes in flight patterns; or by ground vehicles due to changes in movement patterns for Airport service or other vehicles. Through an analysis of 2022-2023 radar flight track data, Runway 1R/19L is used for 0.1% of daytime arrivals, 0.0% of nighttime arrivals, 0.2% of daytime departures, and 0.1% of nighttime departures<sup>110</sup>. The Runway 1R/19L use is minimal in scale compared to other Airport runways, thus the impacts of increased taxi times are negligible. Currently, aircraft movements associated with the 128<sup>th</sup> ANG utilize Taxiway W, Runway 1R/19L, and Taxiway S for ground taxi movements to access Runway 1L/19R. The proposed Taxiway CC, Taxiway W, and Taxiway S will continue to provide access to the 128<sup>th</sup> ANG.

There would be additional energy consumption during removal of Runway 1R/19L and construction activities associated with a partial parallel taxiway for the SPA or Alternative B. The additional energy consumption would primarily be the fuel required for construction equipment. This energy consumption is not anticipated to be substantial or have measurable effects on local supplies. Section 4.3 discusses the estimated construction equipment fuel consumption.

Mineral sources, such as sand, aggregate, bentonite, and cement, used for the construction of the proposed taxiway are not anticipated to require new pits or put a limit on existing resources. The removal of Runway 1R/19L is anticipated to produce recycled aggregate, pulverized asphalt, or millings which may be used for the construction of the partial parallel taxiway. The SPA or Alternative B does not require the use of unusual materials or those in short supply.

The Proposed Action Alternative or Alternative B would not have a substantial impact on the production or consumption of energy. Construction materials required are readily available. The No Action alternative would not impact natural resources or energy supplies.

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<sup>109</sup> Energy Independence and Security Act of 2007: <https://www.govinfo.gov/content/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf>

<sup>110</sup> Data obtained from noise assessment, See Appendix 4 – Noise Technical Report

## 4.11 Noise

FAA Order 1050.1F and 5050.4B provide guidance on the evaluation of noise impacts associated with a proposed action. The FAA orders specify the use of day-night average sound level (DNL) which is a logarithmic average of the sound levels of multiple events at one location over a 24-hour period. Additionally, the FAA orders defines thresholds of significance for changes in DNL, specifically over noise sensitive areas.

A Noise Technical Report was prepared for this EA and evaluated noise impacts associated with the proposed action of decommissioning and removing Runway 1R/19L (SPA and Alternate B) compared to the No Action alternative<sup>111</sup>. The report assumed that future operations on Runway 1R/19L would shift to parallel Runway 1L/19R under the proposed action. The report concluded that the proposed action of decommissioning Runway 1R/19L would not result in a significant impact to noise. When compared to the No Action alternative the proposed action would cause a slight decrease in acreage of the DNL 65dB contours in the CY2028 and CY2033 forecast years and would not impact any noncompatible land uses including housing units or noise sensitive sites.

The Noise Technical Report further describes the regulatory setting, existing conditions, assumptions, methodology, and analysis is included in **Appendix 4**.

Based on the conclusions and data provided in the Noise Technical Report (**Appendix 4**), there are no anticipated noise impacts associated with the SPA or Alternative B when compared to the No Action alternative.

## 4.12 Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks

### 4.12.1 Socioeconomics

Social impacts are generally associated with relocation activities or other community disruptions. Community disruptions include altering surface transportation patterns, dividing or disrupting established communities, disrupting orderly planned development, or creating an appreciable change in employment.

Both the SPA or Alternative B construction activities would be within Airport property, there is no anticipated relocation of residences or businesses and no anticipated disruption to established communities or planned development. Additionally, through the MPU it was identified that the decommissioning and removal of Runway 1R/19L allows for airport development to meet future needs without requiring the acquisition of additional property. The No Action alternative would result in Runway 1R/19L and surrounding runway protections to remain in an as-is condition and property may need be acquired to meet the future development needs of the airport. Additionally, the SPA or Alternative B would not significantly alter the job and economic outlook surrounding the

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<sup>111</sup> Noise Technical Report prepared by Harris Miller Miller & Hansen, Inc. See Appendix 4.

airport in near term. However, the long-term development opportunities associated with the future development plans identified in the MPU and ALP may bring an increased jobs and economic activity to the Airport and surrounding area.

#### 4.12.2 Environmental Justice

Executive Order 12898<sup>112</sup> requires federal agencies to identify community issues of concern, particularly those issues relating to discussions that may have an impact on low-income or minority populations. The Executive Order states that, to the extent practicable and permitted by law, neither minority or low-income populations may receive disproportionately high or adverse impacts as a result of a proposed project. It also requires that representatives of any low-income or minority populations that could be affected by the project in the community be given the opportunity to be included in the impact assessment and public involvement process.

The Department of Transportation Order 5610.2(a) (Actions to Address Environmental Justice in Minority Populations and Low-Income Populations)<sup>113</sup> sets forth the Department of Transportation policy to consider environmental justice principles in programs, policies, and activities. The Order describes how the objectives of environmental justice will be integrated into planning and programming, rulemaking, and policy formulation.

The EJScreen Community Report (**Appendix 3**) identified a population of 102,234 is located within a 3-mile radius of the project area (population surrounding the project area). The percentage of non-white population within population surrounding the project area was 27%. The population surrounding the project area had a lower minority population than Milwaukee County, which had a total population of 577,222, with a non-white population of 48%. The population surrounding the project area has a greater minority population than the State of Wisconsin, which had a total population of 5,893,718, had a non-white population of 19.6%. Based on EJScreen and Census data from 2020, minority populations may be impacted by the proposed project.

The EJScreen Community Report identified 29% of the surrounding population (3-mile radius) as low income. The State of Wisconsin average for low-income population was identified as 28%. The percentage of low-income population in the surrounding area is similar to that of the State of Wisconsin.

The preparation of this EA includes public involvement. The public involvement process described in Chapter 6, Public Coordination and Participation, allows all residents and population groups in the study area the opportunity to participate. The public coordination and participation process does not exclude any persons because of income, race, color, religion, national origin, sex, age, or handicap.

The SPA or Alternative B removal and construction activities would be confined to Airport property and is not anticipated to have impacts on the surrounding populations. Additionally, a noise technical

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<sup>112</sup> Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.

<sup>113</sup> <https://www.transportation.gov/transportation-policy/environmental-justice/department-transportation-order-56102a>

report was prepared to evaluate potential impacts associated with the decommissioning of Runway 1R/19L (see **Appendix 4**). The analysis identified that no additional housing units or other sensitive sites would be within the DNL 65dB contour when compared to the no action alternative for forecast years 2028 and 2033. The potential impacts of noise as a result of the SPA or Alternative B are not anticipated to have impacts on the surrounding populations when compared to the No Action alternative.

#### **4.12.3 Children’s Environmental Health and Safety Risks**

Executive Order 13045<sup>114</sup> requires federal agencies, as appropriate and consistent with the agencies mission, to make it a high priority to identify and assess environmental health risks and safety risks disproportionately affecting children. Agencies are encouraged to participate in implementation of the Executive Order by ensuring their policies, programs, activities, and standards address disproportionate risks to children resulting from environmental health risks or safety risks.

Environmental health risks and safety risks include risks to health or to safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might be exposed to. Given the location and nature of the project, the SPA or Alternative B removal and construction activities should not have an impact on environmental health and safety risks for children.

The decommissioning of Runway 1R/19L would shift aircraft operations to the remaining runways. A noise technical report was prepared to evaluate potential impacts associated with the decommissioning of Runway 1R/19L (see **Appendix 4**). The analysis identified that no additional housing units or other sensitive sites (schools, etc.) would be within the DNL 65dB contour when compared to the no action alternative for forecast years 2028 and 2033. The potential impacts of noise as a result of the SPA or Alternative B are not anticipated to have an impact on environmental health and safety risks for children.

#### **4.12.4 Summary of Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks**

This document is in compliance with the United States Department of Transportation and FAA policies to determine whether a proposed project would have induced socioeconomic impacts or any other adverse impacts on minority or low-income groups; it meets the requirements of Executive Order 12898 on environmental justice; and it meets the requirements of Executive Order 13045 on children’s environmental health and safety risks.

Neither minority nor low-income populations would receive disproportionately high or adverse impacts as a result of SPA, Alternative B, or the No Action Alternative. There are no anticipated

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<sup>114</sup> Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks.



impacts to the environmental health and safety risks for children anticipated with either the SPA, Alternative B, or the No Action alternative.

#### **4.13 Visual Effects**

Changes in lighting associated with airport operations need to be considered to determine if an annoyance is created in the vicinity of the installation. Airport lighting does not generally result in substantial impacts unless a high intensity strobe light would shine directly into people's homes.

Lighting changes associated with the SPA and Alternative B consist of the removal of the existing runway lights and Runway End Identifier Lights (REILs). A REIL system consists of two synchronized, unidirectional flashing lights positioned at the end of a runway. The REIL is effective in identifying a runway during reduced visibility. Depending on the type of equipment, a REIL has an approximate range of three miles in daylight and twenty miles at night<sup>115</sup>.

Visual, or aesthetic, effects are inherently more difficult to define and assess because they involve subjectivity. Visual effects deal broadly with the extent to which airport development contrasts with the existing environment, architecture, historic or cultural setting, or land use planning. The SPA or Alternative B would result in a portion of the project area being restored to a grassy field. The project area of the proposed partial parallel taxiway would consist of pavement similar to the existing landscape of runway pavement.

The SPA or Alternative B would result in a decrease in white runway lights, removal of REIL, and the incorporation of blue taxiway lights resulting in minor light emissions improvements. There are no substantial impacts to visual effects with the SPA or Alternative B.

For the No Action alternative, the existing runway lights and REILs would remain in an as-is condition. The No Action alternative would keep the existing visual impacts of lighting, specifically the strobes associated with the REILs.

#### **4.14 Water Resources**

##### **4.14.1 Wetlands**

Executive Order 11990, Protection of Wetlands, is an order given by President Carter in 1977 to avoid the adverse impacts associated with the destruction or modification of wetlands<sup>116</sup>. To implement the guidelines in Executive Order 11900, the U.S. Department of Transportation (DOT) developed and issued DOT Order 5660.1A, Preservation of the Nation's Wetlands to provide guidance to DOT agencies regarding their actions in wetlands. The DOT Order governs FAA's actions. The Order defines wetlands as:

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<sup>115</sup> FAA, Runway End Identifier Lights:

[https://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/techops/navservices/lsg/reil](https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/reil)

<sup>116</sup> Executive Order 11990: <https://www.epa.gov/cwa-404/protection-wetlands-executive-order-11990>

“Lowlands covered with shallow and sometimes temporary or intermittent waters. This includes, but is not limited to, swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, tidal overflows, estuarine areas, and shallow lakes and ponds with emergent vegetation. Areas covered with water for such a short time that there is no effect on moist-soil vegetation are not included in the definition, nor are the permanent waters of streams, reservoirs, and deep lakes. The wetlands ecosystem includes those areas which affect or are affected by the wetland area itself; e.g., adjacent uplands or regions up and downstream from the wetland or by disturbing the water table of the area in which the wetland lies.”<sup>117</sup>

Section 10 of the Rivers and Harbors Act of 1899 requires approval from the United States Army Corps of Engineers (USACE) prior to placing obstructions or excavating and/or depositing materials in navigable waters<sup>118</sup>.

The USACE has jurisdiction and regulates the discharge of dredged and fill material into the waters of the United States, including adjacent wetlands, under Section 404 of the Clean Water Act<sup>119</sup>. The WDNR has jurisdiction of isolated wetlands, which are outside of USACE jurisdiction under Section 281.36 of the Wisconsin Statutes<sup>120</sup>.

A wetland delineation was performed on September 11, 2023 at the proposed project location<sup>121</sup>. The delineation identified wetlands on the southern end of the project area. **Figure 4-3** details the delineated wetlands identified in the project area. A copy of the wetland delineation report was provided to the WDNR for delineation confirmation. Delineation confirmation was received on September 28, 2023 (**Appendix 2**).

A USACE Jurisdictional Determination was submitted for review on December 15, 2023. Through a phone conversation with the USACE project manager, it was indicated that the wetlands identified in the proposed project area were likely jurisdictional. If the proposed action would result in wetland impacts, the proposed project would require permitting through the USACE Transportation Regional General Permit. As preliminary grading plans are established, plans can be sent to the USACE general inbox to receive concurrence on whether the wetlands are impacted or avoided. If wetlands are impacted, a preconstruction notification (PCN) may be needed if the impacts are greater than the thresholds listed under Category 2: Modification - Linear Transportation of the USACE St. Paul District's Transportation Regional General Permit dated December 13, 2023. **Appendix 2** includes correspondence regarding permitting requirements if wetland impacts are identified through project construction plans.

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<sup>117</sup> DOT Order 5660.1A: <https://www.codot.gov/programs/environmental/wetlands/assets/USDOTOrder56601A.pdf>

<sup>118</sup> Rivers and Harbors Appropriation Act of 1899: <https://www.govinfo.gov/content/pkg/COMPS-5399/pdf/COMPS-5399.pdf>

<sup>119</sup> Section 404 of the Clean Water Act: <https://www.federalregister.gov/d/2023-15284/p-66>

<sup>120</sup> Section 281.36 of Wisconsin Statutes: <https://docs.legis.wisconsin.gov/statutes/statutes/281/iii/36>

<sup>121</sup> A Wetland Delineation Report was prepared by Quest Civil Engineers, LLC, dated September 11, 2023

The SPA or Alternative B may result in wetland impacts depending on the limits of project grading that would be identified during project design. However, due to the proximity of the wetlands to the Taxiway S pavement edge, grading impacts to wetlands are not anticipated. The No Action alternative would have no impacts on wetlands.

#### 4.14.2 Floodplains

Floodplains are defined in Executive Order 11988<sup>122</sup>, Floodplain Management, as “the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.” (100-year flood). Executive Order 11988 directs Federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by floodplains.

The DOT Order 5650.2, Floodplain Management and Protection, further defines the natural and beneficial values served by floodplains as including but not limited to “natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry.” The Executive Order and the DOT Order establish a policy to avoid taking an action within a 100-year floodplain where practicable.

Flood insurance rate maps prepared by FEMA determine the limits of 1% and 0.2% annual chance floodplains (commonly referred to as 100-year and 500-year floodplains). Flood insurance rate maps prepared by the FEMA were reviewed to determine the limits of base floodplains associated with the Proposed Action. **Figure 4-4** graphically represents Flood Hazard Zones from FEMA’s Web Map Service overlaid onto a map of the area surrounding the proposed project site. The majority of the proposed project area is outside the 100-year flood area except for south of Taxiway S. This area includes the high-risk area, Zone AE and the moderate-risk area Zone X with a 0.2% annual chance flood hazard<sup>123</sup>.

It is not anticipated the proposed project would fill or construct pavement within the special floodplain hazard area. The proposed project may include minor grading (cut) or drainage improvements within the floodplain. All pavement construction activities are anticipated to be located north of Taxiway S, no new pavement is anticipated to be added south of Taxiway S.

Due to construction adjacent to or within the special flood hazard area, proposed temporary or permanent changes require coordination with the City of Milwaukee Zoning office. To ensure

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<sup>122</sup> On May 20, 2021, President Biden signed Executive Order (EO) 14030, Climate-Related Financial Risk, reinstating EO 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (January 30, 2015). EO 13690 amends the original floodplain management standard established in 1977 by EO 11988, and was revoked by EO 13807 in August 2017, though is now reinstated.

<sup>123</sup> FEMA Flood Mapping Center: <https://msc.fema.gov/portal/home>

compliance with the DOT/WDNR Cooperative Agreement, the WDNR Transportation Liaison is to be included on all correspondence with the City of Milwaukee related to floodplain impacts.<sup>124</sup>

The SPA would utilize the existing pavement footprint. Through pavement construction, drainage associated with the existing pavement footprint would not be significantly altered. Alternative B would consist of the construction of a taxiway west of the existing pavement. Construction of a new taxiway may alter drainage north of Taxiway S. The No Action alternative would have no floodplain impacts.

#### **4.14.3 Surface Water**

The Clean Water Act (CWA) provides the basic structure for regulating pollutant discharge into waters of the United States<sup>125</sup>. FAA Order 1050.1F identifies a significant impact as an action that would exceed water quality standards established by federal, state, local, and tribal regulatory agencies or contaminate public drinking water supply such that public health may be adversely affected<sup>126</sup>.

The SPA and Alternative B project areas intersect Wilson Park Creek, an identified navigable waterway. Within the project area (and Airport property as a whole) Wilson Park Creek is enclosed in underground culverts. The SPA or Alternative B is only anticipated to remove existing runway pavement, restore to turf, and keep existing drainage patterns. All removal activities would occur over the top of the enclosed stream. The proposed project activities are not anticipated to impact the culverts that enclose Wilson Park Creek.

The proposed project and Wilson Park Creek was discussed with the WDNR Transportation Liaison prior to the WDNR issuing the Initial Review Letter. The WDNR Initial Review Letter included that the proposed project is only anticipated to remove runway pavement over the top of the enclosed stream<sup>127</sup>.

If it is identified through project design the culverts enclosing Wilson Park Creek would be impacted, further coordination with the WDNR Transportation Liaison would be needed to identify the degree of impact. Additionally, if in-stream disturbance is anticipated there shall be no in-stream disturbance between March 1<sup>st</sup> to June 15<sup>th</sup> (inclusive) to minimize impacts to fish and other aquatic organism during sensitive time periods of spawning and migration<sup>128</sup>.

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<sup>124</sup> Including the DNR Transportation Liaison on all correspondence regarding floodplain impact assists in ensuring all floodplain issues have been sufficiently addressed prior to issuing DNR Final Concurrence and obtaining the Transportation Construction General Permit (TCGP) for construction operations. See Attachment 2, WDNR Initial Review Letter.

<sup>125</sup> EPA, Summary of the Clean Water Act: <https://www.epa.gov/laws-regulations/summary-clean-water-act>

<sup>126</sup> FAA Order 1050.1F, Chapter 14. Water Quality:  
[https://www.faa.gov/sites/faa.gov/files/about/office\\_org/headquarters\\_offices/apl/14-water-resources.pdf](https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/14-water-resources.pdf)

<sup>127</sup> WDNR Initial Review Letter (1/10/2024), See Appendix 2.

<sup>128</sup> WDNR Initial Review Letter (1/10/2024), See Appendix 2.

The SPA and Alternative B is not anticipated to impact Wilson Park Creek and surface waters. The No Action Alternative would not impact surface waters.

#### **4.14.4 Groundwater**

The Safe Drinking Water Act (SDWA) regulates public drinking water supply. The SDWA was most recently amended in 1996 and requires federal actions to protect drinking water sources. Additionally, the SDWA prohibits federal agencies from funding actions that would contaminate EPA-designated Sole Source Aquifers (SSAs).

There are no anticipated impacts to EPA designated SSAs, as none are identified in the State of Wisconsin or Northern Illinois. Further analysis on potential groundwater environmental consequences is analyzed relative to water quality and pollutant discharge in Section 4.14.6 Water Quality and Section 4.15 Construction Impacts.

#### **4.14.5 Wild and Scenic Rivers**

The Wild and Scenic Rivers Act<sup>129</sup> declared “certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.” There are no Wild and Scenic River designations in the proximity of the Airport. Therefore, the provisions of the Wild and Scenic Rivers Act do not apply.

A presidential directive<sup>130</sup> requires federal agencies, as part of their planning and environmental review process, to avoid or mitigate adverse effects on rivers identified in the Nationwide Rivers Inventory (NRI)<sup>131</sup>. The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas. There are no rivers on the NRI in the proximity of the Airport.

Chapter NR 102, Wisconsin Administrative Code, Water Quality Standards for Wisconsin Surface Waters<sup>132</sup> establishes water quality standards for surface waters of the state. Section NR 102.10 of the Wisconsin Administrative Code lists outstanding resource waters. Section NR 102.11 of the

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<sup>129</sup> Wild and Scenic Rivers: <https://www.fws.gov/story/wild-and-scenic-rivers#:~:text=The%20Wild%20and%20Scenic%20Rivers%20Act%20of%201968%20established%20the,of%20present%20and%20future%20generations.>

<sup>130</sup> Presidential Directive: [https://www.nps.gov/subjects/rivers/upload/Presidential-Memorandum-for-Heads-of-Departments-and-Agencies\\_508-2.pdf](https://www.nps.gov/subjects/rivers/upload/Presidential-Memorandum-for-Heads-of-Departments-and-Agencies_508-2.pdf)

<sup>131</sup> Nationwide Rivers Inventory: <https://www.rivers.gov/nri#:~:text=Under%20the%20Wild%20and%20Scenic,adversely%20affect%20NRI%20river%20segments.>

<sup>132</sup> Chapter NR 102, Wisconsin Administrative Code, Water Quality Standards for Wisconsin Surface Waters (NR102): [http://docs.legis.wisconsin.gov/code/admin\\_code/nr/100/102.pdf](http://docs.legis.wisconsin.gov/code/admin_code/nr/100/102.pdf).

Wisconsin Administrative Code lists exceptional resource waters. There are no state designated outstanding resource waters or exceptional resource waters identified within Milwaukee County.

There are no anticipated river impacts with either the Proposed Action Alternative, Alternative B, or the No Action Alternative.

#### **4.14.6 Water Quality**

The Federal Water Pollution Control Act, as amended by the CWA of 1977, provides authority to establish water quality standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredged or fill material.

Short-term soil erosion and stormwater quality impacts could result from construction activities. Existing condition of the proposed project area is pavement surrounded by mowed grass, there are no structures. The SPA would remove pavement and restore to a mowed grass field and convert a portion of the pavement to a taxiway. Alternative B would remove pavement to a mowed grass field and construct a taxiway west of the existing pavement.

Stormwater in the proposed project areas currently consists of topography sheet flow, storm sewer structures and pipes, channels, and ditches. The project area north of Taxiway S is apart of the northern airport drainage basin that outfalls at Wilson Park Creek at a box culvert under Howell Avenue near the intersection of Layton Avenue. The project area south of Taxiway S is apart of the southern airport drainage basis that flows into the Mitchell Field Drainage Ditch that exists the southeast corner of airport property. **Figure 4-5** is an aerial view of the proposed project areas with the 24K Hydro Waterbodies (lakes)/Flowline (rivers, streams) map layer overlaid.

The SPA is not anticipated to alter the existing drainage patterns within the project area. Alternative B may alter the existing drainage patterns in the project area due to the construction of Taxiway CC west of the existing pavement. Through the potential incorporation of culvert pipes, swales, and ditches the construction of Taxiway CC is not anticipated to change existing drainage patterns outside of the project area.

The SPA and Alternative B would convert impermeable surfaces (pavement) to a permeable surface (turf). The areas of taxiway conversion or construction would not increase the amount of impermeable surface from existing. The decrease in impermeable surface would decrease stormwater runoff for the project area and increase natural infiltration.

Construction activities would comply with the requirements of Chapters NR 151 Runoff Management and NR 216 Storm Water Discharge Permits of the Wisconsin Administrative Code.

The proposed project would consist of greater than one acre of land disturbance. The proposed project would need to adhere to the Wisconsin Pollutant Discharge Elimination System Transportation Construction General Permit (TGCP) for Storm Water Discharge.

The proposed project would also require an Erosion Control Plan (ECP). The ECP would be provided to the WDNR and would include a description of the best management practices that will be implemented before, during, and after construction and address how post-construction stormwater performance standards will be met for the project area. The WDNR would be provided a grading plan indicating pre-construction grade and final grade. Additionally, the WDNR would be provided an erosion control implementation plan (ECIP) and a storm water management plan for the project. The ECIP would be submitted by the awarded contractor and would outline their implementation of erosion control measures during project construction and construction methods. The ECIP would be submitted to the WDNR Transportation Liaison at least 14 days prior to the preconstruction conference<sup>133</sup>.

Construction documents would include erosion control requirements to maintain water quality. Techniques described in the WDNR's Storm Water Construction Technical Standards would be implemented to prevent erosion and minimize siltation to drainage ways. These techniques may include the use of temporary and permanent sediment traps, silt fences, sodding, ditch checks, erosion mats, temporary and permanent seeding and other means to prevent erosion and trap sediment. During construction, by implementing erosion control measures as specified in the contract documents, impacts to water quality would be minimized.

The FAA Standard Specifications for Construction of Airport (AC 150/5370-10) would be part of the contract documents. General Provisions Section 70-19, Environmental Protection states that the contractor shall<sup>134</sup>:

*“Comply with all federal, state, and local laws and regulations controlling pollution of the environmental. The contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.”*

Based on the above, the SPA and Alternative B should not have substantial adverse impacts on water quality. The No Action Alternative would keep the existing impermeable pavement area and would not realize the benefits of increased turf (permeable surface).

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<sup>133</sup> See WDNR Initial Review Letter (1/10/2024). See Appendix 2.

<sup>134</sup> FAA AC 150/5370-10H: [https://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150-5370-10H.pdf](https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5370-10H.pdf)

## 4.15 Construction Impacts

Construction activities may cause temporary environmental impacts. Generally, these impacts are associated with noise resulting from construction equipment, potential impacts on water quality from run-off and soil erosion from exposed surfaces, and air quality from dust emissions due to equipment operation and soil handling.

Construction activities of the SPA and Alternative B would cause temporary specific impacts as a result of construction activities, exclusively during the construction period.

Construction sound levels refer to instantaneous maximum sound levels as opposed to hourly average sound levels used to describe traffic noise and airport noise. The noise generated by construction equipment would vary greatly, depending on equipment type, equipment model, equipment make, duration of operation, and specific type of work being performed. However, typical noise levels may occur in the 73 to 96 decibels, adjusted range at a distance of 50 feet<sup>135</sup>. Noise from construction is not expected to surpass the noise from aviation operations. Adverse effects related to construction noise are anticipated to be of a localized, temporary, and transient nature.

To reduce the potential impact of construction noise, the special provisions for the proposed project would require that motorized equipment shall be operated in compliance with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. The special provisions may require that motorized construction equipment will not be operated between 10:00 p.m. and 6:00 a.m. without prior written approval of the Airport. All motorized construction equipment would be required to have mufflers and exhaust systems constructed in accordance with equipment manufacture's specifications or systems of equivalent noise reducing capacity, maintained in good operating condition, free from leaks or holes.

An ECIP and a storm water management plan would be prepared in accordance with Chapter Trans 401: Construction site erosion control and storm water management procedures for department actions. The WDNR would be provided a copy of each of these plans prior to construction.

Construction activities would create temporary air quality degradation from equipment exhaust emissions and earth moving and grading operations. The impact would be localized and are not anticipated to be disruptive to occupants of residences adjacent to the Airport. To minimize the potential impact on nearby residents and to avoid contributing to the degradation of regional air quality, excavating, stockpiling, hauling, and constructing should be controlled by watering or other approved dust control measures and appropriate construction sequences.

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<sup>135</sup> The FHWA has produced the Roadway Construction Noise Model (RCNM) to predict construction noise. The RCNM references default noise emission levels. As identified in the *Construction Noise Handbook*, Table 9.1, most construction equipment and operation noise level at 50 feet ranges from 73 dBA to 96 dBA. The only construction equipment and operation greater than 96 dBA is Impact and Vibratory Pile Drivers, which would not be used for the proposed project. The *Construction Noise Handbook* can be found online at [https://www.fhwa.dot.gov/Environment/noise/construction\\_noise/handbook/handbook09.cfm](https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook09.cfm)



During the construction period soil would be exposed to the elements resulting in the potential for erosion. Measures to limit the impacts of construction include:

- Limit the area of erosive land exposed at any one time through construction scheduling.
- Limit the duration of such exposure before application of temporary erosion control measures or final revegetation to the extent practicable.
- Establish vegetation as soon as possible.
- Perform operations in or adjacent to drainage routes and ditches carefully to avoid washing, sloughing or deposition of materials in them.
- If possible, operations should be carried out during dry weather.
- Use silt fence and other Best Management Practices (BMP) to remove sediment from overland flow.
- Reduce the volume and velocity of water that crosses disturbed areas by means of planned engineering methods (e.g., diversions, detention basins, berms).
- Maintain existing vegetative buffers between construction areas and drainage areas and wetlands.
- Avoid removal of surface vegetation whenever possible.
- Incorporate erosion control measures at areas of stockpiled soil.

These controls would minimize the potential of soil erosion into surface water features, including wetlands.

Construction related effects other than sedimentation could impact water quality. To avoid these impacts, if water used during the construction work becomes contaminated by oil, bitumens, harmful or objectionable chemicals, sewage or other pollutants, the water should be disposed of in an acceptable manner to avoid affecting nearby waters and lands. The contractor should not discharge pollutants into any water course or water storage area. Physical removal of maintained grass and other vegetation should be used in lieu of herbicides.

FAA Advisory Circular 150/5370-10H, Standard Specifications for Construction of Airports, Item C-102, Temporary Air and Water Pollution, Soil Erosion and Siltation Control or the Wisconsin Department of Transportation Standard Specifications would be incorporated in project design specifications to further mitigate potential construction impacts. These standards include temporary measures to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods. Additional approval, oversight and permit requirements would also mitigate potential construction impacts. (Reference Section 5.5 Coordination With Public Agencies and State and Local Officials.)

By implementing mitigation measures described in this section, no substantial construction impacts are anticipated with the SPA or Alternative B by operating in accordance with all permit requirements. There are no construction impacts associated with the No Action alternative.

## 4.16 Cumulative Impacts

According to 40 CFR 1508.7, a cumulative impact “is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively substantial actions taking place over a period of time.”<sup>136</sup>

Past and ongoing Airport projects include both landside and airside improvement projects. Previous projects include: parking structure repairs, Taxiway E & F pavement rehabilitation, Runway 7R-25L pavement rehabilitation, Taxiway M realignment, north airfield taxiway rehabilitation and removal, and concourse D roof replacement. Most of the recent airside and landside improvements projects consisted of rehabilitating existing infrastructure or improving to meet safety standards. Past projects have complied with state and local stormwater regulations and were adjusted to minimize wetland impacts.

As described in Section 1.4, Other Contemplated Actions, of Chapter 1, there are several potential improvements on the Airport and near the Airport. Future improvements to the Airport would be related to meeting the needs of the users and aligning the airfield with the ALP. These improvements are anticipated to take place on existing Airport property. Most of the potential improvements to the Airport involve some form of construction. Therefore, the potential does exist for minor and short-term impacts from the potential improvements; however, cumulative effects are not anticipated to be substantial.

The Milwaukee County and State of Wisconsin projects near the Airport as described in Section 1.4 also involve construction. There is the potential for minor and short-term impacts from the potential improvements; however, cumulative effects are not anticipated to be substantial.

Cumulative impacts associated with the SPA or Alternative B combined with other area projects are not anticipated. Both the SPA and Alternative B allow for Airport development without requiring the acquisition of additional property and improving airfield safety. The No Action alternative would require the acquisition of additional property for development and not realize the benefit of increased airfield safety.

## 4.17 Secondary (Induced) Impacts

Major airport development projects may have induced or secondary impacts on surrounding communities including shifts in patterns in population movement and growth, public service demands, and changes in business and economic activity.

The removal and decommissioning of Runway 1R/19L allows for future airport development without requiring the acquisition of additional property while improving airfield safety. Future

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<sup>136</sup> 40 CFR 1508.1(g)(3): [https://www.ecfr.gov/current/title-40/part-1508#p-1508.1\(g\)\(3\)](https://www.ecfr.gov/current/title-40/part-1508#p-1508.1(g)(3))

airport development as a result of the proposed action would increase airport efficiency through taxiway system improvements and other airfield improvements that align with the ALP.

As discussed in other sections of this chapter, the SPA and Alternative B would not have substantial adverse impact on noise and land use. There are no anticipated changes to the population, public service demands, or adverse impacts to the businesses and economy of the surrounding community.

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★ Project Location

USFWS Critical Habitat

■ Critical Habitat - Final

— Critical Habitat - Final

■ Critical Habitat - Proposed

— Critical Habitat - Proposed

No identified Critical Habitat Areas within Milwaukee County.

West Bend

Hine's emerald dragonfly

Watertown

Poweshiek skipperling

Milwaukee



Racine

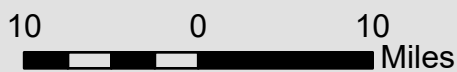
Waukesha

Kenosha

Piping Plover

Grass Lake

Waukegan



Data Source:  
US Fish & Wildlife Service "Critical Habitat" ArcGIS Feature Service

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### MKE RUNWAY 1R-19L REMOVAL USFWS CRITICAL HABITAT AREAS

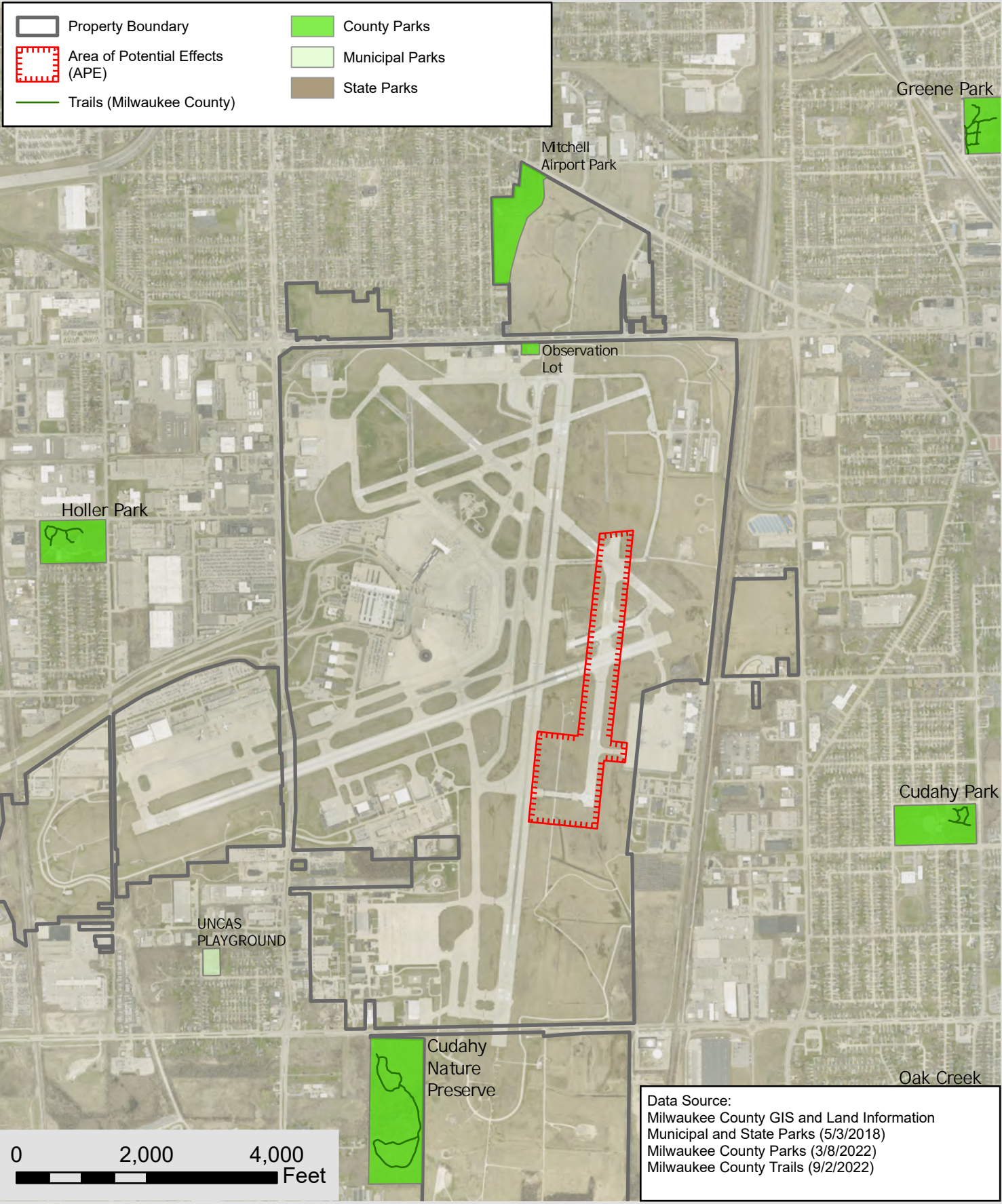
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 4/17/2024

SCALE:  
1 in = 58,208 ft  
PROJECT NO.  
**R3001844.00**

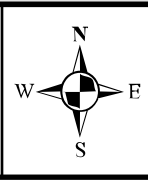
FIGURE NO.  
**4-1**



	Property Boundary		County Parks
	Area of Potential Effects (APE)		Municipal Parks
	Trails (Milwaukee County)		State Parks

Data Source:  
 Milwaukee County GIS and Land Information  
 Municipal and State Parks (5/3/2018)  
 Milwaukee County Parks (3/8/2022)  
 Milwaukee County Trails (9/2/2022)

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**MKE RUNWAY 1R-19L REMOVAL  
 PARKS AND TRAILS MAP**

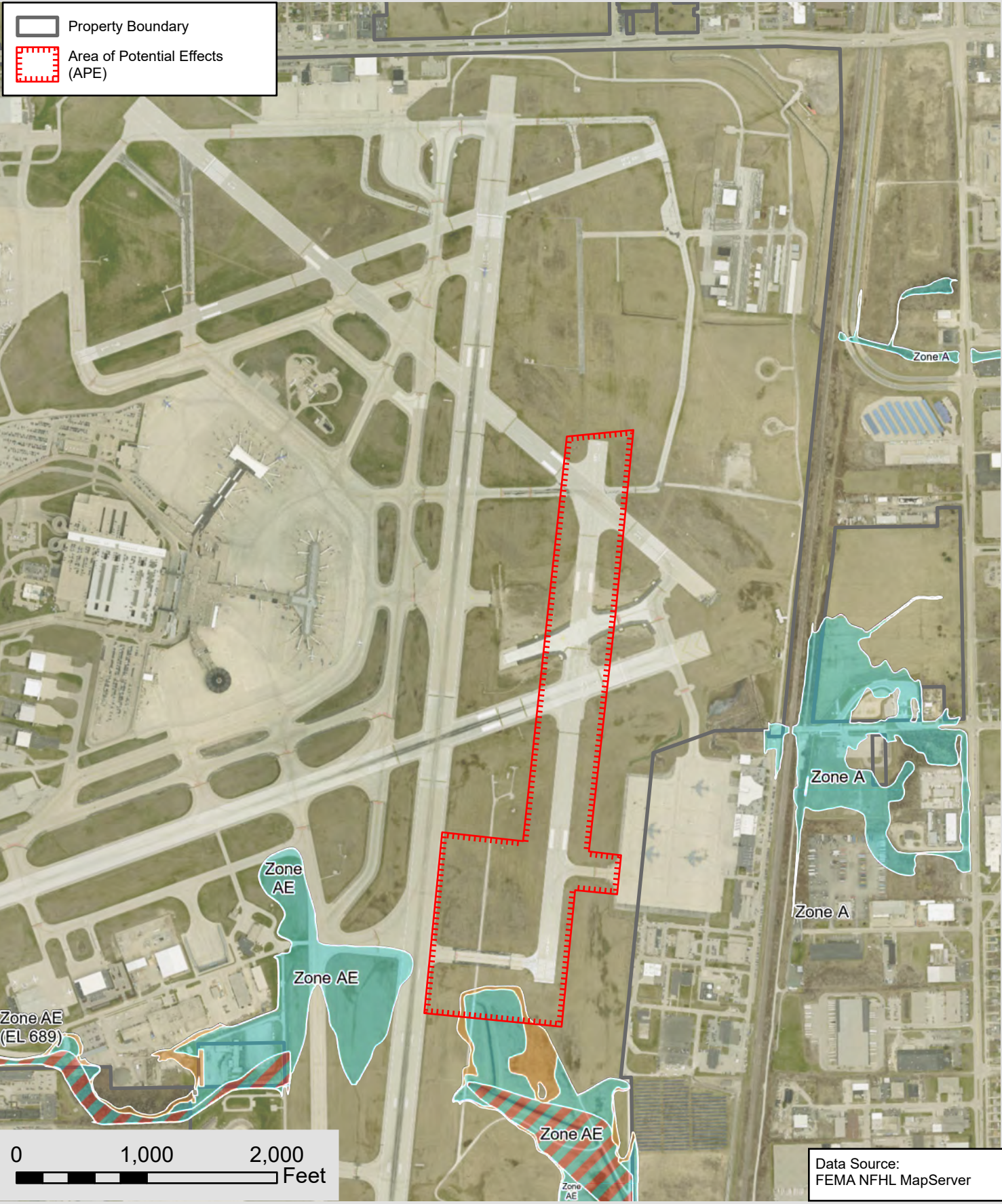
GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

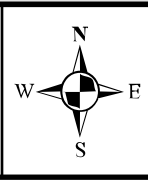
SCALE:  
 1 in = 2,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**4-2**



<p>Wetland Map</p>		<p>City of Milwaukee Milwaukee County, WI</p>	<p>Figure <b>4-3</b></p>
<p>MKE Airport Runways 1R-19L &amp; 13-31</p>	<p>By: BWK Date: 9/12/2023</p>	<p><b>QUEST</b> Civil Engineers, LLC</p>	<p>320 W Grand Ave., Suite 302 Wisconsin Rapids, WI 54495 715-423-3525</p>



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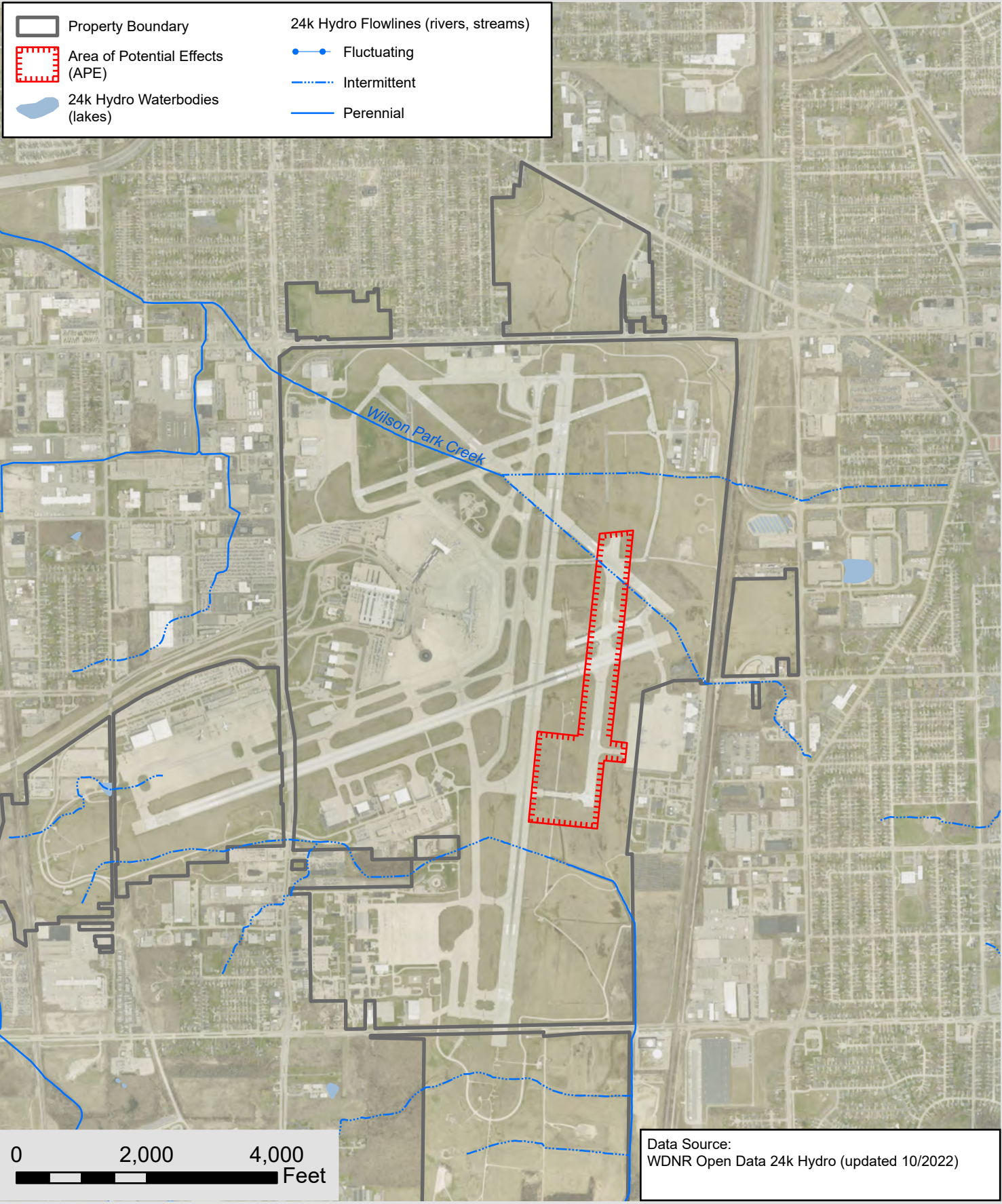


**MKE RUNWAY 1R-19L REMOVAL  
 FLOODPLAIN MAP**

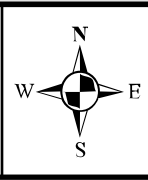
GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:	SCALE:
Project Engineer:	1 in = 1,000 ft
Drawn By: JCW	PROJECT NO.
Checked By:	<b>R3001844.00</b>
Date: 4/17/2024	FIGURE NO.
	<b>4-4</b>





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**MKE RUNWAY 1R-19L REMOVAL  
 WATERWAY MAP (24K HYDRO)**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 4/17/2024

SCALE:  
 1 in = 2,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**4-5**

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## **CHAPTER 5 – OTHER PUBLIC AND ENVIRONMENTAL CONSIDERATIONS**

This chapter discusses the environmental consequences and other considerations that were not covered by the categories discussed in Chapter 4. The following environmental consequences and other considerations are considered as they pertain to the SPA or Alternate B: possible conflicts with land use plans, policies, and controls; consistency with approved State or local plans; mitigation to avoid environmental impacts; degree of controversy on environmental grounds; and coordination with public agencies and State and local officials.

### **5.1 Possible Conflicts with Land Use Plans, Policies and Controls**

The Proposed Action has no known conflicts with Federal, State, or local land use plans. The proposed project is consistent with the Master Plan Update, Airport Layout Plan, and existing airport zoning.

### **5.2 Consistency with Approved State or Local Plans**

There are no known state or local plans with which the proposed project would be inconsistent. The proposed project would occur on Airport property and would not substantially impact resources outside the Airport boundary. The proposed project is consistent with the Wisconsin State Airport System Plan 2030<sup>137</sup> and the Airport Mater Plan Update<sup>138</sup>.

### **5.3 Mitigation to Avoid Environmental Impacts**

Where appropriate, mitigation measures are included in the discussion of the specific environmental impact categories in Chapter 4.

### **5.4 Degree of Controversy on Environmental Grounds**

Input was requested during the development of the Preliminary Environmental Assessment from Federal, State, and local agencies and officials to identify controversial actions. The SPA is not expected to be substantially controversial on environmental grounds.

### **5.5 Coordination with Public Agencies and State and Local Officials**

Preliminary coordination letters and responses are provided in **Appendix 2**. Public coordination and participation activities are described in Chapter 6.

In addition to the approvals discussed in this document, additional permits, processes, and resources that may be necessary for project implementation are listed in **Table 5-1**.

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<sup>137</sup> Wisconsin State Airport System Plan 2030: <http://wisconsin.gov/Pages/projects/multimodal/sasp/air2030-chap.aspx>

<sup>138</sup> Master Plan Update: <https://www.mkeupdate.com/>

**Table 5-1. Additional Permits, Coordination, and Resources**

<b>Agency</b>	<b>Project Activity</b>	<b>Permit Name</b>	<b>Notes</b>
FAA	Project Airspacing and Construction Safety	Form 7460-1 – Notice of Proposed Construction or Alteration	Obstruction Evaluation, Airport Airspace Analysis, and Construction Safety Plan Evaluation. FAA Form 7460-1 to be submitted a minimum 45 days before the start of proposed construction or alteration. Filing the notice 60-90 days prior to construction or alteration is highly recommended.
FAA/Airport	Runway Decommissioning	Runway Decommissioning Checklist (not required)	The runway decommissioning checklist is provided by the FAA to help mitigate hazards and increase awareness of closures. The runway decommissioning checklist can be found on the FAA Runway Safety, Runway and Taxiway Construction webpage <sup>139</sup> .
WDNR	Stormwater, Grading, and Erosion Control	Final Concurrence Letter (Erosion Control Plan and Stormwater Management Plan)	The Final Concurrence letter is issued after design is complete and documentation shows that the project will meet construction and post-construction performance standards.
WDNR	Stormwater, Grading, and Erosion Control	Transportation Construction General Permit (TCGP)	Coverage under TCGP is required prior to construction due to 1 acre or greater of land disturbance. Additionally, stormwater will need to meet the requirements of TRANS 401. To apply for permit coverage a Notice of Intent (NOI) should be submitted.
WDNR	Stormwater, Grading, and Erosion Control	Erosion Control Implementation Plan (ECIP)	The ECIP would be submitted by the awarded contractor. The ECIP must be developed by the contractor and submitted to WDNR at least 14 days prior to the preconstruction conference.
City of Milwaukee	Stormwater	Coordination	The City of Milwaukee is anticipated to be notified as changes to impervious surface because of the proposed project may impact modeling and reporting.

<sup>139</sup> FAA Runway Safety, Runway and Taxiway Construction webpage: [https://www.faa.gov/airports/runway\\_safety/runway\\_construction](https://www.faa.gov/airports/runway_safety/runway_construction)

WDNR	Wetland Impacts	Wetland Impact Tracking Form (WITF)	Wetland impacts are not anticipated. Unavoidable wetland losses must be compensated for in accordance with the DNR/DOT Cooperative Agreement and the WisDOT Wetland Mitigation Banking Technical Guideline using the Wetland Impact Tracking Form.
USACE	Wetland Impacts	Transportation Regional General Permit	Wetland impacts are not anticipated. If there are wetland impacts, a preconstruction notification (PCN) may be needed if the impacts are greater than the thresholds listed under Category 2: Modification - Linear Transportation of the USACE - St. Paul District's Transportation Regional General Permit dated 12/13/2023.
WDNR	Floodplain Construction	Additional Correspondence Requested (see notes)	This project is not anticipated to have grading within the floodplain. Proposed temporary or permanent changes in regulated floodplain areas requires coordination with the City of Milwaukee Zoning office. WDNR shall be copied on all floodplain coordination.
City of Milwaukee Zoning Office	Floodplain Construction	Floodplain Permit/Coordination	This project is not anticipated to have grading within the floodplain. Construction adjacent to or within the floodplain will require coordination with Milwaukee County Zoning. The project is not anticipated fill within the floodplain. If filling within the floodplain is identified and required through construction plan development, further permitting and coordination (not described in this document) will be required.
FEMA	Floodplain Construction	Floodplain – Letter of Map Revision	This project is not anticipated to alter the floodplain. Therefore, no FEMA map revisions are anticipated.

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## CHAPTER 6 – PUBLIC COORDINATION AND PARTICIPATION

The public involvement process described in this chapter discusses community involvement activities, and coordination with state and federal review agencies and other interest groups during the development and evaluation of alternatives and preparation of the Environmental Assessment. The public involvement process is open to all residents and population groups in the study area, and does not exclude any persons because of income, race, color, religion, national origin, sex, age, or handicap. The following is a summary of these activities.

### 6.1 Public Information/Input

The proposed project was developed through the recent Master Plan Update. Through the Master Plan Update process a total of four public information open houses were held and the public had the opportunity to ask questions and provide input and feedback<sup>140</sup>.

As a result of the Master Plan Update, the Airport Layout Plan was updated. Prior to the submission of the ALP to the FAA for approval, Milwaukee County Board Approval is required. On March 9<sup>th</sup>, 2022 a presentation regarding the preferred alternative was provided to the Committee on Transportation, Public Works, and Transit and the ALP was recommended for adoption. The request to submit the ALP to the FAA was adopted by the Milwaukee County Board on March 24, 2022. Prior to the petition for seeking State and Federal aid for the Environmental Assessment to evaluate the decommissioning and removal of Runway 1R/19L, a public hearing was held on August 11, 2022.

Future opportunities for public involvement are discussed in Section 6.3. A public information website has been established to disseminate Environmental Assessment project related information. The website and website address are discussed in Section 6.4.

### 6.2 Agency Coordination

Preliminary coordination was made with the following:

- Milwaukee County Historical Society
- Milwaukee Metropolitan Sewerage District
- Tribal Notification
- United States Army Corps of Engineers
- United States Department of Interior – Fish and Wildlife Service
- United States Environmental Protection Agency
- Wisconsin Department of Administration – Coastal Management Program
- Wisconsin Department of Natural Resources

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<sup>140</sup> Master Plan Update, Section 9 (Community and Stakeholder Engagement):  
<https://www.mkeupdate.com/application/files/1416/6373/1756/MPU-Section11-CommunityStakeholderEngagement-Final-2022-09-20.pdf>

- Wisconsin Department of Transportation – Bureau of Aeronautics (BOA)
- Wisconsin Department of Transportation – Cultural Resources Team
- Wisconsin Historical Society – State Historic Preservation Office

**Table 6-1** summarizes key coordination activities with state and federal agencies, tribal entities, and interest groups.

**Table 6-1. Coordination Summary**

Agency	Coordination Activities
<b>State Agencies</b>	
State Historic Preservation Office	February 28, 2024 - Section 106 signed by State Historic Preservation Officer. (Appendix 5)
Wisconsin Department of Transportation - Cultural Resources Team (CRT)	January 2024 - BOA submitted Section 106 documentation to CRT for review. February 25, 2024 - Section 106 signed by WisDOT Historic Preservation Officer. (Appendix 5)
Wisconsin Department of Natural Resources (WDNR)	September 9, 2023 - Wetland delineation submitted for WDNR confirmation. September 28, 2023 - Wetland delineation confirmation received from WDNR Bureau of Watershed Management. November 8, 2023 - Notification letter sent to WDNR Transportation Liaison to outline the proposed project. An initial project review was request asking for WDNR staff to conduct NHI screening and provide feedback about the proposed project. A project summary and project maps were included. December 7, 2023 - WDNR Transportation Liaison sent request to BOA to prepare "DNR Coordination Form". December 11, 2023 - "DNR Coordination Form" submitted to BOA who forwarded to WDNR Transportation Liaison. January 5, 2024 - Meeting to discuss scope of proposed project. Discussed concerns regarding Wilson Park Creek and clarified that the project does not anticipate any impacts to the creek. January 10, 2024 - WDNR Initial Project Review Received.



Wisconsin Department of Transportation - Bureau of Aeronautics (BOA)	<p>August 26, 2022 - Petition submitted seeking State and Federal aid for the Runway 1R/19L Environmental Assessment.</p> <p>October 27, 2023 - Draft Tribal Notification Letter and supporting documentation sent to BOA.</p> <p>December 13, 2023 - Initial Section 106 Review Archaeological/Historical Information documentation sent for review.</p>
Wisconsin Department of Administration - Coastal Management Program (WCMP)	November 8, 2023 - Notification letter sent to outline the proposed project and solicit input.
<b>Federal Agencies</b>	
United States Army Corps of Engineers (USACE)	<p>December 15, 2023 - Wetland delineation report and Jurisdictional Determination request submitted. Preliminary coordination letter describing the project and project maps were included.</p> <p>December 19, 2023 - Notification of receipt of submittal and Project Manager assignment.</p> <p>January 10, 2024 - Call with USACE Project Manager regarding jurisdictional determination. USACE Project Manager indicated that the wetland within the project area was likely jurisdictional and provided information regarding next steps and permitting.</p> <p>January 10, 2024 - Follow up email to phone call with information regarding permitting and next steps.</p>
United States Department of Interior - Fish and Wildlife Service (USFWS)	<p>January 23, 2024 - Consistency letter received for effect determination using the Minnesota-Wisconsin Federal Endangered Species Determination Key.</p> <p>January 23, 2024 - Consistency letter received for effect determination using the Northern Long-eared Bat Range wide Determination Key</p>
United State Environmental Protection Agency (EPA)	<p>November 8, 2023 - Notification letter sent to outline the proposed project and solicit input.</p> <p>November 8, 2023 - Response received forwarding to correct contact within the EPA's NEPA program.</p>

<b>Native American Interests</b>	
Tribal Notification Letter	December 8, 2023 - Notification letter sent to outline the proposed project and solicit input. December 11, 2023 - Forest County Potawatomi Community responded to the notification letter offering a finding of No Historic Properties affected of significance to the Forest County Potawatomi Community. They wish to remain a consulting party for this project.
<b>Local Governments/Agencies</b>	
Milwaukee County Historical Society	November 8, 2023 - Notification letter sent to outline the proposed project and solicit input.
Milwaukee Metropolitan Sewerage District	November 8, 2023 - Notification letter sent to outline the proposed project and solicit input. November 14, 2023 - Response received stating there were no questions at this time.
Milwaukee County Committee on Transportation, Public Works, and Transit	March 9, 2022 - Request for approval to submit ALP documentation to the FAA. The Airport Director and Master Plan team presented on the master plan and ALP document. The decommissioning of Runway 1R/19L was mentioned. The approval to submit the ALP documentation was recommended for adoption by the committee <sup>141</sup> .
Milwaukee County Board of Supervisors	March 24, 2022 - Request for approval to submit ALP documentation to the FAA was adopted <sup>142</sup> . April 7, 2022- The resolution was signed by the County Executive <sup>143</sup> .

<sup>141</sup> Transportation, Public Works, and Transit Committee, Wednesday, March 9, 2022 - Meeting Minutes:  
<https://milwaukeecounty.legistar.com/View.ashx?M=M&ID=914884&GUID=10ED908A-DACA-431E-879A-F0DFA5927BE5>

<sup>142</sup> Milwaukee County Board of Supervisors, Thursday, March 24, 2022 – Journal of Proceedings – Final:  
<https://milwaukeecounty.legistar.com/View.ashx?M=M&ID=925637&GUID=BD77D3AC-A2CE-4190-8AB3-9C64C4B78610>

<sup>143</sup> County Legislative Information Center, File #22-372:  
<https://milwaukeecounty.legistar.com/LegislationDetail.aspx?ID=5472285&GUID=75F8957E-12F9-4148-8319-28BA95402834&Options=&Search=>

<b>General Public</b>	
Master Plan Update	During the Airport Master Plan Update, a total of four public information open houses were held. The open houses included presentations and an opportunity for input and feedback <sup>144</sup> .
Public Hearing - Petition	August 11, 2022 - A public hearing was held prior to the petition for seeking State and Federal aid for the Environmental Assessment to evaluate the decommissioning and removal of Runway 1R/19L

### 6.3 Future Opportunities for Public Involvement

A Notice of Availability of a Preliminary Environmental Assessment and Notice of Opportunity for a Public Hearing are planned. The notices will be advertised in the Milwaukee Journal Sentinel and on the Airport notices webpage.

### 6.4 Public Information Website

A public information website page was established to disseminate Environmental Assessment project related information. The website page contains a link to the preliminary and final environmental assessments (when available), project information/updates, and a notice of public hearing. The web site is accessible at <https://www.mitchellairport.com/airport-information/notices>.

Following the public comment period for the preliminary and final environmental assessments, documents may be removed from the website page. Documents can be made available upon request to the Wisconsin Department of Transportation - Bureau of Aeronautics<sup>145</sup> or the FAA Chicago Airport District Office.

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<sup>144</sup> Master Plan Update, Section 9 (Community and Stakeholder Engagement): <https://www.mkeupdate.com/application/files/1416/6373/1756/MPU-Section11-CommunityStakeholderEngagement-Final-2022-09-20.pdf>

<sup>145</sup> WisDOT Open Records: <https://wisconsindot.gov/pages/about-wisdot/open-rec/default.aspx>

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## CHAPTER 7 – PREPARERS

This preliminary environmental assessment was prepared under contract with Milwaukee County in 2023-2024 by Westwood Professional Services, Inc. and the following subconsultants:

- Harris Miller Miller & Hanson Inc. – Aviation Noise
- Quest Civil Engineers, LLC. – Wetland Delineation

### 7.1 General Mitchell International Airport

**Justin Weiss, P.E.** - *Project Manager*

### 7.2 Westwood Professional Services

**Kaitlyn M. Wehner** - *Airport Engineer*

Ms. Wehner is an airport engineer with experience in airport design and construction. Her responsibilities include design services for plan development for the Bureau of Aeronautics, county, and local governments. Kaitlyn has been the construction resident engineer for airfield paving, earthwork, drainage, and fencing projects. Her resident engineering experience includes the construction of projects that were evaluated through the NEPA Environmental Assessment process. Her responsibilities included ensuring that environmental obligations were communicated and met during construction.

B.S., Civil Engineering, Michigan Technological University, Houghton, Michigan

**Aaron L. Stewart, P.E.** - *Aviation Services Manager, Wisconsin*

Mr. Stewart has extensive experience in airport design and construction. His responsibilities include project administration, design reports, coordination with the Bureau of Aeronautics, FAA, and airport managers, and preliminary and final design. As the aviation services manager, Mr. Stewart is responsible for the quality of work performed by the professionals in the department. His experience also included project manager and resident engineer for airfield paving, earthwork, drainage and turf restoration.

B.S., Civil Engineering, University of Wisconsin - Milwaukee, WI

A.A.S., Civil Engineering Technology, Northeast WI Technical College, Green Bay, WI

Professional Engineer, 1997, Wisconsin #32318

**Brian D. Wayner, P.E.** - *Service Leader, Environmental*

As environmental service leader, Mr. Wayner is responsible for the quality of work performed by the professionals in the department. He is involved in the planning and implementation of work plans, and directly oversees project work performed in the hydrogeology and engineering areas. Technical experience includes preparing environmental assessments, environmental impact statements, performing investigations and designing remediations for soil and groundwater contaminated sites.

M.S., Environmental Engineering, University of New Haven, West Haven, Connecticut

B.S., Electrical Engineering, University of Wisconsin – Milwaukee

Professional Engineer, 2002, Wisconsin #35304

**Evan Dujardin** - *Scientist/Hydrogeologist*

Mr. Dujardin is a scientist/hydrogeologist. His experience includes Phase I and Phase II Environmental Site Assessments, and site investigations for soil, groundwater, sediment, and vapor in accordance with Wisconsin Administrative Code NR 700 regulations. Mr. Dujardin has assisted in the preparation of Investigation reports, Low Hazard Waste Grant of Exemption requests, Material Management Plans, and closure requests. He also performs Wisconsin Department of Transportation hazardous waste assessment work. Mr. Dujardin has his Tank System Site Assessor certification.

B.S., Geosciences with an emphasis in Hydrogeology, University of Milwaukee

**Jason Weis, P.E., GISP** - *Project Manager*

Mr. Weis is professional engineer with extensive experience in geographic information systems (GIS) and database application design. He is also involved with hydraulic and hydrologic modeling, sidewalk management programs and municipal stormwater management programs.

M.S., Environmental Engineering, University of Wyoming

B.S., Civil Engineering, University of Wisconsin – Platteville

Professional Engineer, Wisconsin # 36681

**Rigden A. Glaab** – *Archaeological Principal Investigator*

Mr. Glaab has over 25 years of archaeological experience including executing projects for academic, government, and private sector environments. He is a Registered Professional Archaeologist (RPA) and meets the Secretary of the Interior's Professional Standards for, prehistoric archaeology and historical archaeology. He is included on the Wisconsin Historical Society's (WHS) Qualified

Archaeologist for Burial Sites list to monitor archaeological construction work and is also on the Wisconsin contractor list to perform cultural resource surveys in Wisconsin.

M.A., Anthropology, University of Texas – Austin

B.A., Anthropology, University of Arizona

**Sara J. Nelson** – *Architectural Historian*

Ms. Nelson is an architectural historian that supports projects as a cultural resources specialist. She has nearly ten years of experience conducting architectural history surveys and preparing National Register nominations for buildings and districts for the government and private sector. She also conducts Phase 1 archaeological surveys and Phase 1 Environmental Site Assessments.

B.A., Historic Preservation and Community Planning, College of Charleston, South Carolina

**7.3 Harris Miller Miller & Hanson Inc.**

**Vincent Ma** – *Consultant*

Vincent Ma is a graduate of California State Polytechnic University (Cal Poly) with a background in environmental and natural resource conservation. Mr. Ma is a Consultant with the Aviation Environmental Services Group at HMMH. Most of his experience has been with projects related to aviation noise including data analysis, noise modeling in AEDT, and reporting. He also has experience conducting noise measurements and modeling in SoundPLAN and ArcGIS for rail and highway noise projects. Mr. Ma is also involved in conducting measurements for residential sound insulation projects at various airports across the country. Vincent is a certified service delivery technician for Envirosuite, providing preventative maintenance and support services for Airport noise monitoring systems throughout the Western United States.

B.S., Environmental Biology, Minor in Regenerative Studies, California State Polytechnic University

**Scott Polzin, PMP** – *Principal Consultant, Aviation Environmental Services*

Scott Polzin is a Principal Consultant in HMMH’s Aviation Environmental Services group. Scott brings over 25 years of environmental planning experience to assignments. The primary focus of his technical experience has been delivering National Environmental Policy Act (NEPA) compliance documents, including environmental impact statements (EISs), environmental assessments (EAs), and categorical exclusions (CatExs). His current focus is delivering NEPA documents on aviation projects but he also has experience on highway, transit, and transmission line projects.

Masters, Community and Regional Planning, University of Nebraska, Lincoln

B.S., Finance, University of Nebraska, Lincoln

**Eugene M. Reindel** – *Vice President*

Gene has focused the greater part of his career on aircraft noise and consulting across the country and internationally. As Vice President in the Aviation Environmental Services (AES) group at HMMH, he manages a wide range of aviation noise consulting projects and provides technical support on aviation related noise studies and noise measurement programs. Mr. Reindel is a trained facilitator and leads public outreach programs associated with controversial noise studies and programs, and uses his training to facilitate community noise forum-type meetings. Gene also teaches courses in acoustics, sound measurements and noise modeling. Gene enjoys and excels at presenting complex issues of aviation noise in an easily understood manner.

M.E., Acoustics, Pennsylvania State University, State College, PA

B.S., Physics Engineering, Pacific Lutheran University, Tacoma, WA

**Aofei Li** – *Staff Consultant*

Aofei Li is a Consultant in the Aviation Environmental Services group at HMMH. He obtained his M.S. in Aeronautical Science – Aviation Management from Middle Tennessee State University. He works on a variety of projects for airport clients and specializes in noise modeling using the Federal Aviation Administration’s (FAA’s) Aviation Environmental Design Tool (AEDT) and ArcPORT, as well as regularly performing acoustical measurements in the field. Mr. Li is proficient in Microsoft Access and SQL Server, ANMS, ArcGIS, ELS, GMS, SAMS, and TARGETS.

B.S., Computer Science, Heilongjiang University of Science and Technology, Harbin, China

M.S., Aeronautical Science, Aviation Management, Middle Tennessee State University

**7.4 Quest Civil Engineers, LLC.**

**Brian Kronstedt** – *Environmental Specialist*

Mr. Kronstedt has over 23 years of experience performing wetland delineations. He has completed training sponsored by the Wisconsin Coastal Management Program including Basic Wetland Delineation, Advanced Wetland Delineation, Plant Identification, and Hydric Soils.

B.S., Biology and Wildlife Management, University of Wisconsin – Stevens Point



## **APPENDIX 1 – SITE PHOTOGRAPHS**

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**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 1

**Description:** Standing on Taxiway S looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 2

**Description:** Standing on Taxiway S looking north



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 3

**Description:** Standing on Runway 1R-19L looking west at Taxiway S, shows pavement deterioration



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 4

**Description:** Standing Runway 1R-19L looking south towards Taxiway S



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 5

**Description:** Standing on Runway 1R-19L looking east at Taxiway W



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 6

**Description:** Standing on Runway 1R-19L north of Taxiway W looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 7

**Description:** Standing on Runway 1R-19L looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 8

**Description:** Standing on Runway 1R-19L looking north



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 9

**Description:** Standing on Runway 1R-19L and Runway 13-31 intersection looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 10

**Description:** Standing on Runway 1R-19L looking north, area shows pavement deterioration



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 11

**Description:** Standing on Taxiway M looking west at Runway 1R-19L



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 12

**Description:** Standing on Runway 1R-19L and Runway 13-31 intersection looking north





**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 13

**Description:** Standing in proposed staging area looking southwest at haul road and entrance gate.



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 14

**Description:** Standing in proposed staging area looking southwest at haul road and entrance gate.



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## **APPENDIX 2 – CORRESPONDENCE**

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**WISCONSIN DEPARTMENT OF NATURAL RESOURCES**

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**State of Wisconsin**  
**DEPARTMENT OF NATURAL RESOURCES**  
1027 W St Paul Ave  
Milwaukee WI, WI, 53233

**Tony Evers, Governor**  
**Adam N. Payne, Secretary**  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



09/28/2023

WIC-SE-2023-41-03089

Justin Weiss  
General Mitchell International Airport  
[sent electronically]

RE: Wetland Delineation Confirmation for "MKE Runways 1R-19L & 13-31" located in NW 1/4, SE 1/4, Section 28, Township 06N, Range 22E, in the City of Milwaukee, Milwaukee County

Dear Justin Weiss

We have reviewed the wetland delineation report from Quest Civil Engineers, LLC prepared for the above-mentioned site. This letter will serve as confirmation that the wetland boundaries shown on the enclosed wetland delineation figure are acceptable. This finding is based upon a detailed report review and interview with the delineator. Any filling or grading within these areas may require DNR approvals. Our wetland confirmation is valid for five years. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

In order to comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at [calvin.lawrence@wisconsin.gov](mailto:calvin.lawrence@wisconsin.gov)).

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization, to comply with the state's Endangered Species Law. To ensure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <https://dnr.wi.gov/topic/ERReview/Review.html>. The Endangered Resources Program will provide a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

If you have any questions, please call me at (414) 308-6780 or you can reach me by email at [kara.brooks@wisconsin.gov](mailto:kara.brooks@wisconsin.gov).

Sincerely, 

Kara Brooks  
Wetland Identification Specialist

Enclosures: Project Location Figure  
Wetland Delineation Figure

Email CC: USACE Project Manager  
Brian Krostedt, Quest



<p>Wetland Map</p>		<p>City of Milwaukee Milwaukee County, WI</p>	<p>Figure <b>A</b></p>
<p>MKE Airport Runways 1R-19L &amp; 13-31</p>	<p>By: BWK Date: 9/12/2023</p>	<p><b>QUEST</b> Civil Engineers, LLC</p> <p>320 W Grand Ave., Suite 302 Wisconsin Rapids, WI 54495 715-423-3525</p>	



## Kaitlyn Wehner

---

**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 3:38 PM  
**To:** ryan.pappas@wisconsin.gov  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project  
**Attachments:** MKE RWY 1R-19L - WDNR Initial Project Review Request.pdf; Attachment 1 - RWY 1R-19L Location Map.pdf; Attachment 2 - RWY 1R-19L Airport Property Map.pdf; Attachment 3 - RWY 1R-19L Airport Diagram Map.pdf; Attachment 4 - RWY 1R-19L Area of Potential Effects Map.pdf; Attachment 5 - Wetland Delineation Confirmation.pdf; Attachment 6 - RWY 1R-19L Photo log.pdf

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226





November 8, 2023

Mr. Ryan Pappas

Wisconsin Department of Natural Resources

1027 West St. Paul Ave

Milwaukee, WI 53233

*Via Electronic Mail Only to ryan.pappas@wisconsin.gov*

RE: Milwaukee General Mitchell International Airport  
Proposed Runway 1R-19L Decommissioning and Removal

Dear Mr. Pappas:

General Mitchell International Airport (Airport) is beginning preliminary studies for improvements to the Airport. (See Attachment 1 – Site Location Map & Attachment 2 – Airport Property Map) These proposed improvements include the decommissioning and removal of Runway 1R-19L (Project).

Recently, the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards. Additionally, the proposed project will align the airfield for future development and reduce the operation and maintenance costs of deteriorating pavements.

Currently, Runway 1R-19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 1R-19L primarily services military aircraft capable of operating on a 4,000-foot-long runway. In 2020 a pavement inspection was completed and very poor to fair pavement conditions were identified.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDS.
- Two alternatives to maintain airfield access for the 128<sup>th</sup> WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or



- Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.

A wetland delineation was performed at the proposed location and submitted to the DNR. The delineation identified wetlands present in a ditch line (See Attachment 5 – Wetland Delineation Confirmation) that may be impacted if the proposed project moves forward with implementation.

The proposed project area was entered into the Natural Heritage Inventory Public Portal, it was identified that endangered resources are located within the 1-mile and 2-mile buffer of the project area. If requested, the public portal ID can be provided for reference. The proposed project was entered into the U.S. Fish & Wildlife Service Information for Planning and Consultation (IPaC) portal and endangered resources were identified as potentially affected by activities in the project location.

The proposed project is located within airport property, specifically in Sections 28 and 33 of Township 06 North, Range 22 East. The project area is currently pavement and mowed grass fields with no structures. (See Attachment 6 – Site Photographs)

We are requesting that you identify any concerns the Wisconsin Department of Natural Resources may have regarding the proposed project or related information about the area. Any concerns or comments will be included in the preliminary environmental assessment. Additionally, you will be included on the distribution list for the preliminary and final environmental assessment. If you would like to receive additional information regarding this proposed project, please contact Justin Weiss at 414-747-6233 or at [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com). Thank you for your assistance.

Sincerely,

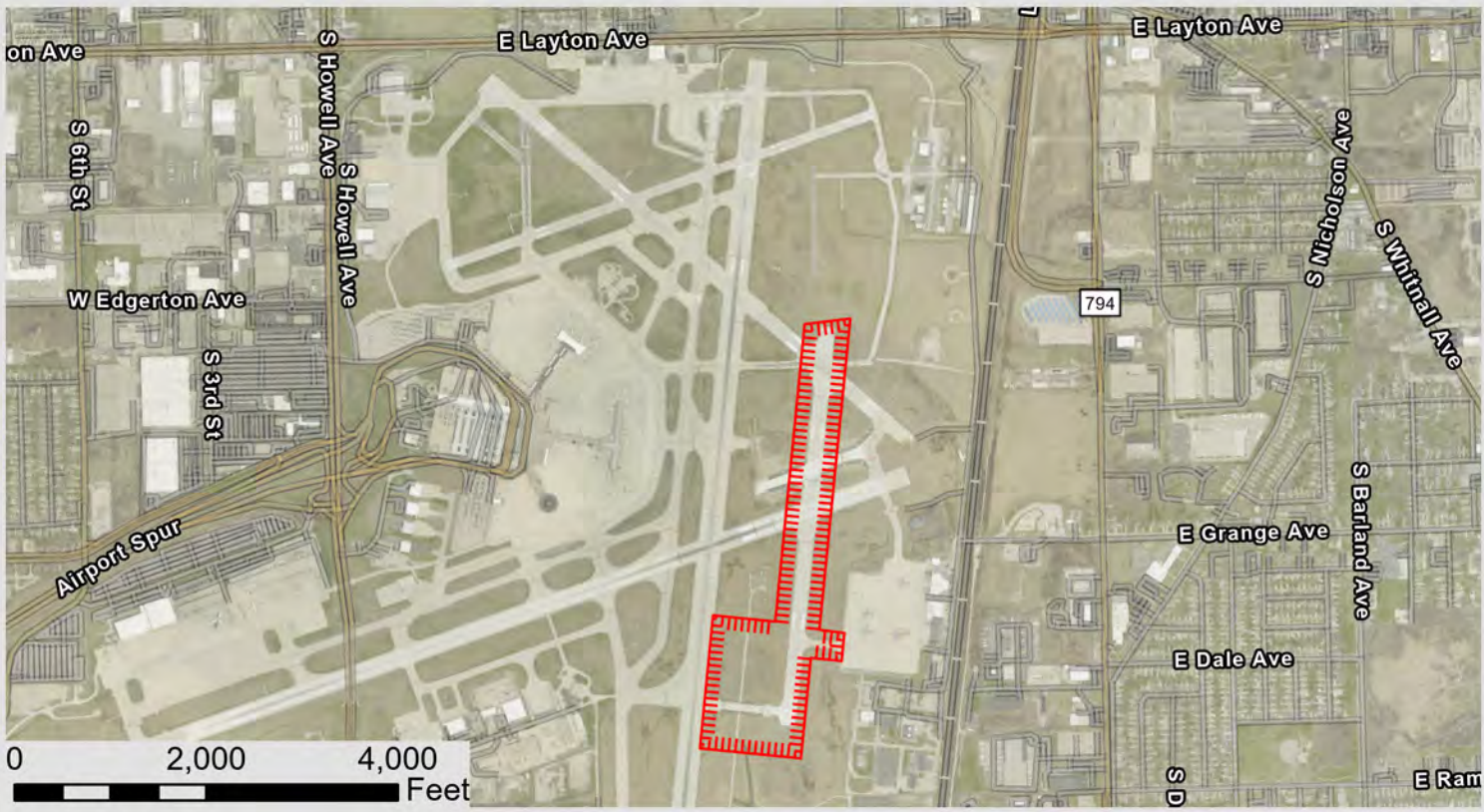
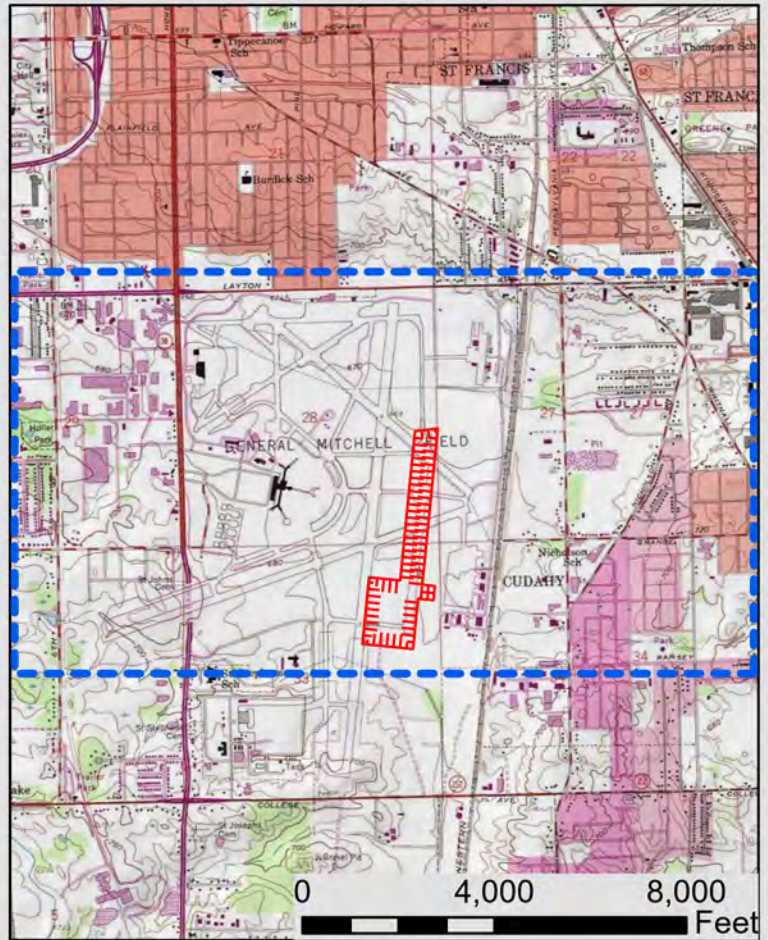
A handwritten signature in blue ink that reads 'Christine Turk'.

Christine Turk, ACE  
Airport Planning Manager  
General Mitchell International Airport

**Attachments:**

1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects
5. Wetland Delineation Confirmation
6. Site Pictures

Cc: Justin Weiss, General Mitchell Airport Project Manager (by email)  
Wendy Hottenstein, WisDOT BOA (by email)  
Mallory Palmer, WisDOT BOA (by email)  
Kaitlyn Wehner, Westwood (by email)



**Westwood**

1 Systems Drive (920) 735-6900  
Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)





**MKE RUNWAY 1R-19L REMOVAL  
LOCATION MAP**

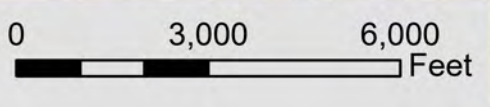
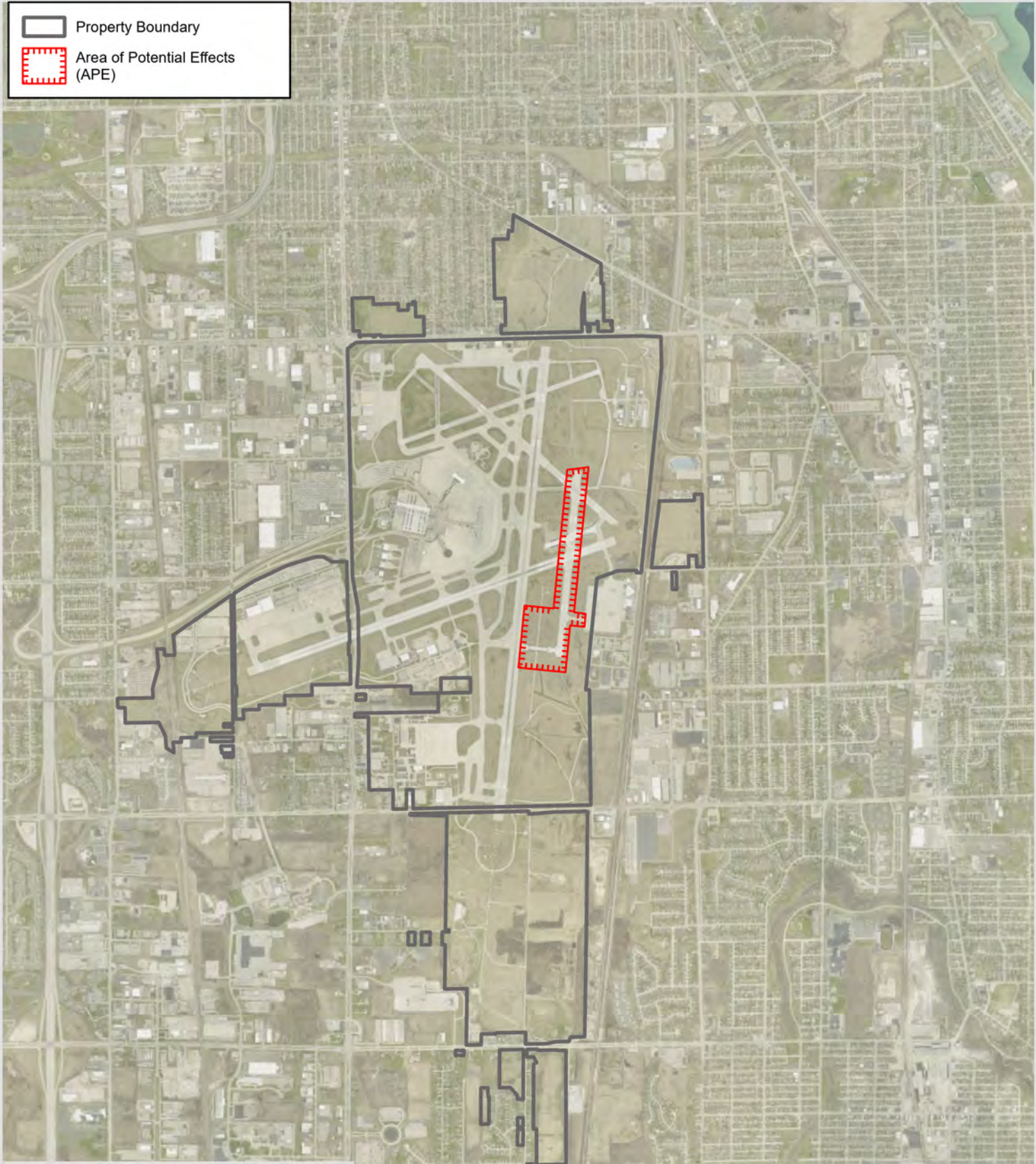
GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
Project Engineer:  
Drawn By: JCW  
Checked By:

Date: 10/17/2023

SCALE:  
1 in = 2,000 ft  
PROJECT NO.  
**R3001844.00**  
FIGURE NO.  
**1**

 Property Boundary  
 Area of Potential Effects (APE)



Data Source:  
Wisconsin Statewide Parcels Database V9.0 (2023)

**Westwood**  
 1 Systems Drive (920) 735-6900  
 Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)



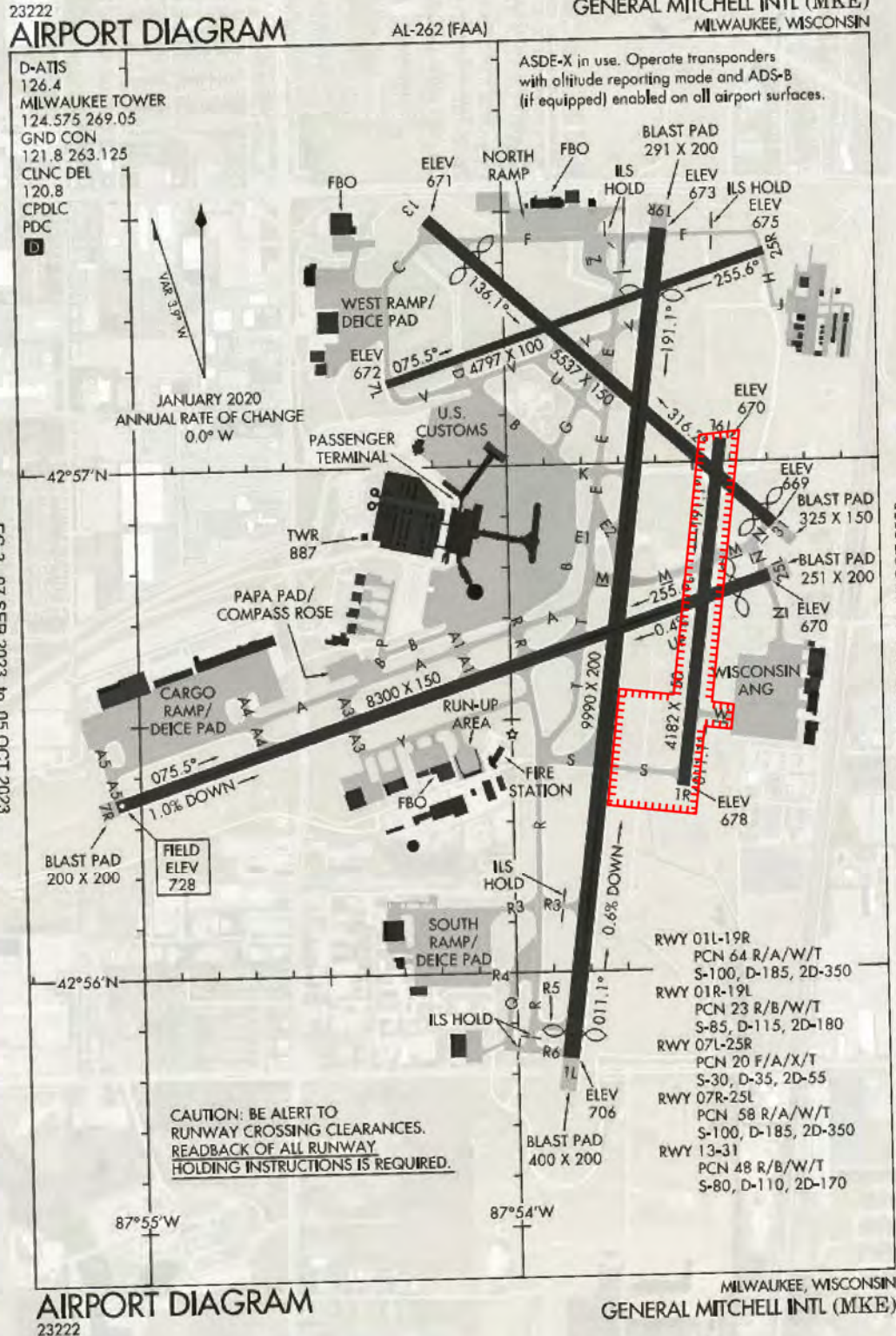
**MKE RUNWAY 1R-19L REMOVAL  
 AIRPORT PROPERTY MAP**  
 GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:  
 Date: 10/17/2023

SCALE:  
 1 in = 3,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**2**



Area of Potential Effects



# AIRPORT DIAGRAM

GENERAL MITCHELL INTL (MKE)  
MILWAUKEE, WISCONSIN

23222 AL-262 (FAA)

D-ATIS 126.4  
MILWAUKEE TOWER 124.575 269.05  
GND CON 121.8 263.125  
CLNC DEL 120.8  
CPDLC PDC

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

ELEV 671 NORTH RAMP FBO ILS HOLD 861 ELEV 673 ILS HOLD ELEV 675

BLAST PAD 291 X 200

075.5° 4797 X 100 3537 X 150 191.1° 255.6°

FBO WEST RAMP/ DEICE PAD ELEV 672

JANUARY 2020 ANNUAL RATE OF CHANGE 0.0° W

PASSENGER TERMINAL U.S. CUSTOMS

42°57'N

TWR 887

PAPA PAD/ COMPASS ROSE

CARGO RAMP/ DEICE PAD 8300 X 150 RUN-UP AREA FIRE STATION

075.5° 1.0% DOWN

FIELD ELEV 728

BLAST PAD 200 X 200

42°56'N

SOUTH RAMP/ DEICE PAD ILS HOLD R3 R3 R4 R5 R6

0.6% DOWN

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

ELEV 706

BLAST PAD 400 X 200

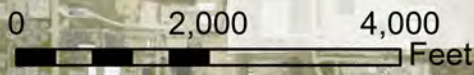
87°55'W 87°54'W

RWY 01L-19R PCN 64 R/A/W/T S-100, D-185, 2D-350  
RWY 01R-19L PCN 23 R/B/W/T S-85, D-115, 2D-180  
RWY 07L-25R PCN 20 F/A/X/T S-30, D-35, 2D-55  
RWY 07R-25L PCN 58 R/A/W/T S-100, D-185, 2D-350  
RWY 13-31 PCN 48 R/B/W/T S-80, D-110, 2D-170

ELEV 670 BLAST PAD 325 X 150 BLAST PAD 251 X 200 ELEV 670 WISCONSIN ANG ELEV 669 TR ELEV 678

# AIRPORT DIAGRAM

MILWAUKEE, WISCONSIN  
GENERAL MITCHELL INTL (MKE)



Data Source:  
FAA (Sep/Oct 2023)

**Westwood**







1 Systems Drive (920) 735-6900  
Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)

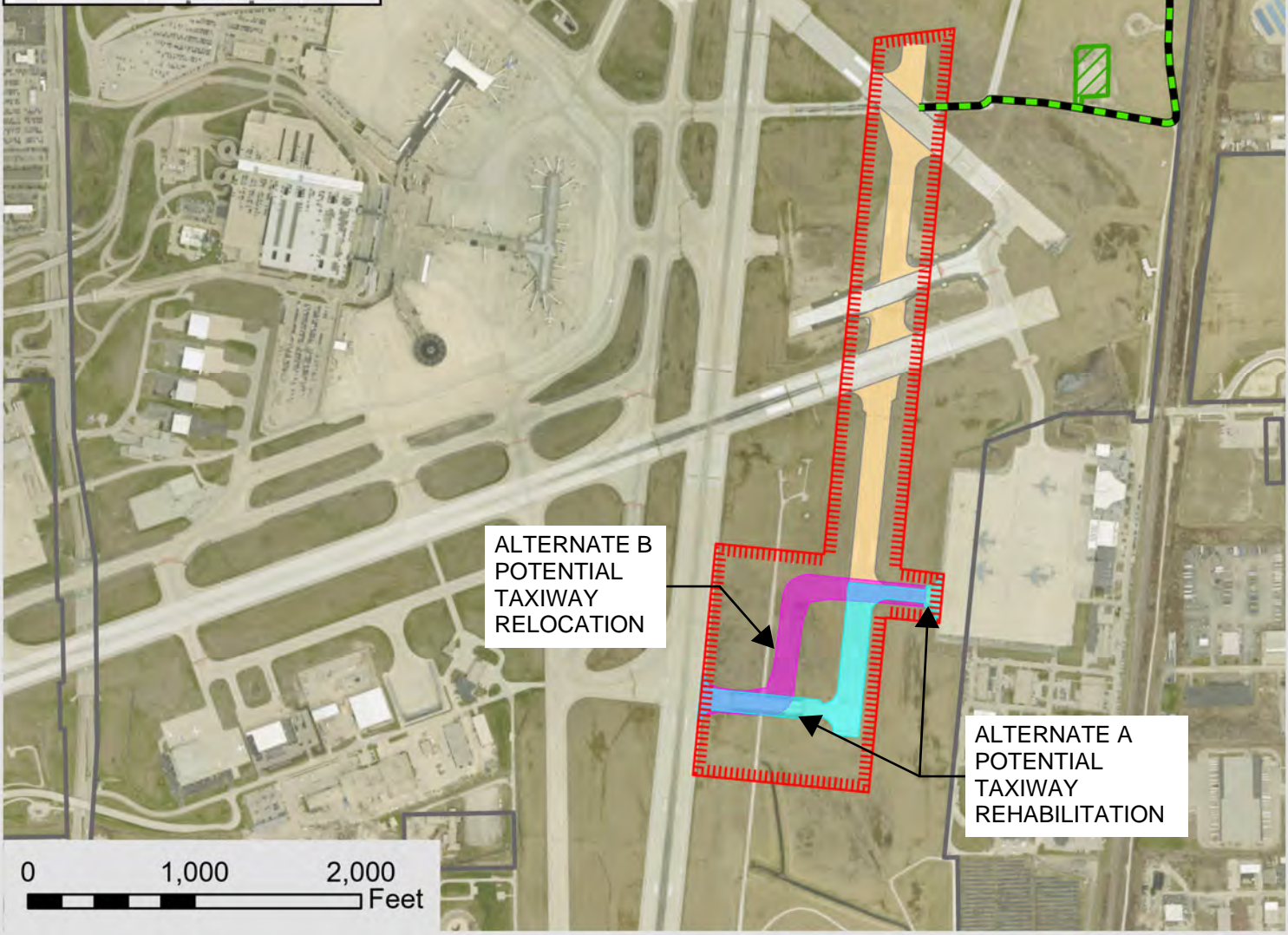


**MKE RUNWAY 1R-19L REMOVAL  
AIRPORT DIAGRAM MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:	SCALE:
Project Engineer:	1 in = 2,000 ft
Drawn By: JCW	PROJECT NO.
Checked By:	<b>R3001844.00</b>
Date: 10/17/2023	FIGURE NO.
	<b>3</b>

-  Property Boundary
-  Area of Potential Effects (APE)
- Project Extents**
-  Pavement Removal
- Proposed Haul Routes**
-  Existing (paved, gravel)
- Proposed Staging Areas**
-  Existing
-  Potential Rehabilitated Parallel Taxiway
-  Potential Relocated Parallel Taxiway



**Westwood**

1 Systems Drive (920) 735-6900  
 Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)



**MKE RUNWAY 1R-19L REMOVAL  
 AREA OF POTENTIAL EFFECTS**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JCW  
 Checked By:

Date: 10/10/2023

SCALE:  
 1 in = 1,000 ft  
 PROJECT NO.  
**R3001844.00**

FIGURE NO.  
**4**

**State of Wisconsin**  
**DEPARTMENT OF NATURAL RESOURCES**  
1027 W St Paul Ave  
Milwaukee WI, WI, 53233

**Tony Evers, Governor**  
**Adam N. Payne, Secretary**  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



09/28/2023

WIC-SE-2023-41-03089

Justin Weiss  
General Mitchell International Airport  
[sent electronically]

RE: Wetland Delineation Confirmation for "MKE Runways 1R-19L & 13-31" located in NW 1/4, SE 1/4, Section 28, Township 06N, Range 22E, in the City of Milwaukee, Milwaukee County

Dear Justin Weiss

We have reviewed the wetland delineation report from Quest Civil Engineers, LLC prepared for the above-mentioned site. This letter will serve as confirmation that the wetland boundaries shown on the enclosed wetland delineation figure are acceptable. This finding is based upon a detailed report review and interview with the delineator. Any filling or grading within these areas may require DNR approvals. Our wetland confirmation is valid for five years. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

In order to comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at [calvin.lawrence@wisconsin.gov](mailto:calvin.lawrence@wisconsin.gov)).

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization, to comply with the state's Endangered Species Law. To ensure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <https://dnr.wi.gov/topic/ERReview/Review.html>. The Endangered Resources Program will provide a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

If you have any questions, please call me at (414) 308-6780 or you can reach me by email at [kara.brooks@wisconsin.gov](mailto:kara.brooks@wisconsin.gov).

Sincerely, 

Kara Brooks  
Wetland Identification Specialist

Enclosures: Project Location Figure  
Wetland Delineation Figure

Email CC: USACE Project Manager  
Brian Krostedt, Quest





<p>Wetland Map</p>		<p>City of Milwaukee Milwaukee County, WI</p>	<p>Figure <b>A</b></p>
<p>MKE Airport Runways 1R-19L &amp; 13-31</p>	<p>By: BWK Date: 9/12/2023</p>	<p><b>QUEST</b> Civil Engineers, LLC</p> <p>320 W Grand Ave., Suite 302 Wisconsin Rapids, WI 54495 715-423-3525</p>	

**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 1

**Description:** Standing on Taxiway S looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 2

**Description:** Standing on Taxiway S looking north



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 3

**Description:** Standing on Runway 1R-19L looking west at Taxiway S



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 4

**Description:** Standing Runway 1R-19L looking south towards Taxiway S



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 5

**Description:** Standing on Runway 1R-19L looking east at Taxiway W



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 6

**Description:** Standing on Runway 1R-19L north of Taxiway W looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 7

**Description:** Standing on Runway 1R-19L looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 8

**Description:** Standing on Runway 1R-19L looking north



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 9

**Description:** Standing on Runway 1R-19L and Runway 13-31 intersection looking south



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L

**Date:** 9/12/23

**Photo #** 10

**Description:** Standing on Runway 1R-19L looking north, area shows pavement deterioration





# DNR PROJECT COORDINATION REQUEST

Wisconsin Department of Transportation (WisDOT), Bureau of Aeronautics (BOA)

*Purpose:* To facilitate interagency coordination utilizing the liaison procedures under the Cooperative Agreement between WDNR and WisDOT.

*Goal:* Within 30 days of form receipt, the TL and AEC/BOA Project Manager should communicate regarding whether additional information is needed by the TL and the timeframe in which the WisDOT project team requested document is needed.

<b>WDNR Transportation Liaison</b>	<b>WisDOT Aeronautical Environmental Coordinator</b> (Send copy of all coordination to AEC)	<b>WisDOT BOA Project Manager</b>
<b>TO:</b> Ryan Pappas (414) 750-7495 Ryan.Pappas@Wisconsin.Gov	<b>FROM:</b> Mallory K. Palmer (608) 261-5861 malloryk.palmer@dot.wi.gov	Wendy Hottenstein, P.E. (608) 261-6278 Wendy.Hottenstein@Dot.Wi.Gov
WisDOT Project ID 0740-40-114	Airport Name (LOC ID) General Mitchell International Airport (MKE)	County & Township/Village/City City of Milwaukee, Milwaukee County
BOA Project ID MKE AIP-114	Project Name Runway 1R-19L Decommissioning and Removal	
Estimated Project Cost (range)	Project Consultant Westwood	Project on Lands of Tribal Interest? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Environmental Document Type (per FAA Order 1050.1F or TRANS 400) <input type="checkbox"/> Categorical Exclusion (CATEX) <input checked="" type="checkbox"/> Environmental Assessment (EA) <input type="checkbox"/> Environmental Impact Statement (EIS)		
<b>Type of Document Requested</b> <input checked="" type="checkbox"/> Initial Review Letter (IRL) <input type="checkbox"/> Final Concurrence Letter (FCL) <input type="checkbox"/> Amendment to IRL (Attach latest IRL) <input type="checkbox"/> Amendment to FCL (Attach latest FCL) <input type="checkbox"/> Other:	<b>Document Delivery Date Information (mm/dd/yyyy)</b> DNR Project Coordination Request Submittal: 12/8/2023  Initial Review Letter Requested By: 1/15/2024 (Provide at least 30 days lead time from DNR Project Coordination Request Submittal)  Final Concurrence Letter Requested By: -Indicated date of Planned or Advanceable PS&E:	
<b>Proposed Work Involved</b>		
<input type="checkbox"/> Runway Rehabilitation/Reconstruction – Runway ID: <input checked="" type="checkbox"/> Taxiway Rehabilitation/Reconstruction – Taxiway ID: W, S, CC <input type="checkbox"/> Apron Rehabilitation/Reconstruction <input type="checkbox"/> Other Pavement(s) <input checked="" type="checkbox"/> Lighting - Replacement, Upgrade or New <input type="checkbox"/> Hangar(s) – New Site, New Building, Demolition or Replacement <input type="checkbox"/> Other Building(s) – Terminal, Customs, ARFF, etc. <input type="checkbox"/> Obstruction Removal <input type="checkbox"/> Fuel System – New, Upgrade or Replacement <input type="checkbox"/> Fencing – New, Upgrade or Replacement		<input checked="" type="checkbox"/> NAVAID(S) <input type="checkbox"/> Land Acquisition/Easement <input type="checkbox"/> Seaplane Base <input checked="" type="checkbox"/> Grading <input checked="" type="checkbox"/> Borrow and/or Waste Site Required <input checked="" type="checkbox"/> Stormwater/Drainage <input type="checkbox"/> Culvert Replacement or Extension <input type="checkbox"/> Channel Change/Stream Relocation <input checked="" type="checkbox"/> Other: Runway 1R-19L Decommissioning with Pavement Removal
<b>Storm Water Management</b> (check all that apply)	<b>Attachments</b>	
<i>Estimated Acres of Ground Disturbance</i> <i>(include total acreage of all disturbed areas, plus known select sites)</i> <input type="checkbox"/> Under 1 acre <input checked="" type="checkbox"/> Over 1 acre <input checked="" type="checkbox"/> WPDES, Transportation Construction General Permit Stormwater Management Plan per TCGP 3.2 ( <a href="#">Guidance</a> )	<i>For Initial Review Letter</i> <input checked="" type="checkbox"/> Map of Project Limits <input checked="" type="checkbox"/> Wetland Delineation (if available) <input type="checkbox"/> Endangered Resource Species Surveys <input type="checkbox"/> Preliminary Engineering Plans <input type="checkbox"/> Phase 1 ESA Report (Hazmat) <input checked="" type="checkbox"/> Other: Photo Log	<i>For Final Concurrence Letter</i> <input type="checkbox"/> Map of Project Limits <input type="checkbox"/> Wetland Delineation <input type="checkbox"/> Wetland Impact Tracking Form <input type="checkbox"/> Special Provision <input type="checkbox"/> Final Engineering Plans <input type="checkbox"/> Erosion Control Plans <input type="checkbox"/> TCGP NOI <input type="checkbox"/> Other:



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## **Proposed Project Description (include proposed design & construction dates)**

The proposed project at General Mitchell International Airport (Airport) consists of the decommissioning and removal of Runway 1R-19L. The Airport owned and operated by Milwaukee County. The airport is located in the City of Milwaukee, Milwaukee County, Wisconsin; approximately two miles west of Lake Michigan and six miles south of downtown Milwaukee. Specifically, the proposed project is located within Airport property in Sections 28 & 33 of Township 6 North, Range 22 East in Milwaukee County, Wisconsin.

Recently the Airport completed a master plan update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the master plan update development needs and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards.

The proposed project undertaking will consist of the following:

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDs.
- Two alternatives to maintain airfield access for the 128th WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or
  - Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.

The estimated start date and duration of the project construction is spring of 2027 to fall of 2028.

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## **Proposed Project Purpose and Need**

In September of 2022 the Airport completed a master plan update. Through the master plan update the opportunity to right size the airfield was analyzed. The airfield analysis focused on balancing the runway configuration with forecast demand, protecting the ability to accommodate growth, and optimizing capacity benefits in the context of future operation and maintenance costs and capital expenses. The purpose of the proposed project is to align the airfield configuration with the master plan update development needs and the recently approved Airport Layout Plan (ALP).

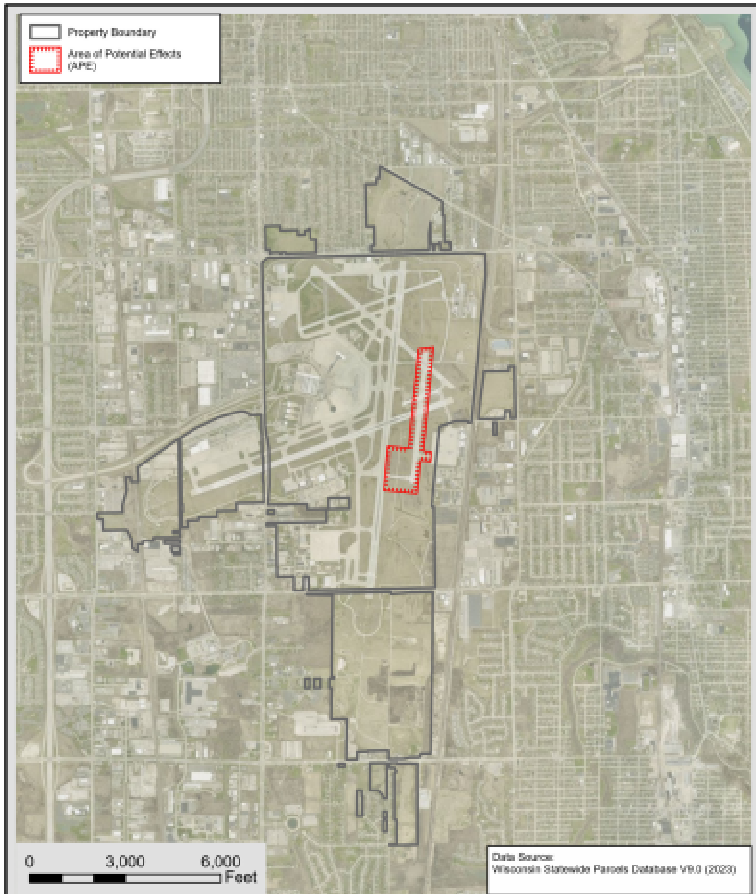
The need for the proposed project is based on addressing the rightsizing needs of the airport by removing underutilized and obsolete pavement. The proposed project also aligns the airfield configuration to meet update FAA standards and align with the most recent ALP update. Currently, the Airport operates using a five (5) runway configuration but through the most recent master plan update, using a three (3) runway system the airport will still be capable to accommodating demand through the 2040 planning horizon. Utilizing a three (3) runway system the airfield taxiway network can be modified to fulfill the need to enhance aircraft circulation and increase efficiency. Additionally, the proposed action is needed to improve safety and reduce operation and maintenance costs associated items such as deteriorating pavement, lighting repairs, and snow plowing. The proposed action facilitates future development to meet the identified future needs of the airport without requiring the acquisition of additional property, while ensuring Airport resources are prudently deployed.

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**List of Attachments** *(A Project Location Map with proposed project limits and aerial map showing resources in project area must be included. Other attachments not referenced on the previous page that may expedite the IRL process include; scoping information, plan and profiles including areas highlighting proposed culvert work, site photos and HSIP application, as applicable. Other attachments not referenced on the previous page that may expedite the FCL process include; 90% plans, natural resource-related Special Provisions and hydraulic analyses, as applicable.)*

1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects Map
5. Wetland Delineation Confirmation
6. Photo Log



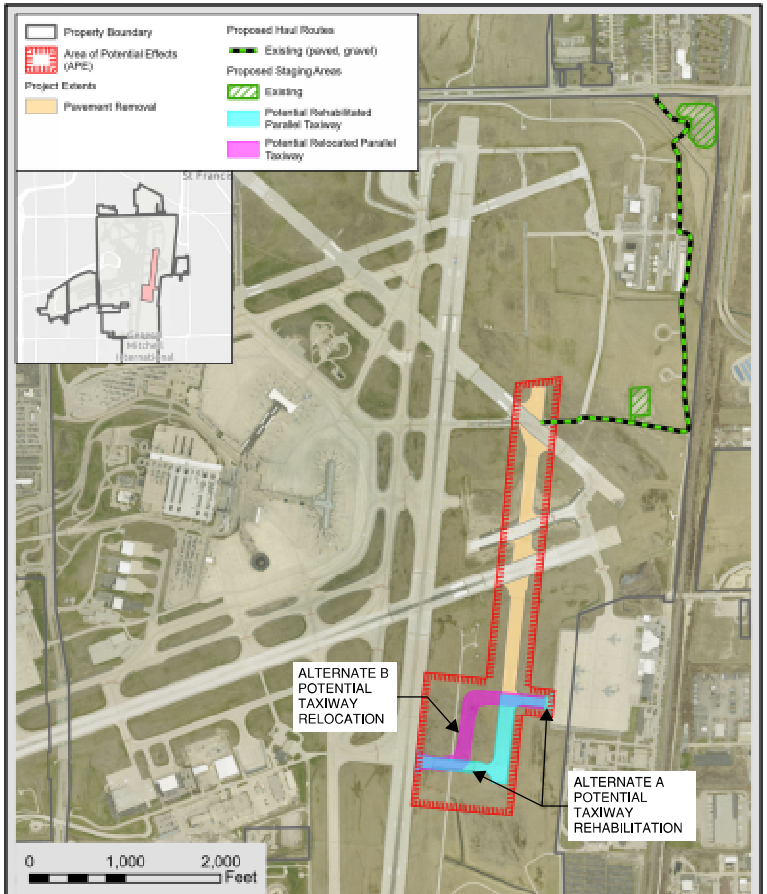
**Westwood**  
1 Systems Drive, Appleton, WI 54912 | (920) 761-6862 | www.westwood.com

**MKE RUNWAY 1R-19L REMOVAL AIRPORT PROPERTY MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager: [Redacted] | SCALE: 1 in = 3,000 ft  
 Project Engineer: JOHN | PROJECT NO: R3001844.00  
 Drawn By: [Redacted] | Checked By: [Redacted]  
 Date: 10/17/2023 | FIGURE NO: 2

R:\081844\081844\Drawings\AerialMap - Copy.aprx (Sheet Property Map)  
 Printed: 08/11/2023 8:33 PM



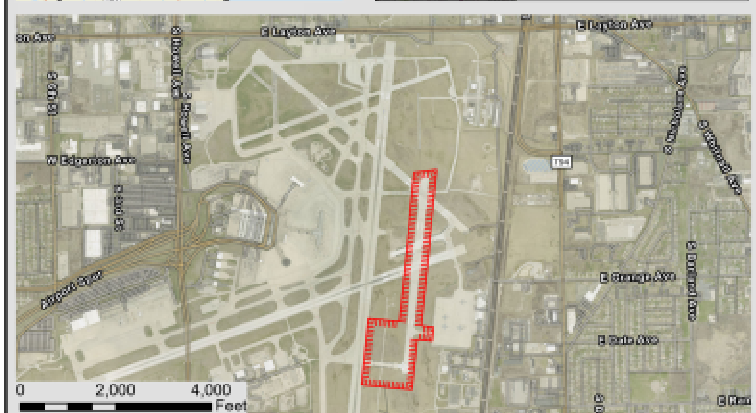
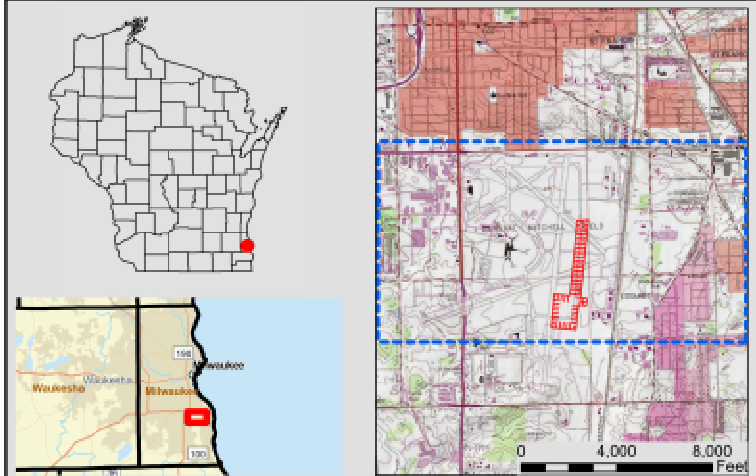
**Westwood**  
1 Systems Drive, Appleton, WI 54912 | (920) 761-6862 | www.westwood.com

**MKE RUNWAY 1R-19L REMOVAL AREA OF POTENTIAL EFFECTS**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager: [Redacted] | SCALE: 1 in = 1,000 ft  
 Project Engineer: JOHN | PROJECT NO: R3001844.00  
 Drawn By: [Redacted] | Checked By: [Redacted]  
 Date: 10/17/2023 | FIGURE NO: 4

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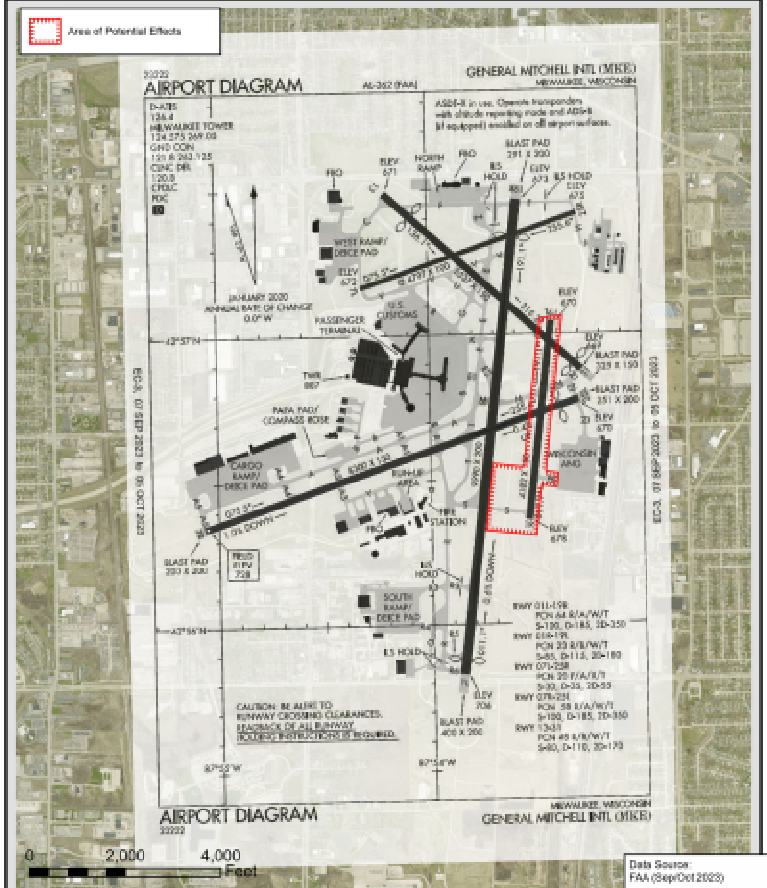
**Westwood**  
1 Systems Drive, Appleton, WI 54912 | (920) 761-6862 | www.westwood.com

**MKE RUNWAY 1R-19L REMOVAL LOCATION MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager: [Redacted] | SCALE: 1 in = 2,000 ft  
 Project Engineer: JOHN | PROJECT NO: R3001844.00  
 Drawn By: [Redacted] | Checked By: [Redacted]  
 Date: 10/17/2023 | FIGURE NO: 1

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**Westwood**  
1 Systems Drive, Appleton, WI 54912 | (920) 761-6862 | www.westwood.com

**MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager: [Redacted] | SCALE: 1 in = 2,000 ft  
 Project Engineer: JOHN | PROJECT NO: R3001844.00  
 Drawn By: [Redacted] | Checked By: [Redacted]  
 Date: 10/17/2023 | FIGURE NO: 3

R:\081844\081844\Drawings\AerialMap - Copy.aprx (Sheet Diagram Map)  
 Printed: 08/11/2023 8:33 PM



State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
1027 W St Paul Ave  
Milwaukee WI, WI, 53233

Tony Evers, Governor  
Adam N. Payne, Secretary  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



09/28/2023 WIC-SE-2023-41-03089

Justin Weiss  
General Mitchell International Airport  
[sent electronically]

RE: Wetland Delineation Confirmation for "MKE Runways 1R-19L & 13-31" located in NW 1/4, SE 1/4, Section 28, Township 06N, Range 22E, in the City of Milwaukee, Milwaukee County

Dear Justin Weiss

We have reviewed the wetland delineation report from Quest Civil Engineers, LLC prepared for the above-mentioned site. This letter will serve as confirmation that the wetland boundaries shown on the enclosed wetland delineation figure are acceptable. This finding is based upon a detailed report review and interview with the delineator. Any filling or grading within these areas may require DNR approvals. Our wetland confirmation is valid for five years. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

In order to comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at calvin.lawrence@wisconsin.gov).

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization, to comply with the state's Endangered Species Law. To ensure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <https://dnr.wi.gov/topic/ERR/Review/Review.html>. The Endangered Resources Program will provide a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

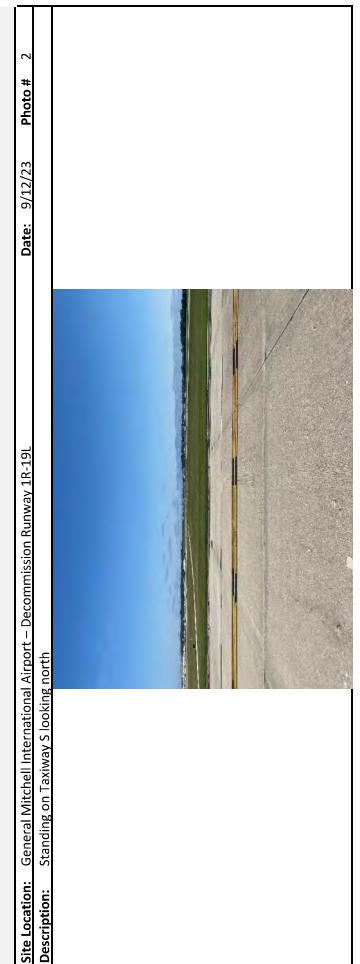
In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

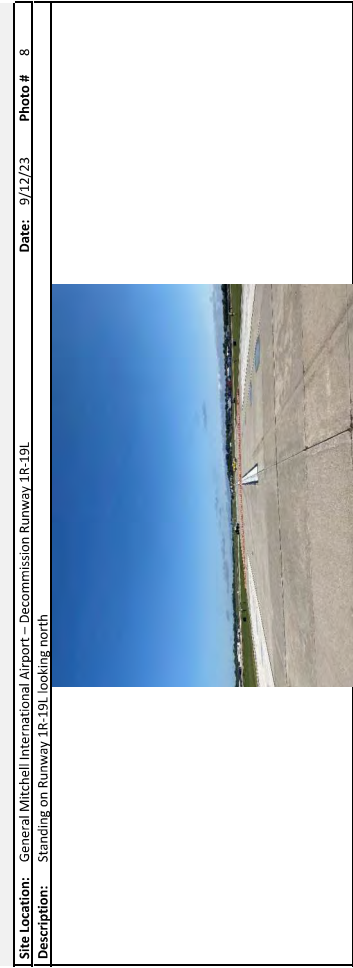
If you have any questions, please call me at (414) 306-6760 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely, *Kara Brooks*  
Kara Brooks  
Wetland Identification Specialist

Enclosures: Project Location Figure  
Wetland Delineation Figure

Email CC: USACE Project Manager  
Brian Krostedt, Quest







January 10, 2024

Mallory K. Palmer  
Aeronautical Environmental Coordinator  
Wisconsin Department of Transportation  
Bureau of Aeronautics  
P.O Box 7914  
Madison, WI 53707

**Subject: DNR Initial Review**

WisDOT Project I.D. 0740-40-114  
BOA Project I.D. MKE AIP-114  
Runway 1R-19L Decommissioning and Removal  
General Mitchell International Airport (MKE)  
City of Milwaukee, Milwaukee County  
Sections 28 and 33 Township 06 North Range 22 East

Dear Ms. Palmer:

The Wisconsin Department of Natural Resources (DNR) has received the information you provided for the above-referenced project. According to your proposal, the purpose of this project is to align the airfield configuration with the master plan update development needs and the airport layout plan (ALP). The need is based on addressing the rightsizing needs of the airport by removing underutilized and obsolete pavement. The proposed project also aligns the airfield configuration to meet updated FAA standards and align with the most recent ALP update. The action will reduce maintenance costs and improve safety.

Proposed improvements include the decommissioning and removal of runway 1R-19L at the General Mitchell International Airport (MKE). The proposed project undertaking will consist of the following actions:

- Decommissioning of runway 1R-19L.
- Removal of approx. 53,000 SY of pavement between the north end of the runway 1R/19L and taxiway W and associated electrical utilities and NAVAIDs.
- There are two alternatives to maintain airfield access for the 128<sup>th</sup> WI Air National Guard unit located east of Runway 1R-19L, as described below:
  - Alternative A: Rehabilitation and conversion of runway 1R-19L south of taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation.
  - OR**
  - Alternative B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of runway 1R-19L, connecting taxiway W and taxiway S.

**If the project proposal changes, please reinitiate coordination with the DNR.**

Preliminary information has been reviewed by DNR staff for the project under the DNR/DOT Cooperative Agreement. Initial comments on the project as proposed are included below, and we assume that additional information will be provided that addresses all resource concerns identified. When requesting Final Concurrence/Water Quality Certification, please send the most up-to-date plan set (including the erosion control plan sheets), contract special provisions, Wetland Impact Tracking Form, Notice of Intent for the Transportation Construction General Permit (TCGP), and any additional pertinent information to demonstrate environmental commitments will be met.

### **Project-Specific Resource Concerns**

#### **Wetlands:**

There is potential for wetland impacts to occur as a result of this project. Wetland impacts must be avoided and/or minimized to the greatest extent practicable. Unavoidable wetland losses must be compensated for in accordance with the DNR/DOT Cooperative Agreement and the WisDOT Wetland Mitigation Banking Technical Guideline. Please provide the wetland community type and quantity of unavoidable wetland impacts, and mitigation information for this project using the Wetland Impact Tracking Form.

#### **Fisheries/In-Stream Work:**

Wilson Park creek and associated tributary are navigable waterways. The approximate locations of the waterways are shown below in figure 1, as these waterways are enclosed in underground culverts on the airport property. Unless otherwise agreed upon prior to the start of construction, there shall be no in-stream disturbance between March 1st to June 15<sup>th</sup> with both dates inclusive of the timeout period. This construction BMP minimizes impacts to fish and other aquatic organisms during sensitive time periods such as spawning and migration.

##### **Wilson Park Creek (WBIC: 15200)**

- Classified as a cool warm headwater stream.
- Classified as an impaired waterway for acute aquatic toxicity, recreational restrictions – pathogens, impairment unknown, chronic aquatic toxicity.
- Google Maps: 42.948927, -87.891016 [LINK](#)
- Currently no in-stream work is proposed in the scope of work of this project. Runway would be removed over the top of the enclosed stream.
- Map below in figure 1.

If erosion control matting is to be used along stream corridors, DNR recommends biodegradable non-netted matting (e.g. Class I Type A Urban, Class I Type B Urban, or Class II Type C). Long-term netted mats may cause animal entrapment. Avoid the use of fine mesh matting that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size.





- Prairie Crayfish (special concern) [LINK](#) – it is recommended to ensure proper erosion/sediment control practices are in place during all stages of the project, and minimizing natural areas/wetland ground disturbance to the greatest extent practicable.
- Wild Licorice (special concern plant) [LINK](#) – It is recommended to conduct plant surveys for this species within the project limits. If the plant is found in the project area, it is recommended to avoid impacting individual plants in the project area to the greatest extent practicable.

*NHI Disclaimer: This review letter may contain NHI data, including specific locations of endangered resources, which are considered sensitive and are not subject to Wisconsin's Open Records Law (s. 23.27 3(b), Wis. Stats.). As a result, endangered resources-related information contained in this review letter may be shared only with individuals or agencies that require this information in order to carry out specific roles in the permitting, planning, and implementation of the proposed project. Endangered resources information must be redacted from this letter prior to inclusion in any publicly disseminated documents*

### **Invasive Species:**

All project equipment shall be decontaminated for removal of invasive species prior to and after each use on the project site by utilizing other best management practices (<https://dnr.wi.gov/topic/Invasives/bmp.html>) to avoid the spread of invasive species as outlined in NR 40, Wis. Adm. Code. For further information, please refer to the following: <https://dnr.wi.gov/topic/invasives/classification.html>

- **Emerald Ash Borer:** This project has the potential for spreading the Emerald Ash Borer (EAB) beetle. While it is legal to freely move ash debris or wood throughout Wisconsin, it is a best management practice to prevent spreading the pest to areas where it is not yet established. A frequently updated map of where EAB is confirmed in WI is available at [Wisconsin's EAB Information website](#). As a rule of thumb, if your project is in the southern half of the state and you are removing many dead or dying ash, they may be infested with EAB. If so, consider these [best management practices to prevent spread of EAB](#).
- **Oak Wilt:** This project involves work that may involve cutting, pruning, or accidental wounding of oak trees. Follow WDOT policy regarding preventing transmission of oak wilt, <https://wisconsindot.gov/rdwy/cmm/cm-03-10.pdf#cm3-10.2>

### **Floodplains:**

The Surface Water Data Viewer (SWDV) indicates that there are special flood hazard areas (e.g., mapped floodplain areas) within the project limits. Proposed temporary or permanent changes in these regulated floodplain areas require that DOT coordinate with the City of Milwaukee Zoning office. Examples of floodplain encroachments include but are not limited to: changes to waterway crossings; culvert extensions; changes to road surface elevations and/or side-slopes; temporary causeways; temporary structures; general fill. To ensure compliance with the DOT/DNR Cooperative Agreement [floodplain attachment](#), and intent of Wis. Admin. Code, Chapter NR116, please copy the DNR Transportation Liaison when project related floodplain impact information is shared with the City of Milwaukee zoning office. This helps DNR document that floodplain issues have been sufficiently addressed prior to issuing Final Concurrence.



**Figure 2.** Mapped floodplain is located at the south end of the project limits.

**Storm Water Management & Erosion Control:**

- For projects disturbing an acre or more of land erosion control and storm water measures must adhere to the Wisconsin Pollutant Discharge Elimination System Transportation Construction General Permit (TCGP) for Storm Water Discharges. Coverage under TCGP is required prior to construction. WisDOT should apply for permit coverage by submitting a Notice of Intent (NOI) prior to, or when requesting Final Concurrence. Permit coverage will be issued by DNR with the Final Concurrence letter after design is complete and documentation shows that the project will meet construction and post-construction performance standards. For more information regarding the TCGP you can go to the following link, and click on the “Transportation” tab: <https://dnr.wi.gov/topic/Sectors/Transportation.html>
- All projects require an Erosion Control Plan (ECP) that describes best management practices that will be implemented before, during and after construction to minimize pollution from storm water discharges. Additionally, the plan should address how post-construction storm water performance standards will be met for the specific site. The project design and Erosion Control Implementation Plan (ECIP) must comply with the TCGP in order to receive permit-coverage from the DNR.
- Once the project contract has been awarded, the contractor will be required to outline their implementation of erosion control measures as it relates to the construction project, as well as their construction methods in the ECIP. An adequate ECIP for the project must be developed by the contractor and submitted to this office for review at least 14 days prior to the preconstruction conference. For projects regulated under the TCGP, submit the ECIP as an amendment to the ECP.

**Asbestos:**

A Notification of Demolition and/or Renovation and Application for Permit Exemption, DNR form 4500-113 (chapters NR 406, 410, and 447 Wis. Adm. Code) may be required. Please refer to DOT FDM 21-

5-1 (November 2019) and the DNR's notification requirements web page: <http://dnr.wi.gov/topic/Demo/Asbestos.html> for further guidance on asbestos inspections and notifications. Contact Mark Chamberlain, Air Management Specialist (608) 575-5634, with questions on the form. The notification must be submitted 10 working days in advance of demolition projects, regardless of asbestos quantities. Please refer to WisDOT procedures on asbestos inspection and abatement for supplemental information.

**U.S. Army Corps of Engineers Coordination:**

This project may require a permit from the U.S. Army Corps of Engineers (USACE). Please contact USACE for more details.

**Other:**

All local, state, and federal permits and/or approvals must be obtained prior to commencing construction activities.

The above comments represent the DNR's initial concerns for the proposed project and does not constitute final concurrence. Final concurrence will be granted after further review of refined project plans, Erosion Control Plan, Wetland Impact Tracking Form, Special Provisions, NOI for the TCGP, and additional coordination if necessary. If any of the concerns or information provided in this letter requires further clarification, please contact this office at (414) 750-7495, or email at [Ryan.Pappas@wisconsin.gov](mailto:Ryan.Pappas@wisconsin.gov)

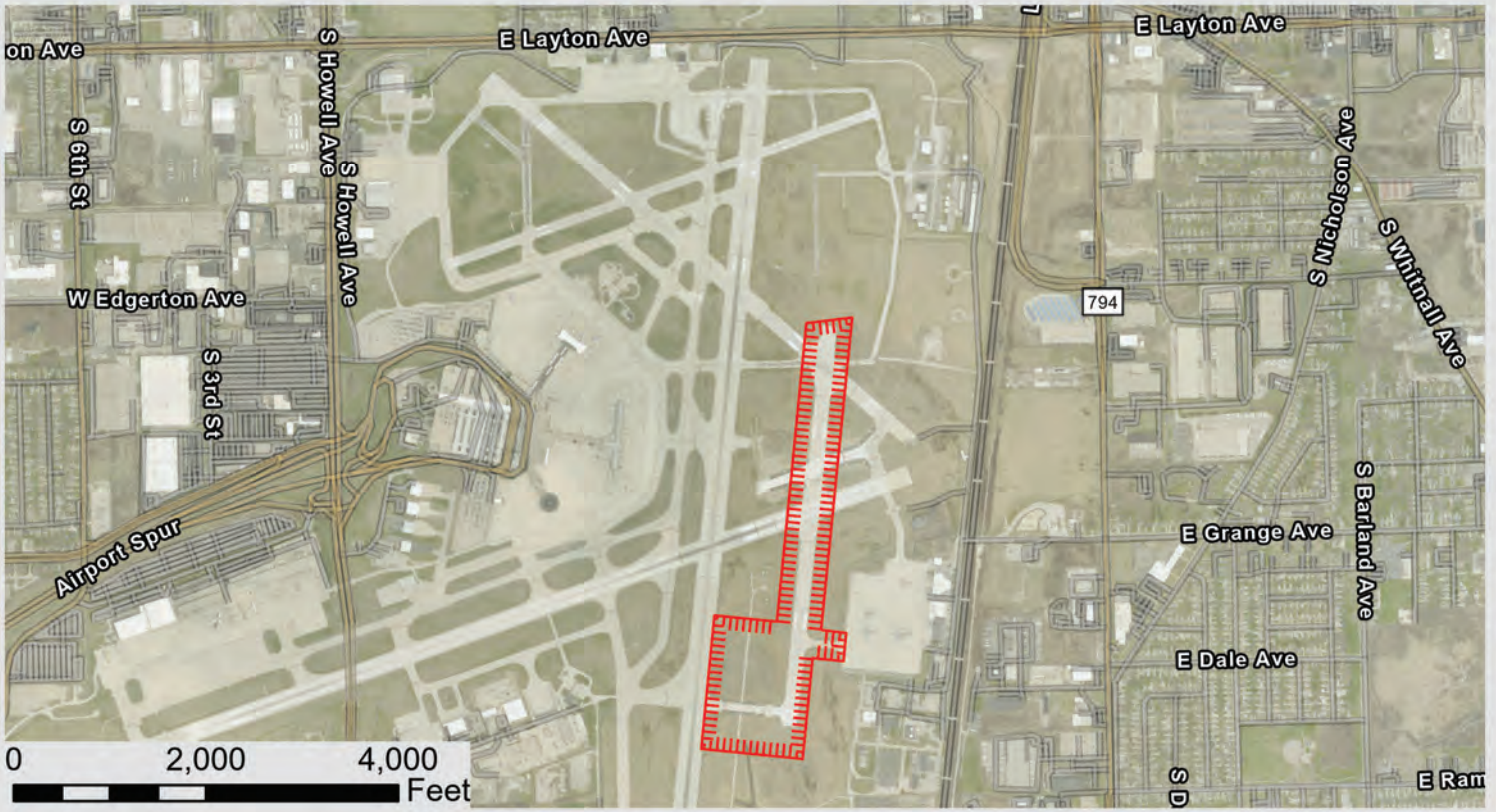
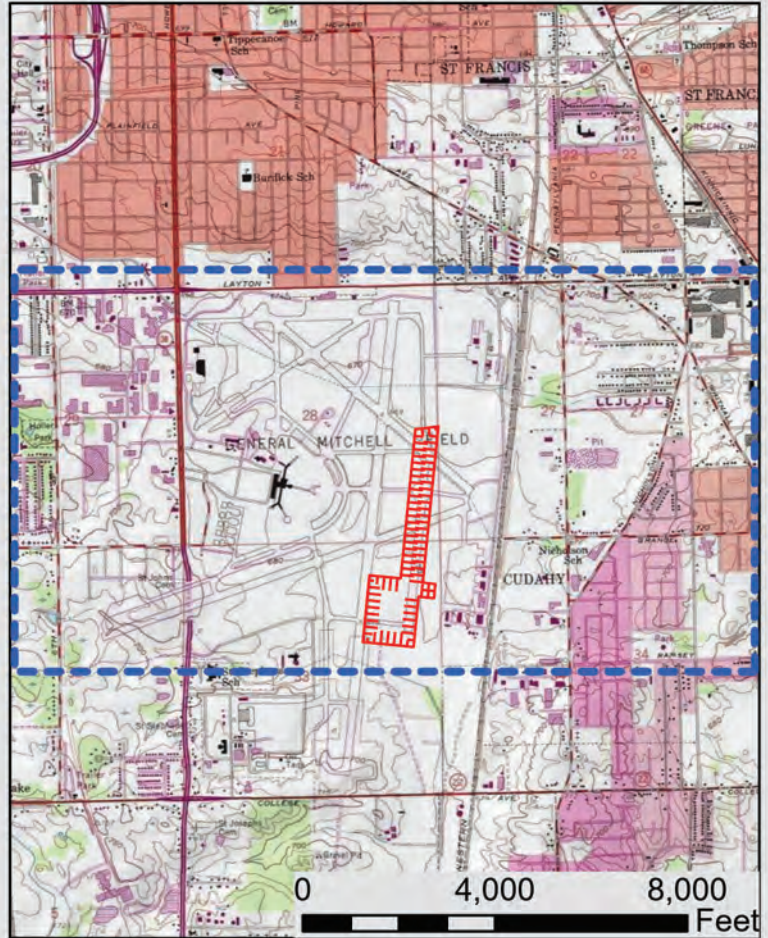
Sincerely,



Ryan Pappas  
Environmental Analysis & Review Specialist

Enclosure: Map

cc: Wendy Hottenstein, WisDOT – BOA [Wendy.Hottenstein@dot.wi.gov](mailto:Wendy.Hottenstein@dot.wi.gov)  
Justin Weiss, General Mitchell International Airport [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com)  
Anthony Raab, General Mitchell International Airport [araab@mitchellairport.com](mailto:araab@mitchellairport.com)



**Westwood**

1 Systems Drive (920) 735-6900  
 Appleton, WI 54914 [www.westwoodps.com](http://www.westwoodps.com)



**MKE RUNWAY 1R-19L REMOVAL  
 LOCATION MAP**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

Project Manager:  
 Project Engineer:  
 Drawn By: JWC  
 Checked By:

Date: 10/17/2023

SCALE:  
 1 in = 2,000 ft  
 PROJECT NO.  
**R3001844.00**  
 FIGURE NO.  
**1**

**WISCONSIN DEPARTMENT OF ADMINISTRATION – COASTAL MANAGEMENT  
PROGRAM (WCMP)**

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## Kaitlyn Wehner

---

**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 3:49 PM  
**To:** kathleen.angel@wisconsin.gov  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project  
**Attachments:** MKE RWY 1R-19L - Wisconsin Coastal Management Program Letter.pdf; Attachment 1 - RWY 1R-19L Location Map.pdf; Attachment 2 - RWY 1R-19L Airport Property Map.pdf; Attachment 3 - RWY 1R-19L Airport Diagram Map.pdf; Attachment 4 - RWY 1R-19L Area of Potential Effects Map.pdf

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226





November 8, 2023

Kathleen Angel

Wisconsin Coastal Management Program

Division of Intergovernmental Relations

(608) 267-7988

*Via Electronic Mail Only to [kathleen.angel@wisconsin.gov](mailto:kathleen.angel@wisconsin.gov)*

RE: Milwaukee General Mitchell International Airport  
Proposed Runway 1R-19L Decommissioning and Removal

Dear Ms. Angel:

General Mitchell International Airport (Airport) is beginning preliminary studies for improvements to the Airport. (See Attachment 1 – Site Location Map & Attachment 2 – Airport Property Map) These proposed improvements include the decommissioning and removal of Runway 1R-19L (Project).

Recently, the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards. Additionally, the proposed project will align the airfield for future development and reduce the operation and maintenance costs of deteriorating pavements.

Currently, Runway 1R-19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 1R-19L primarily services military aircraft capable of operating on a 4,000-foot-long runway. In 2020 a pavement inspection was completed and very poor to fair pavement conditions were identified.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDs.
- Two alternatives to maintain airfield access for the 128<sup>th</sup> WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or





- Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.

We are requesting that you identify any concerns about the proposed project and any additional requirements associated with the Wisconsin Coastal Management Program. Any concerns or requirements will be included in the preliminary environmental assessment. Additionally, you will be included on the distribution list for the preliminary and final environmental assessment. If you would like to receive additional information regarding this proposed project, please contact Justin Weiss at 414-747-6233 or at [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com). Thank you for your assistance.

Sincerely,

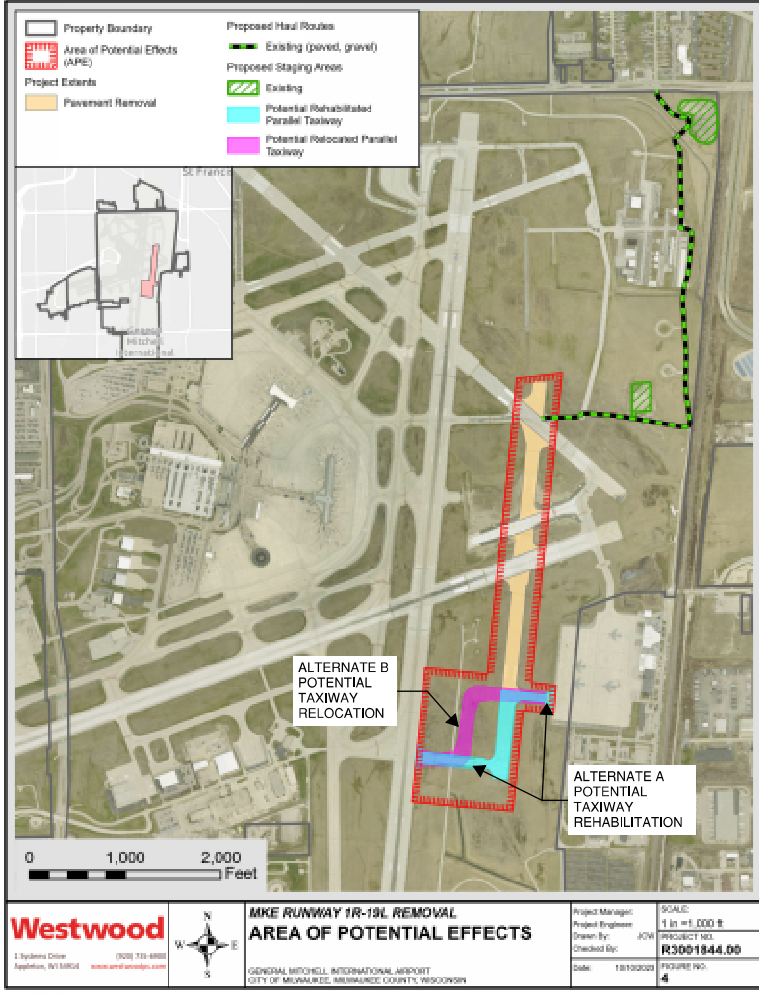
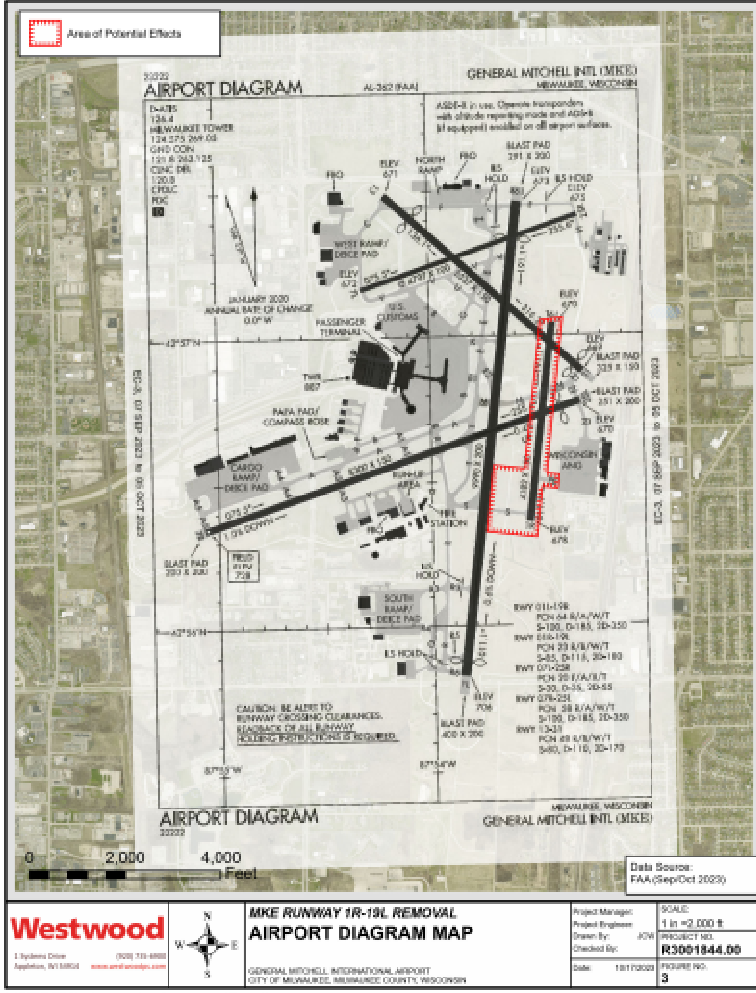
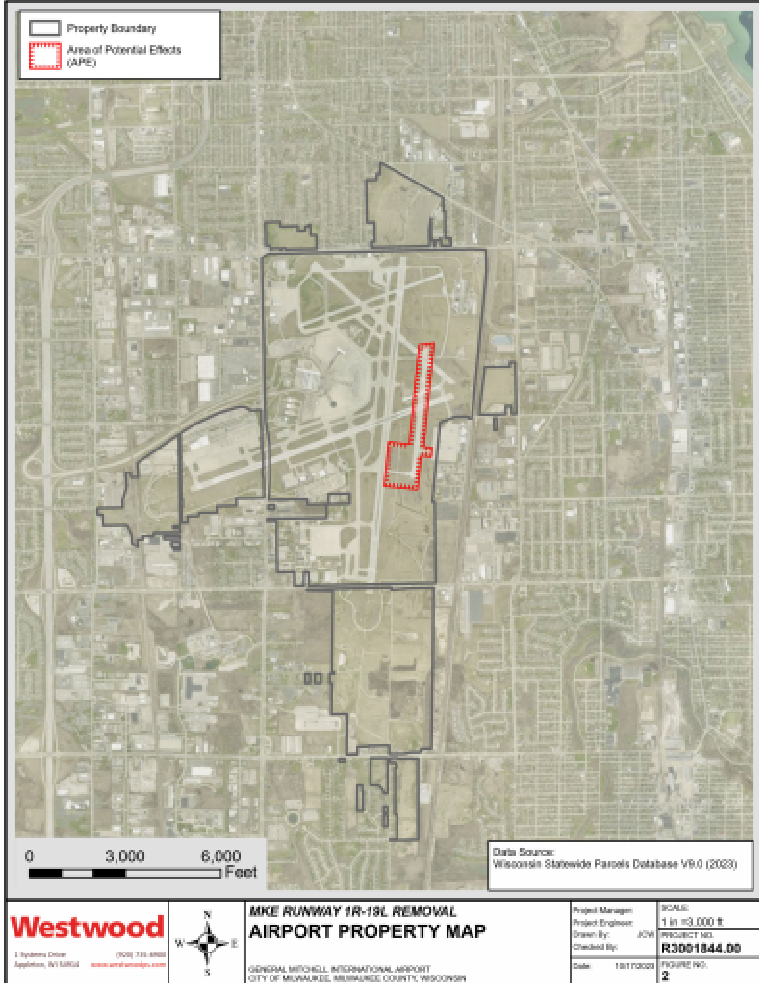
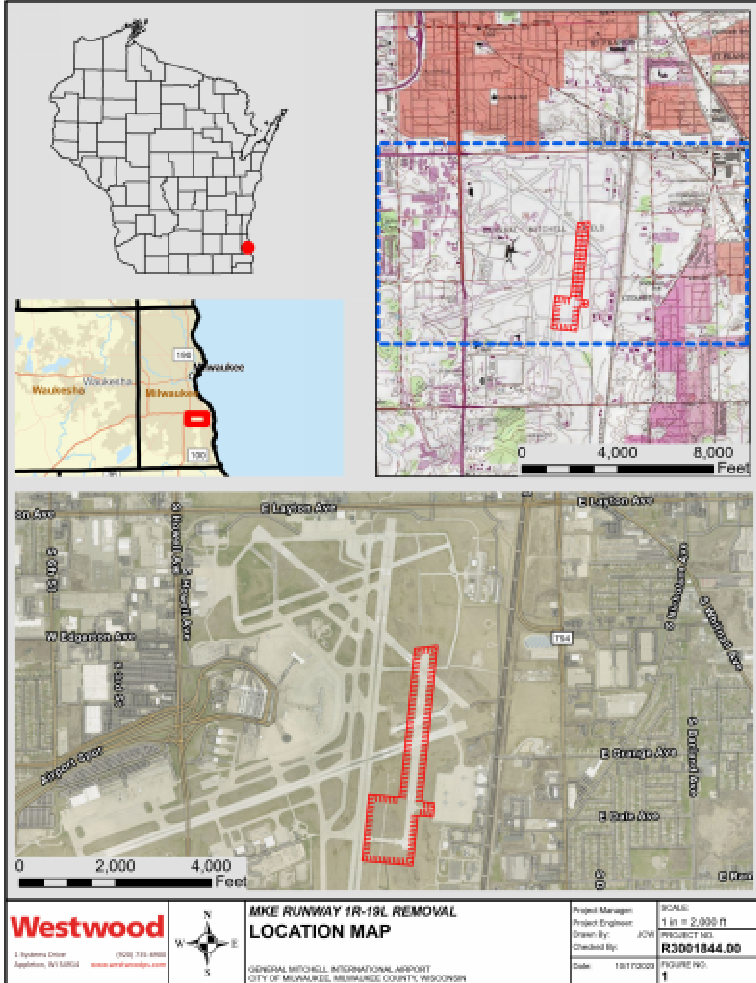
A handwritten signature in blue ink, appearing to read "Christine Turk".

Christine Turk, ACE  
Airport Planning Manager  
General Mitchell International Airport

**Attachments:**

1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects

Cc: Justin Weiss, General Mitchell Airport Project Manager (by email)  
Wendy Hottenstein, WisDOT BOA (by email)  
Mallory Palmer, WisDOT BOA (by email)  
Kaitlyn Wehner, Westwood (by email)



**UNITED STATES ARMY CORPS OF ENGINEERS (USACE)**

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## Kaitlyn Wehner

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**From:** Kaitlyn Wehner  
**Sent:** Friday, December 15, 2023 10:20 AM  
**To:** USACE\_Requests\_WI@usace.army.mil  
**Cc:** cturk@mitchellairport.com; Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; DOT BOA Environmental; Kaitlyn Wehner  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway Decommissioning and Removal Projects  
**Attachments:** RWY 1R-19L EA & RWY 13-31 EA - JD Request Form\_signed.pdf; RWY 1R-19L EA & RWY 13-31 EA Project Mapping.pdf; RWY 1R-19L EA & RWY 13-31 EA WetlandDelineation Report.pdf; MKE RWY 13-31 - USACE Project Review Request.pdf; MKE RWY 1R-19L - USACE Project Review Request.pdf

Hello USACE Brookfield Team,

Westwood on behalf of General Mitchell International Airport is working on an Environmental Assessment for the decommissioning and removal of Runway 1R-19L and a separate Environmental Assessment for the decommissioning and removal of Runway 13-31. The environmental assessments are being performed concurrently and a combined wetland delineation was completed for both proposed project areas.

We are requesting a Jurisdictional Determination for the proposed project areas, attached is the Request for Corps Jurisdictional Determination form, project maps, and the wetland delineation report.

Additionally, preliminary coordination letters describing each project are attached separately. These letters discuss the proposed project undertaking, project location maps, and WIDNR wetland confirmation.

Thank you,

### **Kaitlyn Wehner**

**Airport Engineer**

[kaitlyn.wehner@westwoodps.com](mailto:kaitlyn.wehner@westwoodps.com)

**main** (920)-735-6900  
**office** (920)-830-6183

### **Westwood**

1 Systems Drive  
Appleton, WI 54914

[westwoodps.com](http://westwoodps.com)

(888) 937-5150

## Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: District Name Here

- I am requesting a JD on property located at: 5300 S. Howell Avenue  
(Street Address)  
City/Township/Parish: City of Milwaukee County: Milwaukee State: WI  
Acreage of Parcel/Review Area for JD: 82.844 Acres  
Section: 27, 28, & 33 Township: 06 North Range: 22 East  
Latitude (decimal degrees): 42.948542000 Longitude (decimal degrees): -87.895240862  
(For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- I currently own this property.  I plan to purchase this property.  
 I am an agent/consultant acting on behalf of the requestor.  
 Other (please explain): \_\_\_\_\_
- Reason for request: (check as many as applicable)  
 I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.  
 I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.  
 I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.  
 I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.  
 I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.  
 A Corps JD is required in order to obtain my local/state authorization.  
 I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.  
 I believe that the site may be comprised entirely of dry land.  
 Other: \_\_\_\_\_
- Type of determination being requested:  
 I am requesting an approved JD.  
 I am requesting a preliminary JD.  
 I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.  
 I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

\*Signature: Kaitlyn Wehner Digitally signed by Kaitlyn Wehner  
Date: 2023.12.15 09:06:45-0500 Date: 12/15/2023

- Typed or printed name: Kaitlyn Wehner  
Company name: Westwood Professional Services  
Address: 1N Systems Drive  
Appleton, WI 54914  
Daytime phone no.: 920-830-6183  
Email address: kaitlyn.wehner@westwoodps.com

**\*Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

**Principal Purpose:** The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

**Routine Uses:** This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

**Disclosure:** Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

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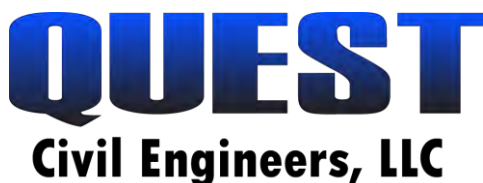
# Wetland Delineation

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## Runway Abandonment Project Runways 1R-19L & 13-31 Milwaukee General Mitchell International Airport (MKE) Milwaukee County, WI

Prepared for: Westwood Professional Services  
Attn: Kaitlyn Wehner  
1 Systems Drive  
Appleton, WI 54914  
(920) 735-6900  
kaitlynwehner@westwoodps.com

Prepared by: Brian Kronstedt



QUEST Civil Engineers, LLC  
320 West Grand Avenue, Suite 302  
Wisconsin Rapids, WI 54495  
Phone: 715-423-3525

[www.questllc.biz](http://www.questllc.biz)

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## 1.0 Executive Summary

### 1.1 Purpose of Delineation

This wetland delineation was prepared for and at the request of Westwood Professional Services who is under contract with Milwaukee General Mitchell Airport (MKE) (**See Figure 1 for Location Map**). This delineation was conducted to assess this property for the presence and location of wetlands to assess if proposed runway removal activities would result in wetland impacts.

The field review for this delineation was conducted by QUEST Civil Engineers, LLC. (QUEST) on September 11, 2023.

## 2.0 Delineator's Qualifications

**Delineated by: Brian Kronstedt – Environmental Specialist for QUEST Civil Engineers, LLC.**

**Qualifications:** Completed the following training sponsored by the Wisconsin Coastal Management Program: Basic Wetland Delineation / Advanced Wetland Delineation / Plant Identification / Hydric Soils

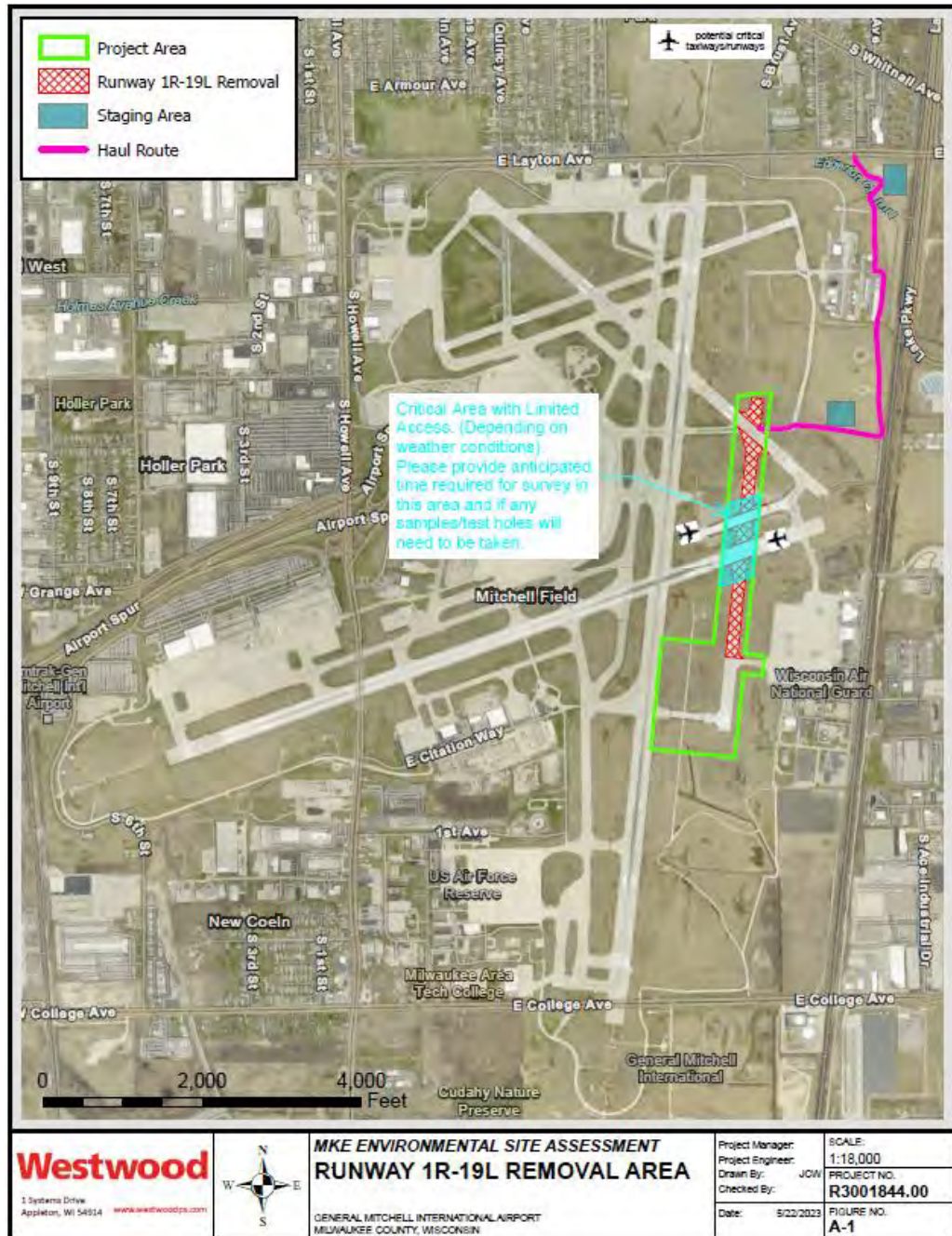
B.S. degree from the University of Wisconsin – Stevens Point, majoring in Biology and Wildlife Management.

23 years of experience performing wetland delineations.

### 3.0 Property Description

#### 3.1 Project Location

This project is located in the city of Milwaukee on the Milwaukee General Mitchel International Airport (MKE), in Milwaukee County, WI (**Figure 3.1-1 and 3.1-2**).



**Figure 3.1-1**

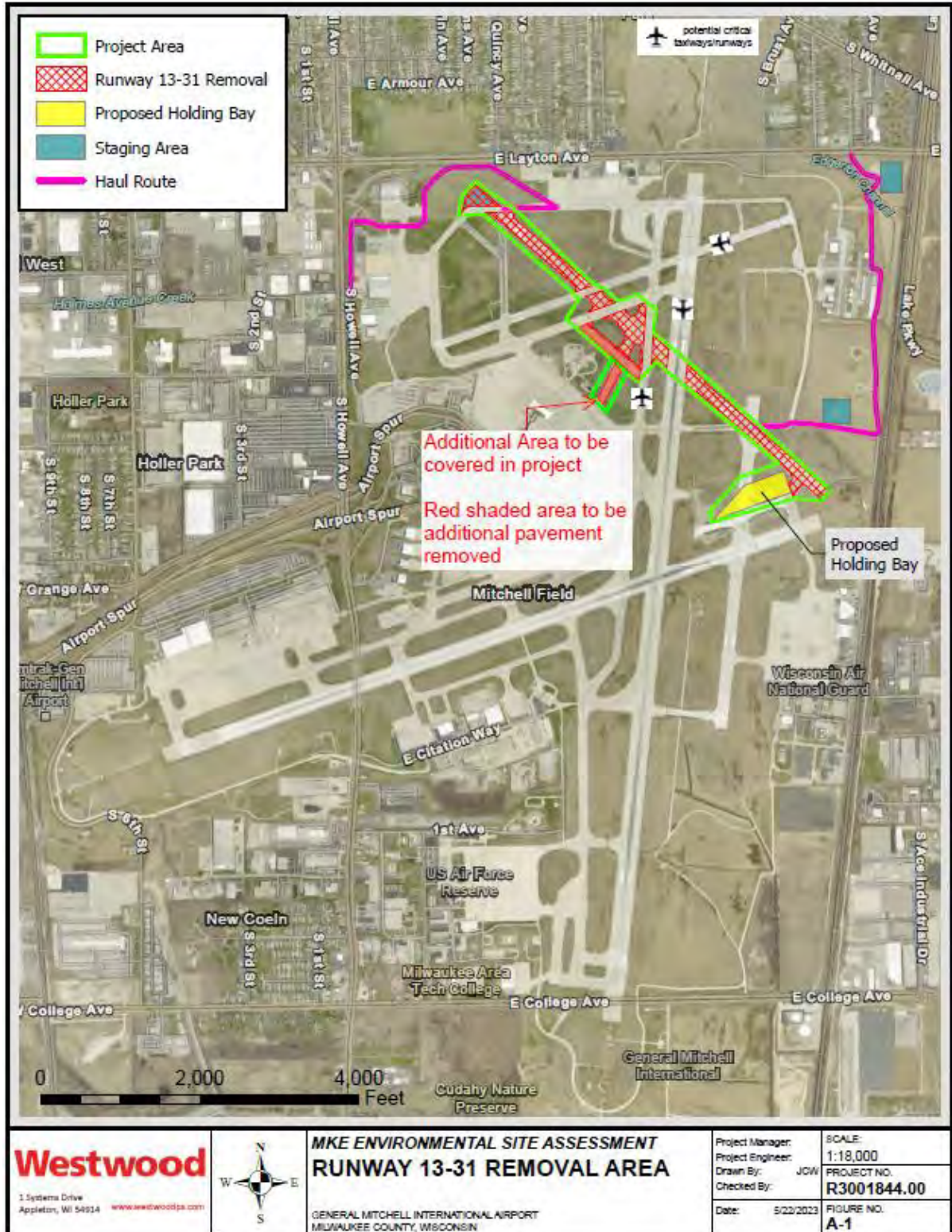


Figure 3.1-2

### 3.2 Area of Review

The Area of Review for this project is all of Runways 1R-19L and 13-31 including their immediate surroundings as shown in lime green linework in **Figure 3.1-1 & 3.1-2**.

### 3.3 Property Description

The entire Area of Review is comprised of the runways itself and manicured lawn surrounding the runway corridor on both sides. All unpaved areas showed evidence of routine mowing with no portions being avoided due to saturated conditions.

## 4.0 Review of Existing Information

### 4.1 NRCS Soils Summary

A review of the NRCS Web Soil Survey mapping revealed only one soil type as being present within the Area of Review (**Figure 4.1-1**).

**Cv – Clayey land**



**Figure 4.1-1**

## 4.2 Wisconsin Wetland Inventory Mapping

The Wisconsin Wetland Inventory (WWI) mapping does not show any wetlands but does show wetland indicators to be present throughout the site (**Figure 4.2-1**).

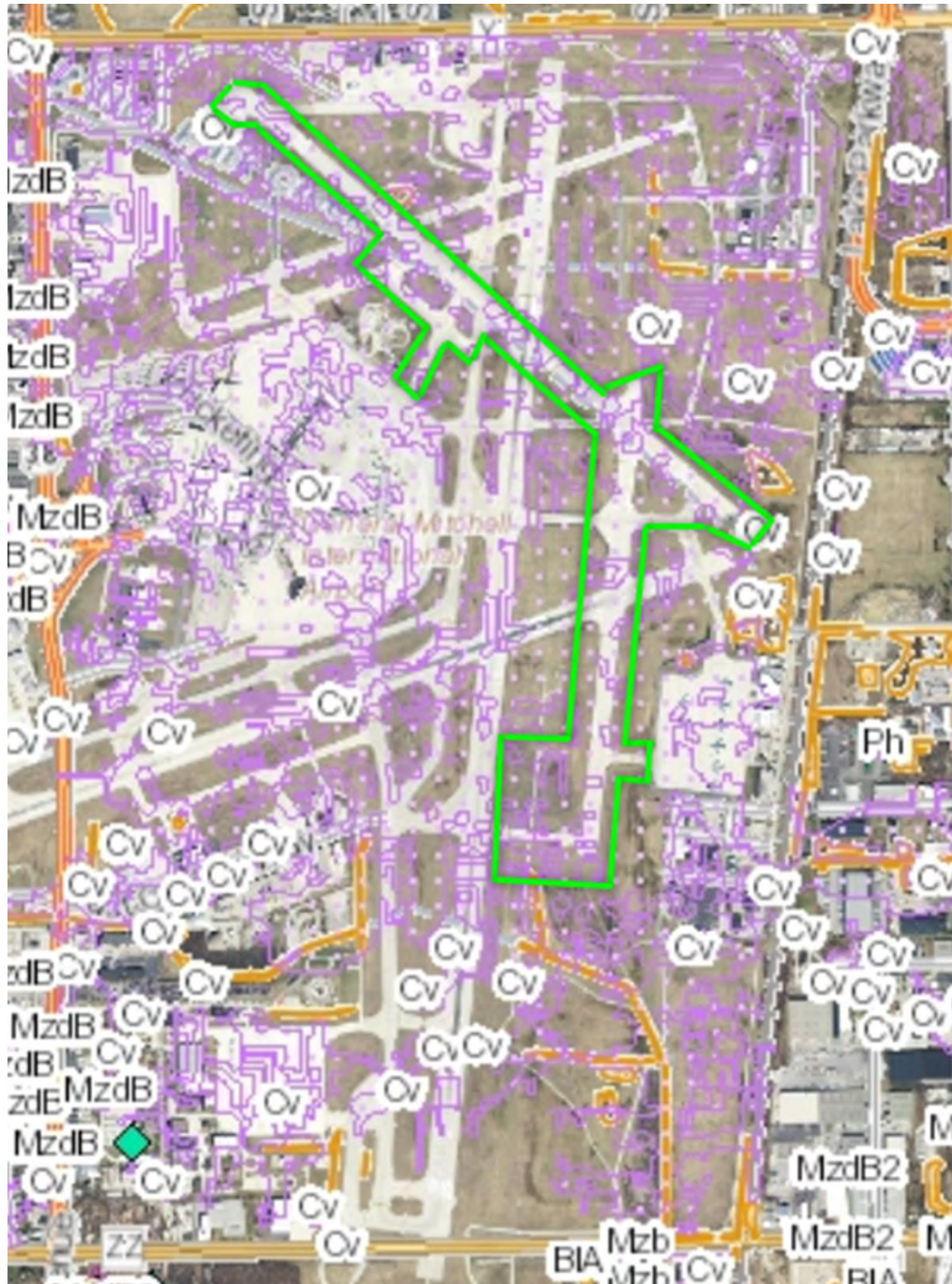
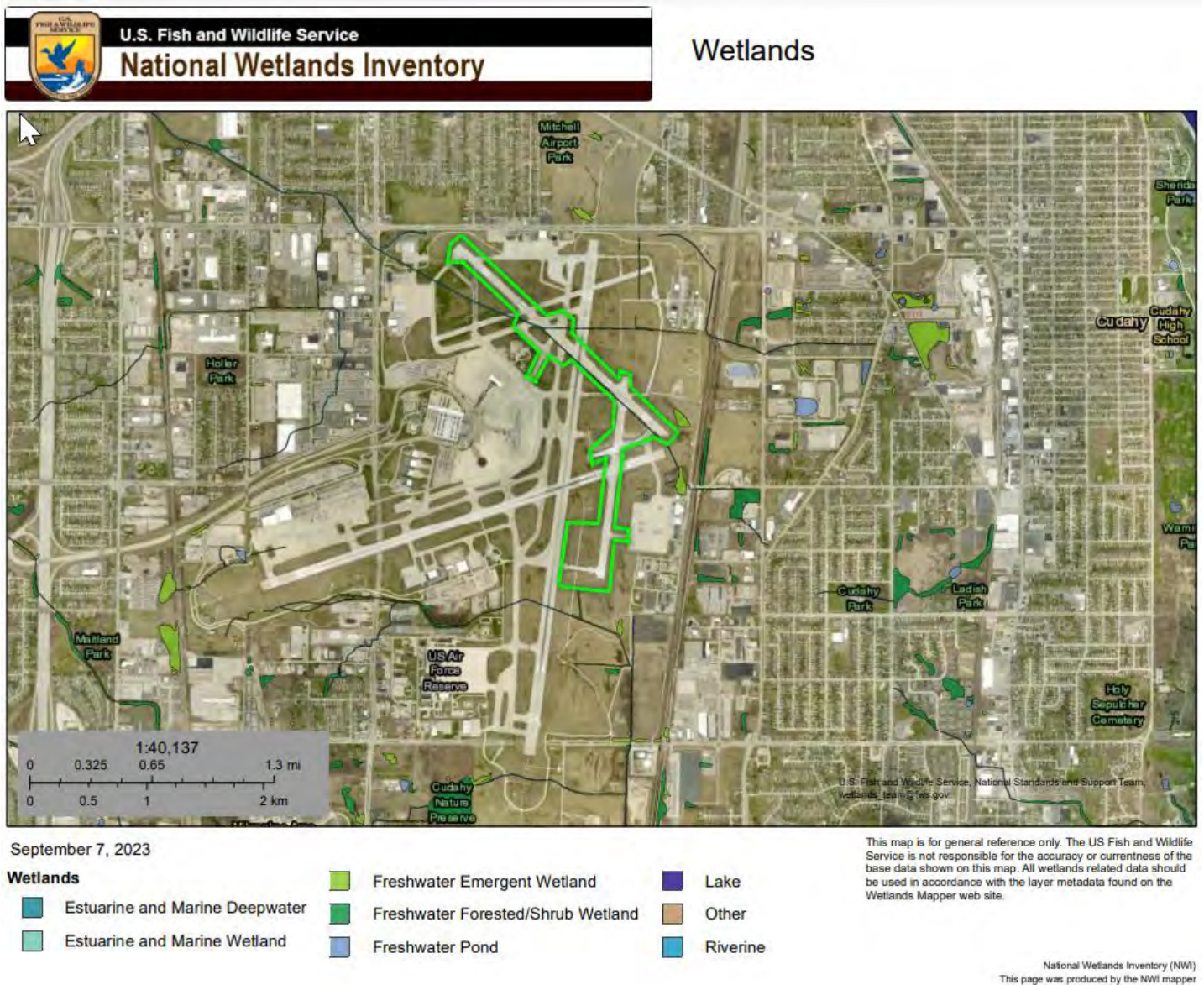


Figure 4.2-1

### 4.3 National Wetland Inventory Mapping

The National Wetland Inventory (NWI) Map mimics that of the Wisconsin's Wetland Inventory and does not show any wetlands to be present within the Area of Review (**Figure 4.3-1**).

<https://www.fws.gov/wetlands/data/mapper.html>



**Figure 4.3-1**

#### 4.4 Topographical Mapping

The topography of the site is very flat. (Figure 4.4-1).



Figure 4.4-1

## 4.6 Antecedent Precipitation

An analysis of precipitation for the three-month period prior to the delineation was conducted and determined that prior precipitation levels for this period were classified as “Dry” for the site (**Table 4.6-1**).

WETS Analysis Worksheet										
Project Name:	MKE Runway Abandonmnet - Runwasy 1R-19L &13-31									
Project Number:	ENV 2023 018 & 019									
Period of Interest:	June-									
Station:	June-Aug									
County:	Milwaukee									
Long-term rainfall records (from WETS table)					Site Determination					
	Month	3 years in 10 less than	Normal	3 years in 10 greater than	Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product	
1st month prior	April	2.40	3.56	4.26	1.82	Normal	2	3	6	
2nd month prior	May	2.44	3.56	4.25	4.33	Dry	1	2	2	
3rd month prior	June	2.86	4.03	4.77	2.60	Dry	1	1	1	
		Sum =	11.15		Sum =	8.75		Sum*** =		
									9	
		*Normal precipitation with 30% to 70% probability of occurrence					Determination: _____ Wet			
									_____ x _____ Dry	
		**Condition Value:		***If sum is:					_____ Normal	
		Dry = 1		6 to 9		then period has been drier than normal				
		Normal = 2		10 to 14		then period has been normal				
		Wet = 3		15 to 18		then period has been wetter than normal				
Precipitation data source:	ACIS - NOAA Regional Climate Centers; <a href="http://agacis.rcc-acis.org">http://agacis.rcc-acis.org</a>									
Reference:	Donald E. Woodward, ed. 1997. <i>Hydrology Tools for Wetland Determination</i> , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.									

**Table 4.6-1**



## 5.0 Methodology

### 5.1 Delineation Methodology

Delineation methods followed that of the Routine On-Site Determination Method described in the U.S. Army Corps of Engineer's "Federal Manual for Identifying and Delineating Jurisdictional Wetlands" (1987 Edition) as well as the Northcentral and Northeast Interim Regional Supplement to the 1987 manual.

Field review methodology consisted of driving and walking the runway looking for hydric indicators. The entire Area of Review was documented using video in case an off site review was preferred by the Department due to the complexities of accessing the Area of Review due to aviation traffic and obtaining access to the site. These videos can be made available upon request.

In attempt to minimize the amount of time spent potentially disrupting aviation traffic, an extensive desktop review was conducted prior to the field review. This review focused on identifying areas with the highest probability of having wetlands present using WWI, aerial photography, historical aerial photography and topographical mapping. Field review then focused on assessing these areas to determine if wetlands were or were not present.

A total of 4 sample plot locations were assessed. Sample Plot 1 represented an area of suspected saturation that appeared visible on the air photos. Field review determined this was not a wetland and that the darker coloration observed on the air photos was due to the presence of witches broom grass (*Panicum capillare*) FAC within that location. Although this location indicated a slightly less dry condition than elsewhere in the Area of Review, an abundance of FACU species were noted throughout the stand of witches broom.

Sample Plot 2 although technically outside of the Area of Review, was conducted to verify if the mapped wetland shown on the WWI was present due to its proximity to the Area of Review. No soils investigation was conducted at this sample plot due to its proximity to instrument lighting and no locates being marked. It was determined that this area did not meet the criteria of being a wetland and that no wetland was present in the area shown on the WWI.

Sample Plot 3 was conducted due to darker coloration shown on the air photos. It was discovered that this area is a slight depressional area with a stormwater inlet (manhole) present. This area was also deemed not to meet the criteria of being a wetland. Both dandelion and yellow hawkweed were present throughout the depression surrounding the inlet.

Sample Plot 4 represents the wetland boundary associated with a ditchline on the south end of the Area of Review for Runway 1R-19L. Due to rain falling prior to and during the field review, the water level within the ditchline appeared to be higher than normal. Due to standing water conditions, no wetland soils investigation was conducted. A soils pit was assessed on the upland side of the wetland boundary. The wetland boundary at this location was distinct, follows the contour of the ditchline and extends southerly beyond the Area of Review.

## 6.0 Findings and Conclusions

### 6.1 Vegetation Communities

The uplands within the Area of Review are limited to manicured turf grass. No shrubs or trees are present.

### 6.2 Hydrology

Hydrology of the site is primarily related to proximity to groundwater. Runoff within delineated wetlands associated with the ditchline near 1R-19L flows in a southeasterly direction.

### 6.3 Wetland Determination

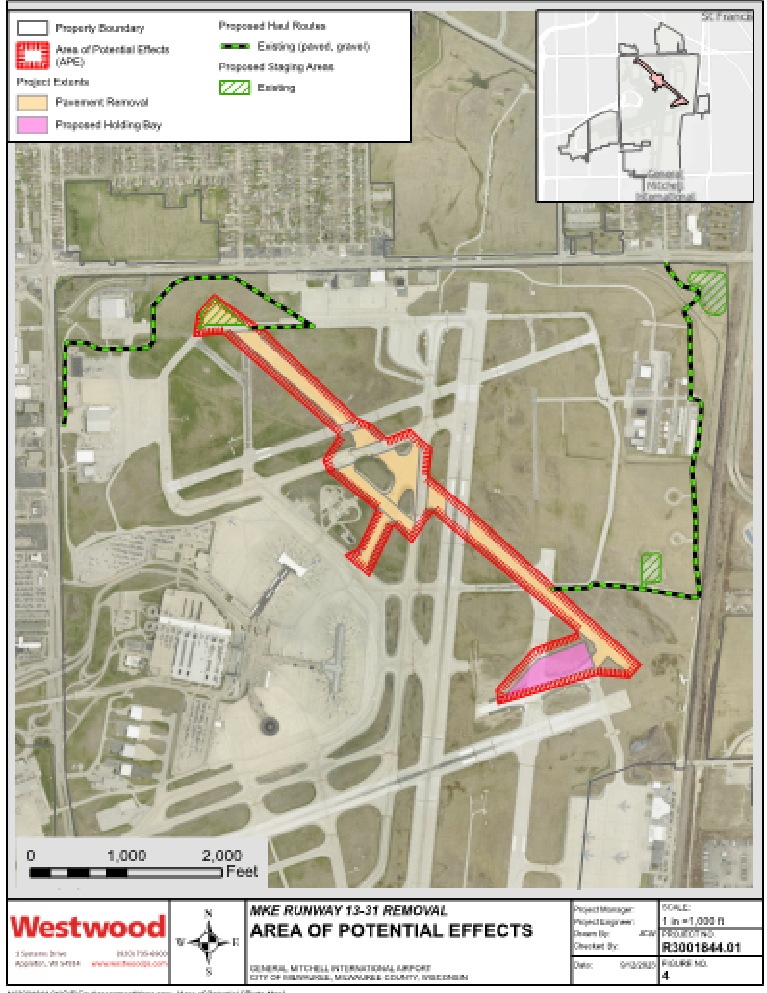
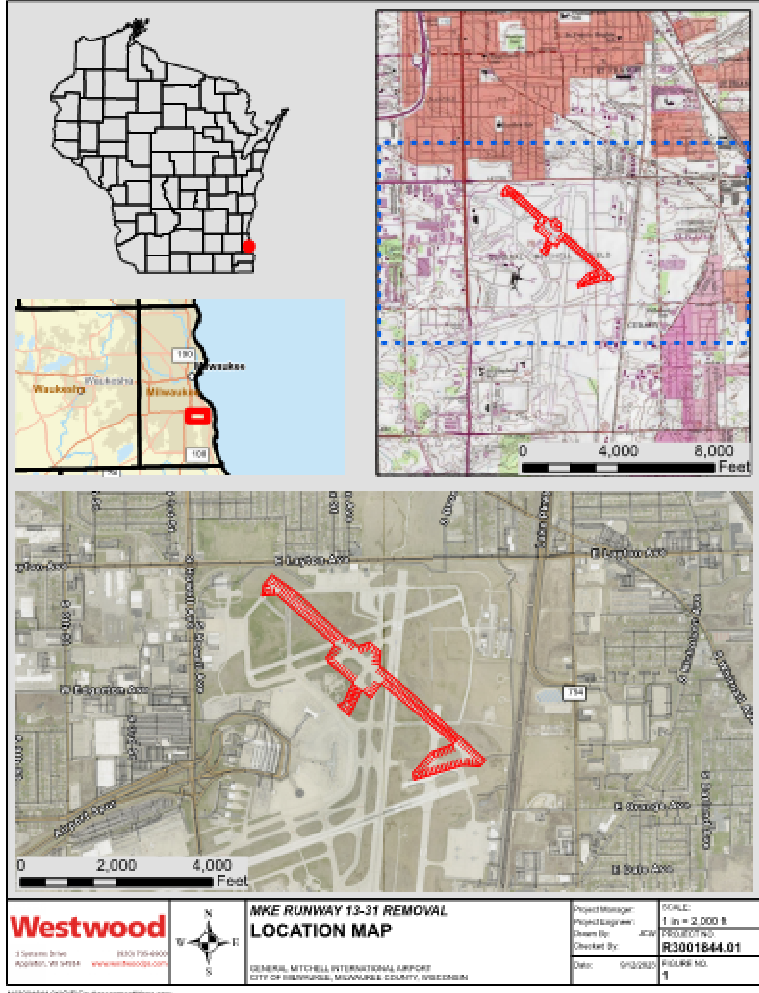
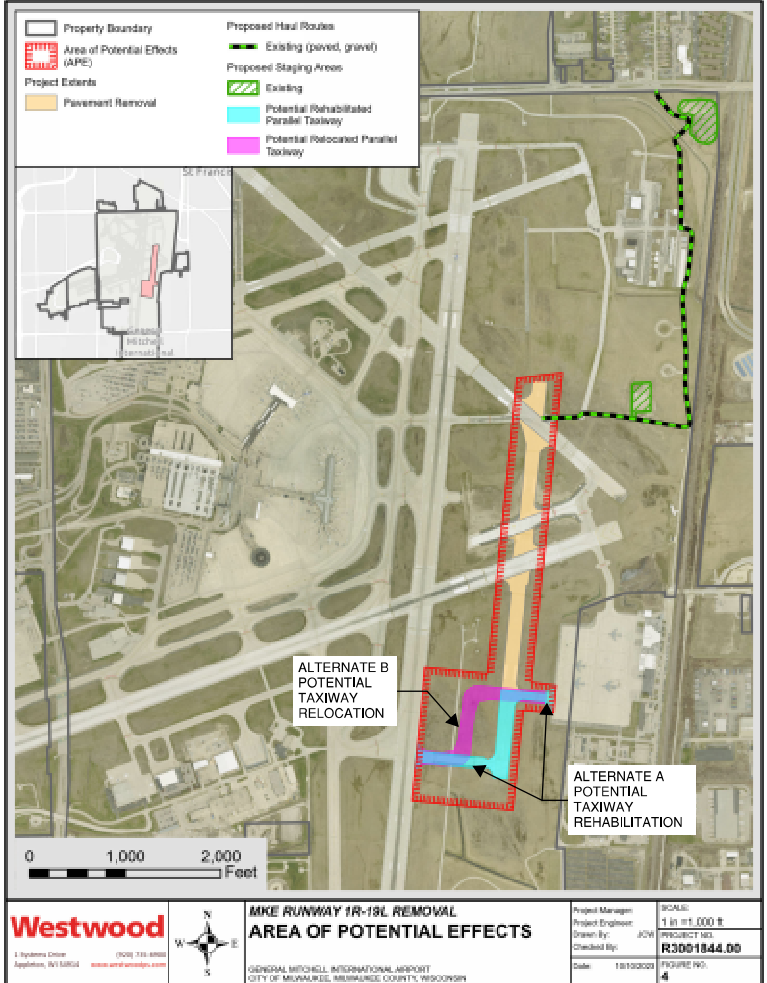
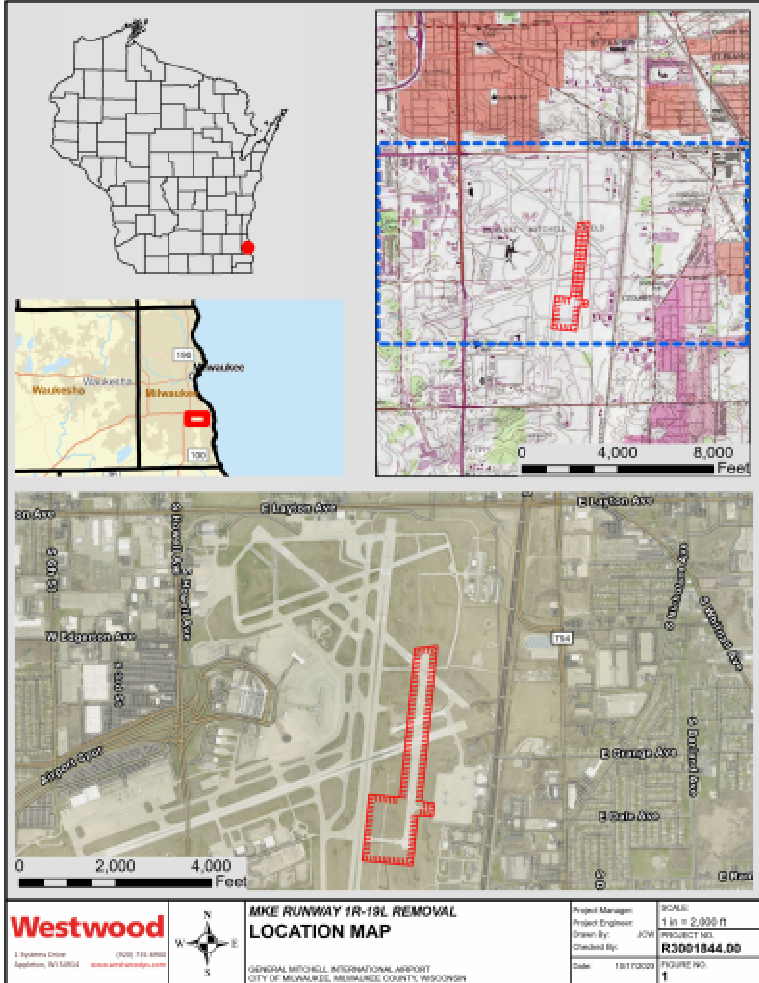
This delineation determined the presence of just one wetland area within the Area of Review. This wetland is located near the south end of the Area of Review for Runway 1R-19L. The wetland boundary is confined to the extent of the ditchline. The boundary is distinct and follows the contour of the ditch that then extends southerly beyond the Area of Review. (Figure 6.3-1).



Figure 6.3-1

## 7.0 Bibliography

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- Wisconsin State Herbarium, University Wisconsin – Madison, WisFlora: Wisconsin Vascular Plant Species, <http://www.botany.wisc.edu/wisflora/>
- United States Department of Agriculture – Natural Resource Conservation Service, Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/>
- Wisconsin Department of Natural Resources, WDNR Webview, <http://dnrmaps.wisconsin.gov/img/imf.jsp?site=webview>



December 15, 2023

US Army Corps of Engineers (USACE)  
Brookfield Office  
250 North Sunnyslope Road, Suite 296  
Brookfield, WI 53005  
*Via Electronic Mail Only to USACE\_Requests\_WI@usace.army.mil*

RE: Milwaukee General Mitchell International Airport  
Proposed Runway 1R-19L Decommissioning and Removal

Dear USACE Brookfield Team:

General Mitchell International Airport (Airport) is beginning preliminary studies for improvements to the Airport. (See Attachment 1 – Site Location Map & Attachment 2 – Airport Property Map) These proposed improvements include the decommissioning and removal of Runway 1R-19L (Project).

Recently, the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards. Additionally, the proposed project will align the airfield for future development and reduce the operation and maintenance costs of deteriorating pavements.

Currently, Runway 1R-19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 1R-19L primarily services military aircraft capable on operating on a 4,000-foot-long runway. In 2020 a pavement inspection was completed, very poor to fair pavement conditions were identified.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDS.
- Two alternatives to maintain airfield access for the 128th WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or
  - Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.

A combined wetland delineation was performed at the proposed location for the Runway 13-31 removal study and the study for the removal of Runway 1R-19L was submitted to the Wisconsin Department of Natural Resources. The delineation identified wetlands present in a ditch line that may be impacted if the proposed project moves forward with implementation. (See Attachment 5 – Wetland Delineation Confirmation)

The proposed project is located within airport property, specifically in Sections 28 and 33 of Township 06 North, Range 22 East. The project area is currently pavement and mowed grass fields with no structures. (See Attachment 6 – Site Photographs)

We are requesting a Jurisdictional Determination for the proposed project areas (attached separately via email). Additionally, we are requesting that you identify any concerns the US Army Corps of Engineers may have regarding the proposed project. Any concerns or comments will be included in the preliminary environmental assessment. Additionally, you will be included on the distribution list for the preliminary and final environmental assessments. If you would like to receive additional information regarding this proposed project, please contact Justin Weiss at 414-747-6233 or at [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com) or Kaitlyn Wehner at 920-830-6183 or at [Kaitlyn.wehner@westwoodps.com](mailto:Kaitlyn.wehner@westwoodps.com). Thank you for your assistance.

Sincerely,

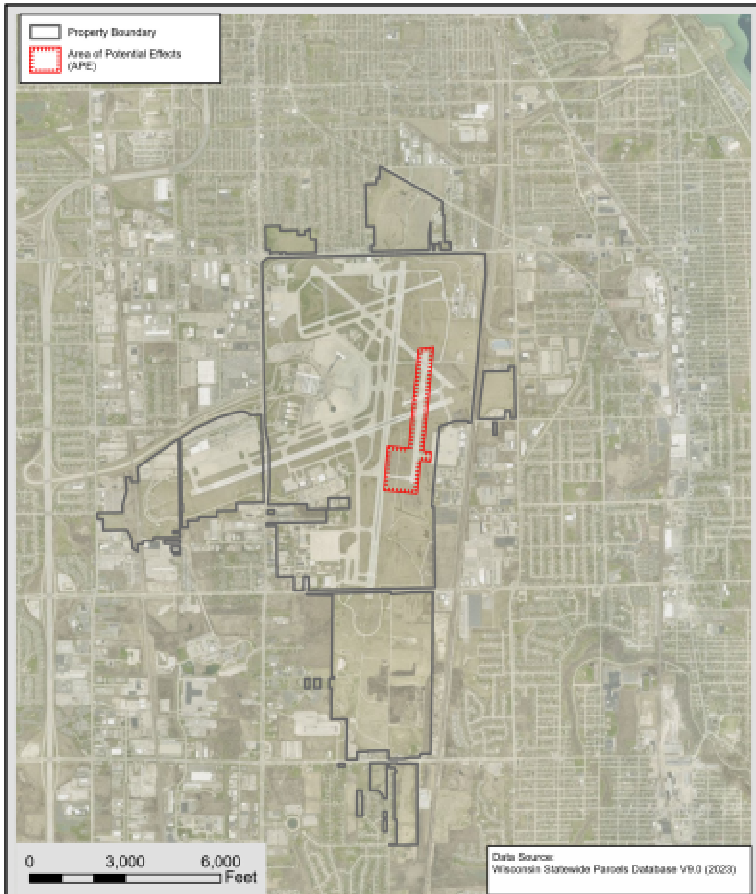


Kaitlyn Wehner  
*Airport Engineer*  
*Westwood Professional Services*

Attachments:

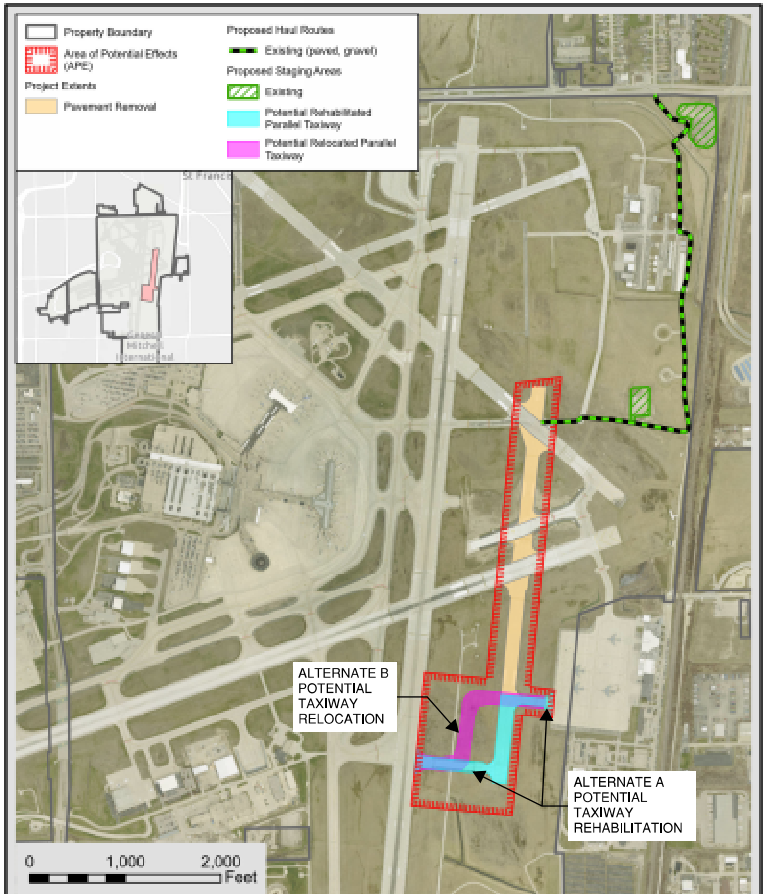
1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects
5. Wetland Delineation Confirmation
6. Site Pictures

Cc: Christine Turk, General Mitchell Airport – Airport Planning Manager (by email)  
Justin Weiss, General Mitchell Airport - Project Manager (by email)  
Wendy Hottenstein, WisDOT BOA (by email)  
Mallory Palmer, WisDOT BOA (by email)



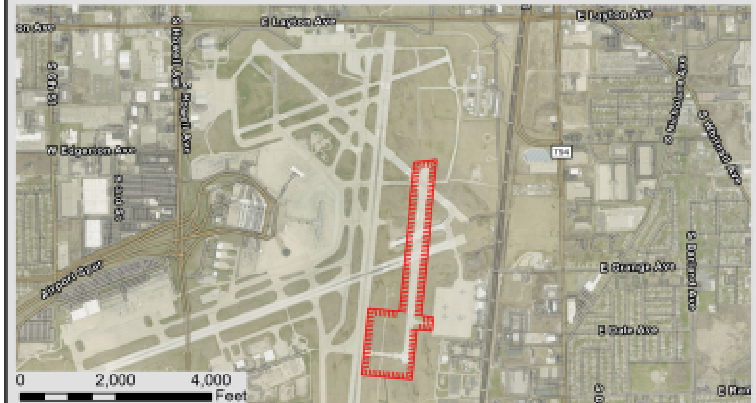
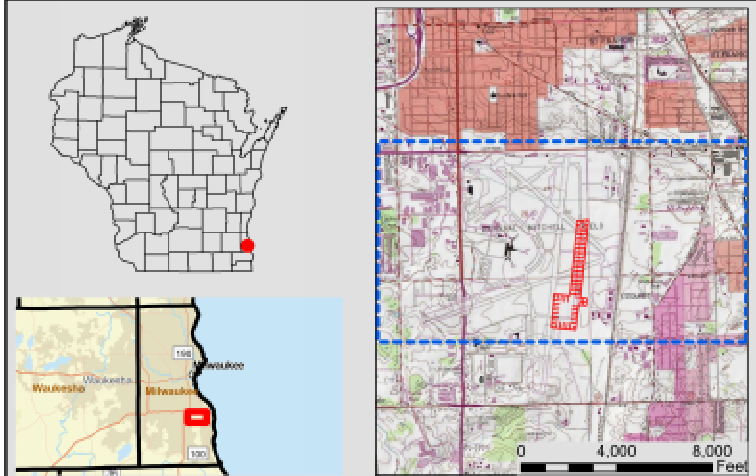
		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT PROPERTY MAP</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 3,000 ft PROJECT NO: <b>R3001844.00</b> Date: 10/17/2023 FIGURE NO: <b>2</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN			

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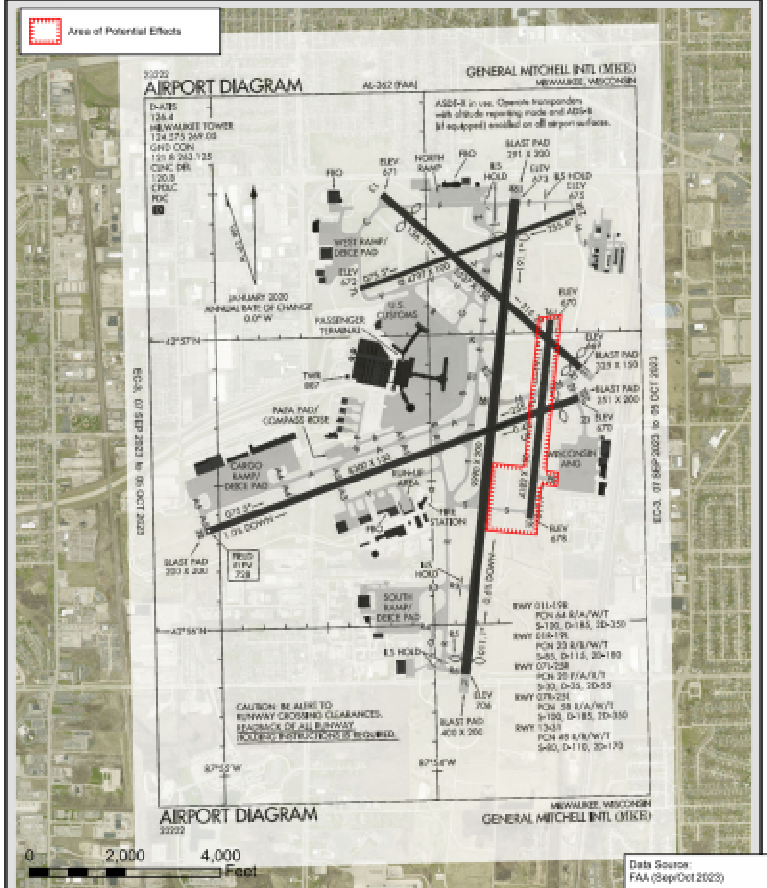
		<b>MKE RUNWAY 1R-19L REMOVAL AREA OF POTENTIAL EFFECTS</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 1,000 ft PROJECT NO: <b>R3001844.00</b> Date: 10/17/2023 FIGURE NO: <b>4</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN			

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		<b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b> Date: 10/17/2023 FIGURE NO: <b>1</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN			

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		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b> Date: 10/17/2023 FIGURE NO: <b>3</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN			

File: 10/17/23 09:23:23\Projects\mke\mke\figs - Copy.aprx (Airport Diagram Map)  
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State of Wisconsin  
 DEPARTMENT OF NATURAL RESOURCES  
 1027 W St Paul Ave  
 Milwaukee WI, WI, 53233

Tony Evers, Governor  
 Adam N. Payne, Secretary  
 Telephone 608-266-2621  
 Toll Free 1-888-936-7463  
 TTY Access via relay - 711



09/28/2023 WIC-SE-2023-41-03089

Justin Weiss  
 General Mitchell International Airport  
 [sent electronically]

RE: Wetland Delineation Confirmation for "MKE Runways 1R-19L & 13-31" located in NW 1/4, SE 1/4, Section 28, Township 06N, Range 22E, in the City of Milwaukee, Milwaukee County

Dear Justin Weiss

We have reviewed the wetland delineation report from Quest Civil Engineers, LLC prepared for the above-mentioned site. This letter will serve as confirmation that the wetland boundaries shown on the enclosed wetland delineation figure are acceptable. This finding is based upon a detailed report review and interview with the delineator. Any filling or grading within these areas may require DNR approvals. Our wetland confirmation is valid for five years. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

In order to comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at calvin.lawrence@wisconsin.gov).

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization, to comply with the state's Endangered Species Law. To ensure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <https://dnr.wi.gov/topic/ERR/Review/Review.html>. The Endangered Resources Program will provide a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

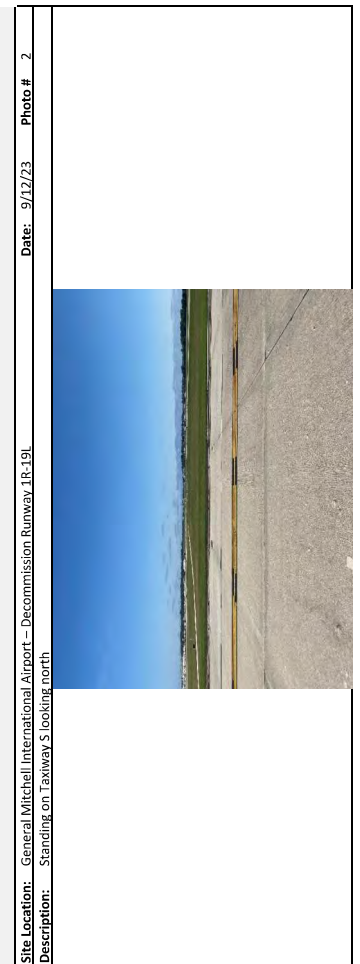
In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

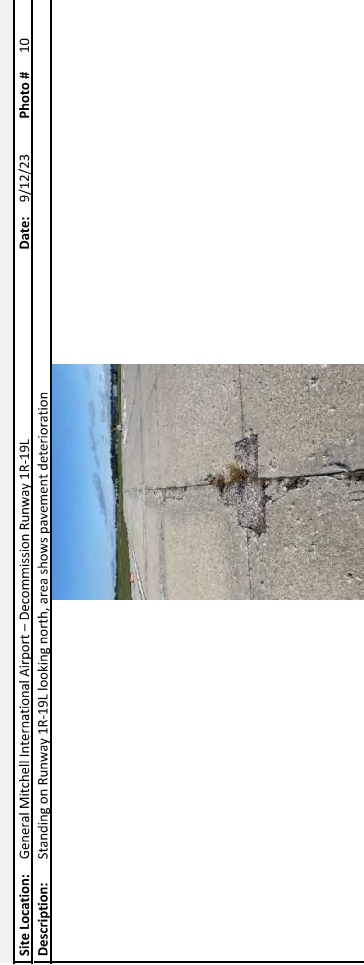
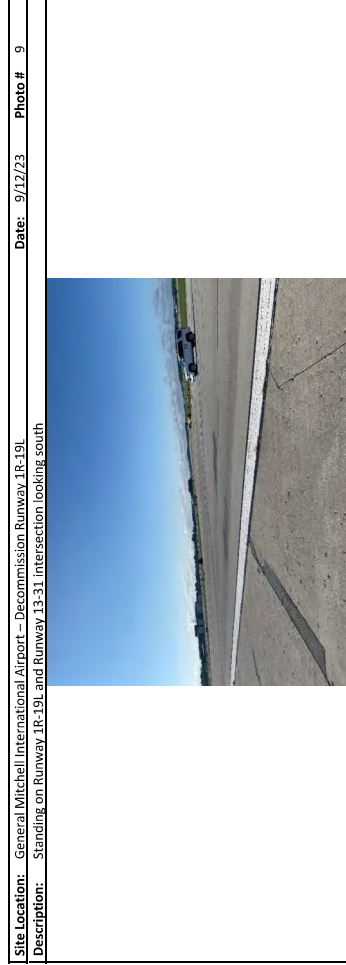
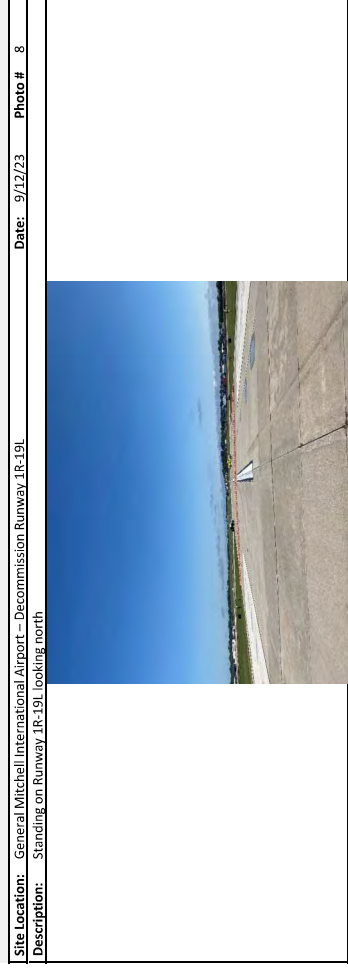
If you have any questions, please call me at (414) 306-6760 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely, *Kara Brooks*  
 Kara Brooks  
 Wetland Identification Specialist

Enclosures: Project Location Figure  
 Wetland Delineation Figure

Email CC: USACE Project Manager  
 Brian Krostedt, Quest







**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT  
332 MINNESOTA STREET, SUITE E1500  
ST. PAUL, MN 55101-1323

12/19/2023

Regulatory File No. MVP-2007-01108-LAH

**THIS IS NOT A PERMIT**

Kaitlyn Wehner  
Westwood Professional Services  
1N Systems Dr  
Appleton, WI 54914

To Whom It May Concern:

We have received your submittal described below. You may contact the Project Manager with questions regarding the evaluation process. The Project Manager may request additional information necessary to evaluate your submittal.

File Number: MVP-2007-01108-LAH

Applicant:

Project Name: AJD Milwaukee Mitchell International Airport Proposed Runway  
Decommissioning and Removal Projects

Project Location: Section 9 of Township 5 N, Range 22 E, Milwaukee County, Wisconsin  
(Latitude: 42.9443430756561; Longitude: -87.898156636076)

Received Date: 12/15/2023

Project Manager: Leah Huff  
(651) 318-9382  
Leah.A.Huff@usace.army.mil

Additional information about the St. Paul District Regulatory Program can be found on our web site at <http://www.mvp.usace.army.mil/missions/regulatory>.

Please note that initiating work in waters of the United States prior to receiving Department of the Army authorization could constitute a violation of Federal law. If you have any questions, please contact the Project Manager.

Thank you.

U.S. Army Corps of Engineers  
St. Paul District  
Regulatory Branch

## Kaitlyn Wehner

---

**From:** Kaitlyn Wehner  
**Sent:** Wednesday, January 10, 2024 9:40 AM  
**To:** Huff, Leah A CIV CEMVP  
**Subject:** RE: 2007-01108-LAH AJD Milwaukee Mitchell International Airport Proposed Runway Decommissioning and Removal Projects

Leah,

That sounds good and we will plan on continuing coordination regarding the wetland area the once the plans are more developed and identify if impacts are avoided.

Thank you very much!

### Kaitlyn Wehner

**Airport Engineer**

[kaitlyn.wehner@westwoodps.com](mailto:kaitlyn.wehner@westwoodps.com)

**main** (920)-735-6900

#### Westwood

1 Systems Drive  
Appleton, WI 54914

---

**From:** Huff, Leah A CIV CEMVP <Leah.A.Huff@usace.army.mil>  
**Sent:** Wednesday, January 10, 2024 9:23 AM  
**To:** Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>  
**Subject:** RE: 2007-01108-LAH AJD Milwaukee Mitchell International Airport Proposed Runway Decommissioning and Removal Projects

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Kaitlyn,

We do not provide affirmative jurisdictional determinations. So, as far as the AJD request is concerned, that will be withdrawn and the permit process will continue in its place once you have those plans ready for review. Again, the proposed plans don't presently seem to have a large amount of impacts to that wetland/waterway (potentially avoidable all-together), therefore there may be no need to submit a preconstruction notification (application) to the Corps if proposed impacts are below those thresholds highlighted and within the RGP-Transportation Category 2 guidelines.

Thank you,

Leah Huff  
Regulatory Specialist  
US Army Corps of Engineers  
St. Paul District, Regulatory Division  
East Wisconsin Branch  
(651) 318-9382

---

**From:** Kaitlyn Wehner <[Kaitlyn.Wehner@westwoodps.com](mailto:Kaitlyn.Wehner@westwoodps.com)>  
**Sent:** Wednesday, January 10, 2024 9:14 AM  
**To:** Huff, Leah A CIV CEMVP <[Leah.A.Huff@usace.army.mil](mailto:Leah.A.Huff@usace.army.mil)>  
**Subject:** [Non-DoD Source] RE: 2007-01108-LAH AJD Milwaukee Mitchell International Airport Proposed Runway Decommissioning and Removal Projects

Thank you Leah!

I will be sure to include this in the Environmental Assessments and will share our Preliminary EA with you and the general inbox once distributed.

I assume that once the determination is completed, we will be getting a notification on that as well?

Thank you,  
Kaitlyn

**Kaitlyn Wehner**  
**Airport Engineer**  
kaitlyn.wehner@westwoodps.com

**main** (920)-735-6900  
**office** (920)-830-6183  
**cell** (920)-238-1164

**Westwood**  
1 Systems Drive  
Appleton, WI 54914

**westwoodps.com**  
(888) 937-5150

---

**From:** Huff, Leah A CIV CEMVP <[Leah.A.Huff@usace.army.mil](mailto:Leah.A.Huff@usace.army.mil)>  
**Sent:** Wednesday, January 10, 2024 8:55 AM  
**To:** Kaitlyn Wehner <[Kaitlyn.Wehner@westwoodps.com](mailto:Kaitlyn.Wehner@westwoodps.com)>  
**Subject:** 2007-01108-LAH AJD Milwaukee Mitchell International Airport Proposed Runway Decommissioning and Removal Projects

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good morning Kaitlyn,

I have attached the Regional General Permit – Transportation guidelines with Category 2: Modification – Linear Transportation section thresholds highlighted as we discussed. Please feel free to reach out to me directly with any additional questions as your project plans get developed.

Thank you,

Leah Huff  
Regulatory Specialist  
US Army Corps of Engineers

St. Paul District, Regulatory Division  
East Wisconsin Branch  
(651) 318-9382



US Army Corps  
of Engineers  
St. Paul District

## DEPARTMENT OF THE ARMY

### TRANSPORTATION REGIONAL GENERAL PERMIT

PERMIT: Transportation Regional General Permit

ISSUING OFFICE: U.S. Army Corps of Engineers, St. Paul District

EFFECTIVE DATE: December 13, 2023

EXPIRATION DATE: February 19, 2028

#### A. AUTHORIZATION AND APPLICABILITY

Regulated activities conducted in accordance with the terms and conditions of the Transportation Regional General Permit (RGP or permit) are authorized in the States of Wisconsin and Minnesota and on Indian Reservations in Wisconsin and Minnesota. Certain regulated activities require an applicant to submit pre-construction notification (PCN) and receive written St. Paul District Corps of Engineers Regulatory Branch (Corps) verification prior to commencing work. Refer to the appropriate sections of this permit for a description of RGP procedures, eligible activities, conditions, exclusions, and application instructions.

1. Regulatory Authorities: Section 404 of the Clean Water Act (33 U.S.C. 1344, Section 404) for discharges of dredged and fill material into waters of the US, and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403, Section 10) for work and structures that are located in, under, or over any navigable water of the US. Activities subject to Section 404 and Section 10 regulatory requirements are hereafter referred to as regulated activities.
2. Exclusions: The following activities are INELIGIBLE for Transportation RGP authorization:
  - a. Regulated activities that would divert more than 10,000 gallons per day of surface or ground water into or out of the Great Lakes Basin.
  - b. Regulated activities that may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.
  - c. Regulated activities eligible for authorization under a valid Corps Special Area Management Plan (SAMP) general permit, see <http://www.mvp.usace.army.mil/Missions/Regulatory/Permitting-Process-Procedures/> for more information on SAMPs.
  - d. Regulated activities which would adversely affect public water supplies.
3. Expiration: Unless otherwise specified in the Corps letter verifying a project complies with the terms and conditions of this RGP, the time limit for completing work authorized by the permit ends upon the expiration date of the RGP. Activities authorized under this RGP that have commenced construction or are under contract to commence construction in reliance upon this RGP, will remain authorized provided the activity is completed within 12 months of the date of the RGP expiration, suspension, or revocation; whichever is sooner.
4. Section 401 Water Quality Certification: Where Section 404 activities are proposed, no RGP authorization is valid until a project proponent obtains a Clean Water Act Section 401 water quality certification (401 certification) or waiver from the appropriate water quality certifying agency; see general condition 25 in Section F below. In addition, some RGP authorizations may be subject to project-specific special conditions that will be specified in the Corps verification letter. This RGP does not obviate the need for other necessary federal, state, tribal, or local authorizations or permits.

St. Paul District Corps of Engineers, Regulatory Division  
Transportation Regional General Permit

5. Bad River Band of Lake Superior Chippewa (Bad River Band) coordination areas: Corps coordination with the Bad River Band is required for certain regulated activities proposed within the Wisconsin hydrologic unit codes (HUCs) shown in Map 1. Additional information on PCN, reporting requirements and the coordination process can be found in Section D.

**CATEGORY 1: MINOR MAINTENANCE - LINEAR TRANSPORTATION**

Eligible Activities: Regulated activities required for crossings of waters of the US associated with minor repairs, rehabilitation, or replacement of a previously authorized<sup>1</sup> currently serviceable linear transportation project provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated in the original permit or the most recently authorized modification.

Regulated activities associated with new stormwater ponds; tributary channelization; slope widening; road widening; and new lanes, trails, railways, and runways are NOT authorized by this category. Activities authorized by this category are limited to:

- a. *Minor* deviations in a culvert or bridge configuration or filled area due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes, site conditions, or safety standards, including and limited to: the repair of a culvert aprons or bridge piles; lining or cleaning of pipes, culverts or bridges; extension of culverts without slope or shoulder widening; upsizing of culverts or flumes; maintenance of existing stream bank protection (not to expand original footprint); resetting or re-tying of aprons and culverts; and apron placements<sup>2</sup>; including the use of temporary discharges necessary to conduct those activities;
- b. Removal of previously authorized structures or fills, including temporary discharges necessary to conduct those activities;
- c. Repair, rehabilitation, or replacement of structures or fills destroyed or damaged by storms, floods, fire, or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage, including temporary discharges necessary to conduct those activities; and
- d. Removal of accumulated sediment and debris within the vicinity of bridges and culverted crossings, including temporary discharges necessary to conduct those activities<sup>2</sup>.

Activity restrictions:

- a. Removal of accumulated sediment and debris is limited to the minimum necessary to reestablish the approximate dimensions of a waterway in the vicinity of a structure to what existed when the structure was built and does not extend farther than 200 feet in any direction from the structure.
- b. All tributary channel modifications are limited to the minimum necessary for the repair, rehabilitation, or replacement of a structure or fill. Modifications to a tributary, including the removal of material from the tributary necessary to complete eligible activities, must be immediately adjacent to the structure or fill being maintained.
- c. All dredged or excavated material must be deposited and retained in an area that is not a water of the US.

No PCN or reporting is required unless triggered by the terms and condition of this permit (See Section D. Pre-Construction Notification).

---

<sup>1</sup> Previously authorized under 33 CFR 330.3 or by a Corps permit.

<sup>2</sup> The undertaking of these activities does not always result in a discharge or require a Corps permit. This RGP category authorizes the repair, rehabilitation, or replacement of previously authorized structures or fills that do not qualify for the Clean Water Act (CWA) Section 404(f) exemptions such as the maintenance exemption or the maintenance (but not construction) of drainage ditch exemption.



## CATEGORY 2: MODIFICATION - LINEAR TRANSPORTATION

**Eligible Activities:** Regulated activities required for crossings of waters of the US associated with the reconstruction, expansion, modification, or improvement of existing linear transportation project (e.g., roads, highways, attached frontage roads, railways, trails, airport runways, and taxiways), including temporary structures, fills, work, and temporary mats necessary to construct the modification activity. This RGP category also authorizes minor realignments of existing transportation projects where there is a demonstrated need to improve safety, durability, or capacity, such as vertical and horizontal curve corrections or improvements to existing roadway intersections and interchanges. This RGP category also authorizes the construction of new non-motorized pedestrian, bicycle, or multi-use sidewalks and trails that are directly associated with and whose purpose is to enhance the safety and mobility of an existing public road system.<sup>3</sup>

### Activity Restrictions:

- a. Regulated activities cannot cause the loss of greater than 1.0 acre of waters of the US for each single and complete project (see definition of single and complete linear project), including the area of tributary loss. This limitation does not apply if the overall project would result in the loss of 3.0 acres or less of waters of the US.
- b. All tributary channel losses, including bank stabilization, are limited to the minimum necessary to construct or protect the linear transportation project and cannot exceed 500 linear feet<sup>4</sup> for each single and complete project, unless the Corps waives the 500 linear foot loss limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. An applicant may request, in writing, a waiver from the Corps.

### An applicant must submit a PCN:

- a. If a single and complete linear project exceeds 0.1 acre of loss of waters of the US;
- b. If a single and complete linear project exceeds 300 linear feet of tributary loss, including bank stabilization;
- c. If a single and complete linear project exceeds 0.5 acre of temporary impact to waters of the US;
- d. If a waiver from General Condition 15 for the duration of temporary impacts in waters of the US is requested by the applicant (allowing temporary fill to remain in place longer than 90 days between May 15 and November 15);
- e. If triggered by the project's location or potential impacts as described in Section D. Pre-Construction Notification.

## CATEGORY 3: NEW CONSTRUCTION - LINEAR TRANSPORTATION

**Eligible Activities:** Regulated activities required for crossings of waters of the US associated with the construction of new linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways). Examples of eligible regulated activities include those necessary for the construction of: (1) new roads or major realignments of existing roadways; (2) new railroad spurs or tracks; (3) new or detached frontage roads; (4) new airport runways; (5) new or detached trails; (6) associated linear infrastructure for those new construction projects; and (7) temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project.

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<sup>3</sup> This RGP category does not authorize new construction of detached or "stand-alone" trails that are not directly associated with the reconstruction, expansion, modification, or improvement of an existing public road system, such as snowmobile, ATV, and other recreational trails, regardless of their proximity to a roadway. These activities may be considered new construction under Category 3.

<sup>4</sup> When calculating loss of a tributary for a culvert replacement, the linear foot length and area in square feet or acres of the existing structure does not count toward the linear foot limits or acres of loss of waters of the US. Rip-rap and other tributary impacts count towards the tributary loss limit. See Section C. Calculating Impacts to Waters of the United States for more information.

St. Paul District Corps of Engineers, Regulatory Division  
Transportation Regional General Permit

Activity Restrictions:

- a. Regulated activities cannot cause the loss of greater than 0.5 acre of waters of the US for each single and complete project, including the area of tributary loss (see definition of single and complete linear project).
- b. All tributary channel losses, including bank stabilization, are limited to the minimum necessary to construct or protect the linear transportation project and cannot exceed 500 linear feet for each single and complete project, unless the Corps waives the 500 linear foot loss limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. An applicant may request, in writing, a waiver from the Corps.

An applicant must submit a PCN:

- a. If a single and complete linear project exceeds 400 square feet of loss of waters of the US;
- b. If a single and complete linear project exceeds 300 linear feet of tributary loss, including bank stabilization;
- c. If a single and complete linear project exceeds 0.5 acre of temporary impact to waters of the US;
- d. If a waiver from General Condition 15 for the duration of temporary impacts in waters of the US is requested by an applicant (allowing temporary fill to remain in place longer than 90 days between May 15 and November 15);
- e. If triggered by the project's location or potential impacts as described in Section D. Pre-Construction Notification.

#### **CATEGORY 4: NON-LINEAR TRANSPORTATION PROJECTS**

Eligible Activities: Regulated activities required for the construction, expansion, or maintenance of non-linear features associated with transportation projects, including the use of temporary discharges necessary to conduct those activities. Such projects may include: stormwater management facilities, vehicle maintenance or storage buildings, weigh stations, rest-stops, parking lots, train stations, aircraft hangars, and associated infrastructure.

Activity Restrictions:

- a. Regulated activities cannot cause the loss of greater than 0.5 acre of waters of the US, including the area of tributary loss (see definition of single and complete non-linear project).
- b. The discharge must not cause the loss of greater than 300 linear feet of a tributary, unless the Corps waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects (see definition of single and complete non-linear project). An applicant may request, in writing, a waiver from the Corps.

An applicant must submit a PCN:

- a. If the single and complete project exceeds 0.1 acre of loss of waters of the US;
- b. If the single and complete project exceeds 0.5 acre of temporary impact to waters of the US;
- c. If a waiver from General Condition 15 for the duration of temporary impacts in waters of the US is requested by an applicant (allowing temporary fill to remain in place longer than 90 days between May 15 and November 15);
- d. If a waiver from the 300 linear foot tributary limit is requested by an applicant; or
- e. If triggered by the project's location or potential impacts as described in Section D. Pre-Construction Notification.

#### **CATEGORY 5: TRANSPORTATION SURVEYING**

Eligible Activities: Regulated temporary activities required for surveying activities necessary for transportation projects, such as core sampling, exploratory type bore holes, exploratory trenching, soil surveys, sediment sampling, sample plots or transects for wetland delineations, historic resources surveys, and temporary access roads necessary to perform those activities.

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Activity Restrictions:

- a. Regulated activities for the recovery of historic resources are not authorized.
- b. Losses of waters of the US are not authorized.
- c. Bore holes must be properly sealed following completion of survey activities.

An applicant must submit a PCN:

- a. If the single and complete project exceeds 0.5 acre of temporary impact to waters of the US; or
- b. If triggered by the project's location or potential impacts as described in Section D. Pre-Construction Notification.

## B.USE OF MULTIPLE RGP CATEGORIES

Single and complete non-linear projects may not be "piecemealed" to avoid the limits in a general permit (nationwide, programmatic, or regional general permit). For example, multiple category 4 non-linear activities may be authorized by the Transportation RGP for an overall project, provided the cumulative loss of waters of the US does not exceed 0.5 acre. To illustrate this, consider two category 4 activities proposed as part of a new overall light-rail project, a proposed 0.25 acre loss for a stormwater pond and a 0.25 acre loss for a train station. Both are eligible for category 4 authorization, because the cumulative loss of waters of the US does not exceed 0.5 acre.

Categories 4 and 5 (non-linear single and complete projects) can be used in conjunction with other categories of this general permit.

Multiple linear categories (categories 1, 2, and 3) of this RGP may be utilized for the same single and complete linear project, provided the cumulative loss of waters of the US does not exceed the loss limit of the general permit category with the *highest* specified limit.

When general permit limits are exceeded, projects may be eligible for review and authorization by an individual permit.

## C. CALCULATING IMPACTS TO WATERS OF THE UNITED STATES

1. Waters of the US may include waterbodies such as streams, rivers, lakes, ponds, and wetlands (see Definitions, Section G).
2. Loss of waters of the US is the sum of all permanently adversely affected jurisdictional waterbodies for a single and complete project. Temporary impacts to waters of the US, discussed below, are calculated separately from losses of waters of the US and do not contribute to loss thresholds. Permanent adverse effects include filling, flooding, excavation, or drainage in waters of the US as a result of the regulated activity. Permanent adverse effects to waters of the US include regulated activities that change a waterbody to dry land, increase the bottom elevation of a waterbody (e.g. placement of riprap), decrease the bottom elevation of a waterbody (e.g. excavation of a sedge meadow wetland to shallow marsh), or change the use of a waterbody.
  - a. Losses of wetlands must be reported in either acres or square feet, as appropriate.
  - b. Losses of tributaries, ponds, and lakes must be reported in acres or square feet and linear feet below the plane of the ordinary high water mark. If regulated activities are proposed at multiple locations, they are added together to determine the overall amount of linear loss to waters of the US.
3. Temporary impacts to waters of the US include the sum of all regulated impacts to waters of the US for a single and complete project which are restored to pre-construction contours and elevations after construction. Examples of temporary impacts to waters of the US may include the placement of timber matting, installation of coffer dams, trenching and backfilling, and in many cases, mechanized land-clearing.
  - a. Temporary impacts to wetlands must be reported in either acres or square feet, as appropriate.
  - b. Temporary impacts to tributaries, ponds, and lakes must be reported in acres or square feet and linear feet

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below the plane of the ordinary high water mark. If regulated activities are proposed at multiple locations, temporary impacts must be added together to determine the overall amount of temporary linear impact.

4. Losses and temporary impacts to waters of the US do not include:
  - a. Activities that do not require Department of the Army authorization, such as activities eligible for exemptions under Section 404(f) of the Clean Water Act.
  - b. Impacts to linear ditches, as defined in Section G, provided the ditch does not abut a wetland. Sections of linear ditches in or abutting wetlands do contribute to loss and temporary impact thresholds.
5. The measurements of loss and temporary impact to waters of the US are for determining whether a project may qualify for the RGP and are not reduced by compensatory mitigation.

#### D. PRE-CONSTRUCTION NOTIFICATION (PCN) INFORMATION

Projects that meet the terms and conditions of this RGP and do not require pre-construction notification, as outlined below, may commence work after project proponents have carefully confirmed that the activity will be conducted in compliance with all applicable terms and conditions of the RGP. See list below for additional PCN requirements.

**For all activities which require PCN**, project proponents must obtain written Corps verification of RGP coverage before starting regulated work. The PCN must include all other nationwide permits, programmatic general permits, RGPs, or individual permits used or intended to be used to authorize any part of the overall linear and non-linear project (including all single and complete projects), including regulated activities that require Corps authorization but do not require PCN. If an individual permit is required for any one single and complete project, the overall project is ineligible for authorization under this permit.

If an activity does not specifically require a PCN (as described in each RGP category), reference the information below to determine if a PCN must be submitted and a written verification letter received prior to starting work.

**Reporting requirement** (applicable in areas shown on Map 1): Regardless of category, overall projects (defined in Section G) that do not require PCN, but would result in cumulative losses or temporary impacts of 0.5 acre or greater of waters of the US, are required to be reported to the Corps. The project proponent must minimally provide items 1 through 6, 9-10, and 12 below (Form and Content of PCN) to the Corps at least 30 days prior to starting work. This information will be used by the Corps to initiate coordination with the Bad River Band. Project proponents do not have to wait for written verification of coverage unless notified by the Corps.

Except for all Category 1 activities, PCN is required for regulated activities proposed in these Aquatic Resources:

1. Designated wild rice waters<sup>5, 6</sup>;
2. Bogs and fens<sup>5, 7</sup>;
3. Apostle Islands National Lakeshore and Madeline Island (WI only);
4. Coastal plain marshes, interdunal wetlands, and Great Lakes ridge and swale complexes (WI only)<sup>5</sup>;
5. Wetland sites designated by the Ramsar Convention (as of the date of publication, these include: the Horicon Marsh, Upper Mississippi River Floodplain wetlands, Kakagon and Bad River Sloughs, Door County Peninsula Coastal wetlands, Chiwaukee Illinois Beach Lake Plain, and Lower Wisconsin Riverway), see <https://rsis.ramsar.org/> (WI only).
6. State and Tribal waters identified as 1) Areas of Special Natural Resources Interest Outstanding and Exceptional Streams (WI), 2) Outstanding Resource Value Waters Prohibited and Restricted Streams (MN), 3) Exceptional Aquatic Life Use waters (MN), 4) Bad River Outstanding Tribal Resource Waters, Outstanding Resource Waters, and Exceptional Resource Waters<sup>8</sup>, and 5) all tributaries outside the Bad River Band Reservation illustrated in dark or light blue on Map 2.

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PCN is required for the following activities to comply with other federal laws:

1. Regulated activities which might affect any federally-listed threatened, endangered, or proposed threatened and endangered species, designated critical habitat, or proposed critical habitat unless ESA Section 7 consultation addressing the effects of the proposed activity has been completed by a federal applicant or lead federal agency.
2. Regulated activities which might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties unless the requirements of Section 106 of the NHPA have been satisfied by a federal applicant or lead federal agency.
3. Regulated activities which may result in disturbance or removal of human remains.
4. Regulated activities which require permission from the Corps pursuant to Section 408 because it will alter or temporarily or permanently occupy or use a Corps federally authorized civil works project.
5. Regulated activities in or which may affect the National Wild and Scenic River System, including designated portions of the St. Croix River in Minnesota and Wisconsin and the Wolf River in Wisconsin, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status.

Other activities which require PCN include:

1. Regulated activities in areas of suspected sediment or soil contamination, including but not limited to Superfund sites. Superfund sites in Minnesota or Wisconsin can be located by searching the EPA's website: <https://www.epa.gov/superfund/search-superfund-sites-where-you-live>.
2. Bridges, structures, and sunken vessels more than 50 years old, unless already determined ineligible for listing on National Register of Historic Places. Culverts that are constructed using pre-cast concrete, cast-in-place concrete, or corrugated metal are not subject to this PCN requirement.
3. All regulated activities which require a waiver to be eligible for authorization by the RGP.

Timing of PCN: Where required by the terms of this RGP, the prospective permittee must notify the Corps by submitting a PCN as early as possible. The Corps will determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30-day period to request the additional information necessary to make the PCN complete. Generally, the Corps will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the Corps will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the Corps.

The prospective permittee shall not begin the activity until they are notified in writing by the Corps that the activity may proceed under the RGP with any special conditions imposed by the Corps.

Form and Content of PCN: The PCN must be in writing and should utilize the Minnesota Joint Waters Wetlands

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<sup>5</sup> Information about Wisconsin plant community types may be obtained from <http://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=group&Type=Wetland>.

<sup>6</sup> Information regarding wild rice waters and their extent may be obtained from <https://www.dnr.state.mn.us/wildlife/shallowlakes/wildrice.html> and <https://gisdata.mn.gov/dataset/biota-wild-rice-lakes-dnr-wld> in Minnesota, <https://dnr.wisconsin.gov/topic/wildlifehabitat/rice.html> in Wisconsin, and an interactive map is provided at: <http://maps.glifwc.org/> (under Treaty Resources – Gathering).

<sup>7</sup> Additional information on bog and fen communities can be found at <http://www.mvp.usace.army.mil/missions/regulatory.aspx> and in Minnesota at <http://www.dnr.state.mn.us/npc/classification.html>.

<sup>8</sup> Information about WI ASNRI waters can be found at <https://dnr.wisconsin.gov/topic/SurfaceWater/swdv>. Information about MN ORVW and Exceptional AQL waters can be found at <https://www.pca.state.mn.us/business-with-us/water-quality-standards> and <https://mpca.maps.arcgis.com/apps/webappviewer/index.html?id=4642533a988b40adb63a0138b5f1d439>. Information about Bad River waters can be found at <https://www.arcgis.com/apps/View/index.html?appid=6f44c371217e4ee8b5f1c2c705c7c7c5>.

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Application, WI DNR application, or the Corps Application for Department of the Army Permit Form ENG 4345. A letter containing the required information may also be used. A complete PCN must include:

1. Contact information including the name, mailing address, email address, and telephone numbers of the prospective permittee and any third party agents.
2. Location of the proposed activity (i.e. section-township-range and latitude and longitude in decimal degrees).
3. A description of the proposed activity and its purpose; a description of any avoidance and minimization mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any and all other general or individual permits used or intended to be used to authorize any part of the overall proposed project including activities that require Corps authorization but do not require PCN.
4. A tabulation of all impacts to waters of the US, including the anticipated amount of loss of waters and temporary impacts expected to result from the proposed activity. Impacts to all waters of the US must be reported in acres or square feet. In addition, tributary, pond, and lake impacts must also be reported in linear feet. A table may be used to clearly and succinctly disclose this information (see Calculating Impacts to Waters of the United States, Section C).
5. Sketches, maps, drawings, and plans must be provided to show that the activity complies with the terms of the RGP. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity. Large and small-scale maps must be provided to show the project site location. Drawings and plans should be to scale, with scale included, and depict all identified aquatic resources and aquatic resource impact areas, including plan-view drawings on a recent aerial photograph, and cross-section and profile drawings where appropriate.
6. Identification of all aquatic resources on the project site and the acreage of each aquatic resource present. Aquatic resources must be identified by type (e.g. wetland, tributary, lake, man-made ditch, pond, etc.) and impacts must be identified by type (e.g. fill, excavation, etc.) and permanence (permanent or temporary). A wetland delineation may be required.
7. A statement describing how compensatory mitigation requirements will be satisfied, or an explanation why compensatory mitigation should not be required. See Mitigation, Section E for more information.
8. If the proposed project would impact a calcareous fen, the PCN must include a copy of the WI DNR authorization for the proposed regulated activity, or a copy of the approved MN DNR calcareous fen management plan specific to the project.
9. If any federally-listed threatened or endangered species (or species proposed for listing) or proposed or designated critical habitat might be affected or is in the vicinity of the regulated activity, the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. Federal applicants or applicants that have federal funding (or whose project otherwise involves a lead federal agency) must provide documentation demonstrating compliance with ESA Section 7.
10. If the activity might have the potential to cause effects to a historic property listed on, eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity and include a vicinity map indicating the location of the historic property. Federal applicants or applicants that have federal funding (or whose project otherwise involves a lead federal agency) must provide documentation demonstrating compliance with Section 106 of the NHPA.
11. If an activity is proposed in a component of the National Wild and Scenic River System (including the St. Croix River in Minnesota and Wisconsin and the Wolf River in Wisconsin) or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river.”
12. The PCN must specify how long temporary impacts and structures will remain in place and include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project

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conditions (see general conditions 14 and 15).

13. If a waiver for a specific category or condition of the permit is proposed (e.g. from a linear tributary impact limit or duration of temporary impact), the PCN must include an explanation of the need for a waiver and why the applicant believes the impacts would result in minimal individual and cumulative adverse environmental effects.
14. For an activity that requires permission from, or review by, the Corps pursuant to Section 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the PCN must include a statement confirming that the project proponent has submitted a written request for Section 408 permission from, or review by, the Corps office having jurisdiction over the Corps civil works project.

**Agency Coordination:** Agency coordination is required for activities which require a waiver to be eligible for authorization by this RGP, except for a waiver of General Condition 15 for the duration of temporary impacts in waters of the US.

When agency coordination is required, the district engineer will immediately provide a copy of the complete PCN to the appropriate Federal, state, or tribal offices (EPA, FWS, state and tribal natural resource or water quality agency). Agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the PCN. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency. The district engineer will indicate in the administrative record associated with each PCN that the resource agencies' concerns were considered.

**Tribal Coordination:** Tribal coordination is required for all activities which require PCN and are located within the exterior boundaries of federally-recognized Indian reservations. When tribal coordination is required, the district engineer will immediately provide a copy of the complete PCN to the affected tribe. The tribe will have 10 calendar days from the date the material is transmitted to notify the district engineer that they intend to provide substantive, site-specific comments. If contacted by the affected tribe, the district engineer will wait an additional 15 calendar days before making a decision on the PCN. The district engineer will fully consider the tribe's comments received within the specified time frame concerning the proposed activity. The district engineer will indicate in the administrative record associated with each PCN that the tribe's concerns were considered.

**Bad River Band Coordination** (required for all reporting and PCN activities proposed within areas shown on Map 1): Within 7 calendar days the Corps will transmit the reporting information or PCN directly to the Bad River Band's Mashkiziibii Natural Resources Department (via email [wqs@badriver-nsn.gov](mailto:wqs@badriver-nsn.gov), [wetlands@badriver-nsn.gov](mailto:wetlands@badriver-nsn.gov), and [waterreg@badriver-nsn.gov](mailto:waterreg@badriver-nsn.gov)). The Bad River Band will have 15 calendar days from the date transmitted to notify the district engineer and project proponent that they intend to provide substantive, project-specific comments related to the water quality effects of the proposed regulated activity. When this notification occurs, the project proponent shall not begin the regulated activity unless and until they are authorized in writing by the Corps. The Bad River Band will have 20 calendar days from the notification date to describe to the Corps any anticipated effects of the regulated activity to Bad River Band's water quality, including any recommended conditions which may address those concerns. The district engineer will fully consider the Bad River Band's comments received within the specified time frame before making a decision. The district engineer will indicate in the administrative record how the Bad River Band's concerns were considered. The Corps will separately share with Bad River Band the Corps response to comments received before, or concurrent with, any final Corps decision.

## E. MITIGATION

In accordance with the Federal Mitigation Rule (33 CFR part 332), the Section 404(b)(1) guidelines (40 CFR part 230), and

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current Corps policies, guidelines, and procedures for compensatory mitigation, regulated activities must be designed and constructed to avoid and minimize (mitigate) adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site). Mitigation includes actions which may avoid, minimize, rectify, reduce, or compensate for adverse environmental effects or activities which may otherwise be contrary to the public interest. Regulated activities which the Corps believes do not mitigate adverse environmental effects or are contrary to the public interest are ineligible for authorization by this RGP and will be evaluated by the Corps using individual permit procedures.

After all practicable steps to avoid and minimize adverse effects to waters of the US have been considered, the Corps may require compensatory mitigation to ensure that the regulated activity results in no more than minimal adverse environmental effects or will not be contrary to the public interest. In reviewing the complete PCN for the proposed activity, the Corps will determine whether the activity authorized by the RGP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The Corps will issue the RGP verification for that activity if it meets the terms and conditions of the RGP, unless the Corps determines, after considering compensatory mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest. When this occurs, the Corps will exercise discretionary authority to require an individual permit evaluation for the proposed regulated activity.

Regulated activities eligible for this RGP must include a statement describing how compensatory mitigation requirements will be satisfied, or an explanation why compensatory mitigation should not be required for proposed impacts to waters of the US. Project proponents may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the project proponent must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of the current Corps policies, guidelines, procedures, and 33 CFR 332 (the Mitigation Rule).

Information regarding current Corps policies and guidelines about compensatory mitigation in Minnesota and Wisconsin may be viewed online at [www.mvp.usace.army.mil/Missions/Regulatory/Mitigation](http://www.mvp.usace.army.mil/Missions/Regulatory/Mitigation). Information regarding existing banks and in-lieu fee programs is available online at [www.ribits.usace.army.mil](http://www.ribits.usace.army.mil). Nationally applicable information, including the Mitigation Rule, may be read online at [http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/mitig\\_info/](http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/mitig_info/).

## F. GENERAL CONDITIONS

To qualify for this RGP authorization, the prospective permittee must comply with the following conditions, as applicable, in addition to any category-specific requirements and project-specific special conditions imposed by the Corps.

1. Compliance:
  - a. The permittee is responsible for ensuring that whoever performs, supervises, or oversees any portion of the physical work associated with the construction of the project has a copy of and is familiar with all the terms and conditions of the RGP and any special (permit-specific) conditions included in any written verification letter from the Corps.
  - b. The activity must also comply with any special conditions added by the state, tribe, or U.S. EPA in its Section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination. The permittee is ultimately responsible for ensuring compliance with all the terms and conditions of the RGP.
  - c. Any authorized structure or fill must be properly maintained, including maintenance to ensure public safety and compliance with applicable RGP general conditions, as well as any activity-specific conditions added by the Corps to an RGP authorization.



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2. Compliance Certification: Each permittee who receives an RGP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The Corps will provide the permittee the certification document with the RGP verification letter. The completed certification document must be submitted to the Corps within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.
3. Site Inspection: The permittee shall allow representatives from the Corps to inspect the proposed project site and the authorized activity to ensure that it is being, or has been, constructed and maintained in accordance with the RGP authorization.
4. Migratory Birds and Bald and Golden Eagles: The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service (FWS) to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.
5. Endangered Species:
  - a. No activity is authorized under this RGP which is likely to directly or indirectly jeopardize the continued existence of a federally threatened or endangered species or a species proposed for such designation, as identified under the Endangered Species Act (ESA), 50 CFR 402, or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under the RGP which “may affect” a listed species or critical habitat, unless ESA Section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the RGP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the RGP activity and are later in time, but still are reasonably certain to occur.
  - b. As a result of formal or informal consultation with the FWS, the Corps may add species-specific permit conditions to the RGP verification.
  - c. Information on the location of federally threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS on their web page at [www.fws.gov/ipac](http://www.fws.gov/ipac).
6. Calcareous Fens: The permittee may not complete regulated activities in a calcareous fen, unless the Wisconsin Department of Natural Resources has authorized the proposed regulated activity, or the Minnesota Department of Natural Resources has approved a calcareous fen management plan specific to the project. A list of known Minnesota calcareous fens can be found at: [http://files.dnr.state.mn.us/eco/wetlands/calcareous\\_fen\\_list.pdf](http://files.dnr.state.mn.us/eco/wetlands/calcareous_fen_list.pdf). Information about calcareous fens in Wisconsin can be found at <http://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=group&Type=Wetland>.
7. Wild and Scenic Rivers: The permittee may not complete regulated activities which may affect or are located in a designated portions of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
8. Historic Properties, Cultural Resources:
  - a. No activity which may affect historic properties listed or potentially eligible for listing on the National Register of Historic Places is authorized until the requirements of Section 106 of the National Historic Preservation Act (Section 106) have been satisfied. If PCN is required for the proposed activity, the federal project proponent should follow their own procedures for complying with the requirements of Section 106 and provide documentation of compliance with those requirements..
  - b. Information on the location and existence of historic and cultural resources can be obtained from the State Historic Preservation Office, Tribal Historic Preservation Offices, and the National Register of Historic Places.
  - c. Rock or fill material used for activities authorized by this permit must either be obtained from existing quarries or, if a new borrow site is excavated to obtain fill material, the Corps must be notified prior to the use of the new site to determine whether a cultural resources survey of the site is necessary.

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9. Discovery of Previously Unknown Remains and Artifacts: If any previously unknown historic, cultural, or archeological remains and artifacts are discovered while accomplishing the activity authorized by this permit, the permittee must immediately notify the Corps of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The Corps will initiate the federal, tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
10. Burial Sites: Burial sites, marked or unmarked, are subject to state law (Wisconsin Statute 157.70 and Minnesota Statutes 306 and 307.08). Native American burial sites on federal or tribal land are subject to the provisions of Native American Graves Protection and Repatriation Act (NAGPRA). Regulated activities may not result in disturbance or removal of human remains until disposition of the remains has been determined by the appropriate authority under these laws, and the work is authorized by the Corps. Regulated activities which result in an inadvertent discovery of human remains must stop immediately, and the Corps, as well as the appropriate state and tribal authority, must be notified. Regulated work at inadvertent discovery sites requires compliance with state law and NAGPRA, as appropriate, prior to re-starting work.
11. Federally Authorized Corps Civil Works projects: A permittee is not authorized to begin any regulated activities described in this RGP if activities will alter or temporarily or permanently occupy or use a Corps federally authorized civil works project, unless the appropriate Corps office issues a Section 408 permission to alter, occupy, or use the Corps civil works project (pursuant to 33 U.S.C. 408) and the Corps issues written RGP verification. Examples of federal projects include, but are not limited to, works that were built by the Corps and are locally maintained (such as local flood control projects) or operated and maintained by the Corps (such as locks and dams).
12. Safety of Impoundment Structures: To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.
13. Suitable Material: No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
14. Restoration of Temporary Impacts: All temporary impacts in waters of the US, including discharges resulting from side casting material excavated from trenching, that occur as a result of the regulated activity must be fully contained with appropriate erosion control or containment methods, be restored to pre-construction contours and elevations, and, as appropriate, revegetated with native, non-invasive vegetation, unless otherwise conditioned in a Corps RGP verification. All temporary access roads constructed in waters of the US must be properly bridged or culverted to maintain surface flows. In temporarily excavated wetlands, the top 6 to 12 inches of the excavation should normally be backfilled with topsoil originating from the wetland. No temporary excavation area, including, but not limited to trenches, may be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a French drain effect).
15. Duration of Temporary Impacts: Temporary impacts in waters of the U.S., including wetlands, must be avoided and limited to the smallest area and the shortest duration required to accomplish the project purpose.
  - a. Unless otherwise conditioned in a Corps RGP verification, temporary impacts may not remain in place longer than 90 days between May 15 and November 15. Before those 90 days have elapsed, all temporary discharges must be removed in their entirety.
  - b. If the temporary impacts would remain in place for longer than 90 days between May 15 and November 15, the PCN must include a request for a waiver from this condition and specify how long temporary impacts will remain and include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. The permittee must remove the temporary impacts in their entirety in accordance with the activity authorized in their permit verification.

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16. Best Management Practices (BMPs): To minimize adverse effects from soil loss and sediment transport that may occur as a result of the authorized work, appropriate BMPs must be implemented and maintained. For authorized work above an OHWM the BMPs must remain in place until the affected area is stabilized with vegetation or ground cover. For all authorized work below an OHWM, BMPs are required and must prevent or minimize adverse effects (e.g., total suspended solids or sedimentation) to the water column outside of the authorized work area. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance. All BMPs must be inspected and properly maintained following storm events to ensure they are operational. All exposed slopes and stream banks must be stabilized within 24 hours after completion of all tributary crossings.
17. Culverts and Crossings: Unless an RGP verification authorizes otherwise, replacement and installation of culverts or crossings authorized by an RGP are to follow (or be restored to) the natural alignment and profile of the tributary. The culverts or bridges must adequately pass low flow and bankfull events, bedload, sediment load, and provide site-appropriate fish and wildlife passage. Example design elements include recessing single culverts to accommodate natural bankfull width and adjusting additional culvert inverts at an elevation higher than the bankfull elevation.
18. Aquatic Life Movements: No regulated activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic resources. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.
19. Spawning Areas: Activities in spawning areas, during spawning seasons, must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial sedimentation) of a designated or known spawning area are not authorized.
20. Hard Armoring: For RGP categories that allow for the use of hard armoring for bank stabilization, only suitable material must be used and be of a size and configuration sufficient to prevent its movement from the authorized alignment by natural forces under normal or high flows.
21. Pollutant or Hazardous Waste Spills: The permittee is responsible for removing pollutants and hazardous materials and for minimizing any contamination resulting from a spill in accordance with state and federal laws. In accordance with applicable state, tribal and federal laws and regulations, if a spill of any potential pollutant or hazardous waste occurs, it is the responsibility of the permittee to immediately notify the National Response Center at 1-800-424-8802 or [NRC@uscg.mil](mailto:NRC@uscg.mil) AND  
IN WISCONSIN: the WI DNR Spills Team at 1-800-943-0003, or  
IN MINNESOTA: the Minnesota State Duty Officer at 1-800-422-0798.  
IN WISCONSIN HUC10s identified on Map 1: the Bad River Band of Lake Superior Chippewa at [brownfields@badriver-nsn.gov](mailto:brownfields@badriver-nsn.gov), [nrdirector@badriver-nsn.gov](mailto:nrdirector@badriver-nsn.gov), and [wqs@badriver-nsn.gov](mailto:wqs@badriver-nsn.gov).
22. Clean Construction Equipment: To prevent the spread of invasive species, all construction equipment must be clean prior to entering and before leaving the work site.
23. Navigation:
  - a. No activity may cause more than a minimal adverse effect on navigation.
  - b. Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the US.
  - c. For activities subject to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the

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United States. No claim shall be made against the United States on account of any such removal or alteration.

24. Fills Within 100-Year Floodplains: The regulated activity must comply with applicable FEMA-approved state or local floodplain management requirements.
25. Tributary Modifications: When stream channelization is performed with the construction of a road crossing, both activities should be considered as a single and complete project, which may be authorized by another form of authorization. The Corps does not consider installation of a culvert in a stream bed as stream channelization as long as those activities are conducted in accordance with the terms of the categories described in this permit. Unless the general permit verification authorizes otherwise, replacement and installation of culverts or crossings authorized are to follow (or be restored to) the natural alignment and profile of the tributary, see General Condition 17. Culverts and Crossings.
26. Section 401 Clean Water Act, Water Quality Certification: All regulated activities authorized by this RGP pursuant to Section 404 of the Clean Water Act require Section 401 Clean Water Act certification or waiver to be considered valid.
27. Transfer of Regional General Permit Verifications: If the permittee sells the property associated with a regional general permit verification, the permittee may transfer the regional general permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the regional general permit verification must be attached to the letter, and the letter must contain the following statement and signature "When the structures or work authorized by this regional general permit are still in existence at the time the property is transferred, the terms and conditions of this regional general permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this regional general permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

---

(Transferee)

---

(Date)

## G. DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Direct effects: Effects that are caused by the regulated activity and occur at the same time and place.

Discharge: The term discharge of dredged material is defined at 33 CFR 323.2(d) and the term discharge of fill material is defined at 33 CFR 323.2(f).

Exploratory trenching: temporary excavation of the upper soil profile to expose bedrock or substrate for the purpose of mapping or sampling the exposed material.

Historic property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory

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Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the regulated activity and are later in time or farther removed in distance but are still reasonably foreseeable.

Linear ditch: A defined channel constructed adjacent to a linear transportation facility (e.g., roads, highways, railways, trails, airport runways, and taxiways, etc.) to convey runoff from the linear facilities and from areas which drain toward the linear facilities. The term linear ditch does not include natural tributaries, relocated natural tributaries, or modified natural tributaries.

Navigable waters: Waters subject to Section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Ordinary high water mark (OHWM): An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Overall project: The aggregate of all single and complete projects related to the same purpose, including both linear and non-linear activities with regulated losses and temporary impacts to waters of the US.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification (PCN): A request submitted by the project proponent to the Corps for confirmation that a particular activity is verified by a general permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. PCN may be required by the terms and conditions of this regional general permit.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Single and complete linear project (categories 1-3 and temporary access roads fills): A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the overall linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the US (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of this general permit authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. The definition of "single and complete linear project" does not include the term "independent utility" because each crossing of waters of the US is needed for the single and complete linear project to fulfill its purpose of transporting people, goods, and services from the point of origin to the terminal point.

Single and complete non-linear project (categories 4 and 5): For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the overall project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility. Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an RGP authorization. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Stormwater management facilities: Stormwater management facilities are those facilities including, but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances

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and other pollutants) of stormwater runoff.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tribal lands: Any lands which are either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Tributary: For the purposes of this permit, a water that contributes flow, either directly or through another water to a traditionally navigable water or interstate water (including wetlands) and that is characterized by the presence of the physical indicators of bed and banks and ordinary high water mark. A tributary can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, canals, and ditches.

Waiver: An approval from the Corps which allows an applicant to exceed the activity restrictions or conditions described in an RGP. Waivers may only be considered when expressly indicated as available in an RGP and will only be granted once the Corps has made a written determination that the RGP activity will result in only minimal individual and cumulative adverse environmental effects. When a waiver is required, an applicant cannot start work until they have received an RGP verification letter with waiver approval.

Waterbody: For purposes of this RGP, a waterbody is a jurisdictional water of the US. Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

## H. FURTHER INFORMATION

1. Congressional authorities: The permittee has been authorized to undertake the activity described above pursuant to Section 404 of the Clean Water Act (33 U.S.C 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
2. The Corps retains discretionary authority to require an individual permit for any activity eligible for authorization by an RGP based on concern for the aquatic environment or for any other factor of the public interest.
3. Limits of this authorization:
  - a. This RGP does not obviate the need to obtain other federal, state, or local authorizations required by law;
  - b. This RGP does not grant any property rights or exclusive privileges;
  - c. This RGP does not authorize any injury to the property or rights of others; and
  - d. This RGP does not authorize interference with any existing or proposed federal project.
4. Limits of federal liability: In issuing this permit, the Federal Government does not assume any liability for the following:
  - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes;
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest;
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;
  - d. Design or construction deficiencies associated with the permitted work; or
  - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
5. Reliance on permittee’s data: The determination of this office that an activity is not contrary to the public interest will be made in reliance on the information provided by the project proponent.
6. Re-evaluation of decision: This office may reevaluate its decision for an individual verification under this general permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

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- a. The permittee fails to comply with the terms and conditions of this permit;
  - b. The information provided by the permittee in support of the pre-construction notification proves to have been false, incomplete, or inaccurate (See 5 above); or
  - c. Significant new information surfaces which this office did not consider in reaching the original decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring the permittee to comply with the terms and conditions of their permit and for the initiation of legal action where appropriate. The permittee will be required to pay for any corrective measures ordered by this office, and if the permittee fails to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill the permittee for the cost.
7. This office may also reevaluate its decision to issue this RGP at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.

## I. CORPS DECISION

In reviewing the PCN for the proposed activity, the Corps will determine whether the activity authorized by the RGP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific RGP, the Corps should issue the RGP verification for that activity if it meets the terms and conditions of that RGP, unless the Corps determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the US to determine whether they individually satisfy the terms and conditions of the RGPs, as well as the cumulative effects caused by all of the crossings authorized by RGP. If an applicant requests a waiver for any limit where waivers are indicated as available, the Corps will only grant the waiver upon a written determination that the RGP activity will result in only minimal individual and cumulative adverse environmental effects.

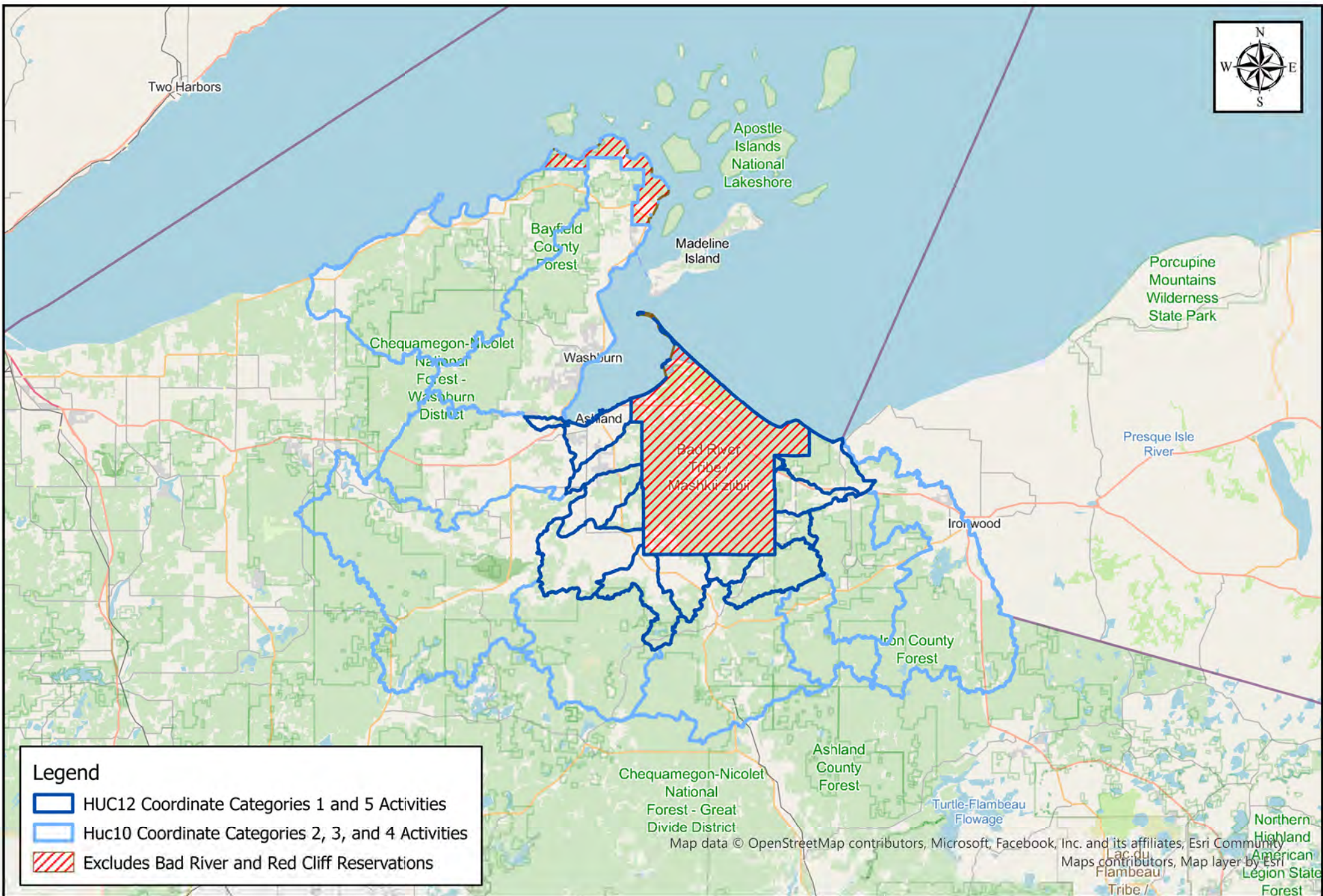
When making minimal adverse environmental effects determinations the Corps will consider the direct and indirect effects caused by the RGP activity. The Corps will also consider the cumulative adverse environmental effects caused by activities authorized by the RGP and whether those cumulative adverse environmental effects are no more than minimal. The Corps will consider site specific factors, such as the environmental setting in the vicinity of the RGP activity, the type of resource that will be affected by the RGP activity, the functions provided by the aquatic resources that will be affected by the RGP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the RGP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the Corps. The Corps may add case-specific special conditions to the RGP authorization to address site-specific environmental concerns.

The Corps will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal to inform decisions regarding whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the Corps determines that the activity complies with the terms and conditions of the RGP and that the adverse environmental effects are no more than minimal, after considering mitigation, the Corps will notify the permittee and include any activity specific

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conditions in the RGP verification the Corps deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). When compensatory mitigation is required, the Corps must approve the final mitigation plan before the permittee commences work in waters of the US, unless the Corps determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the Corps determines that the adverse environmental effects of the proposed activity are more than minimal, then the Corps will notify the applicant of next steps as described in 33 CFR 325.2.





# Transportation RGP Map 1

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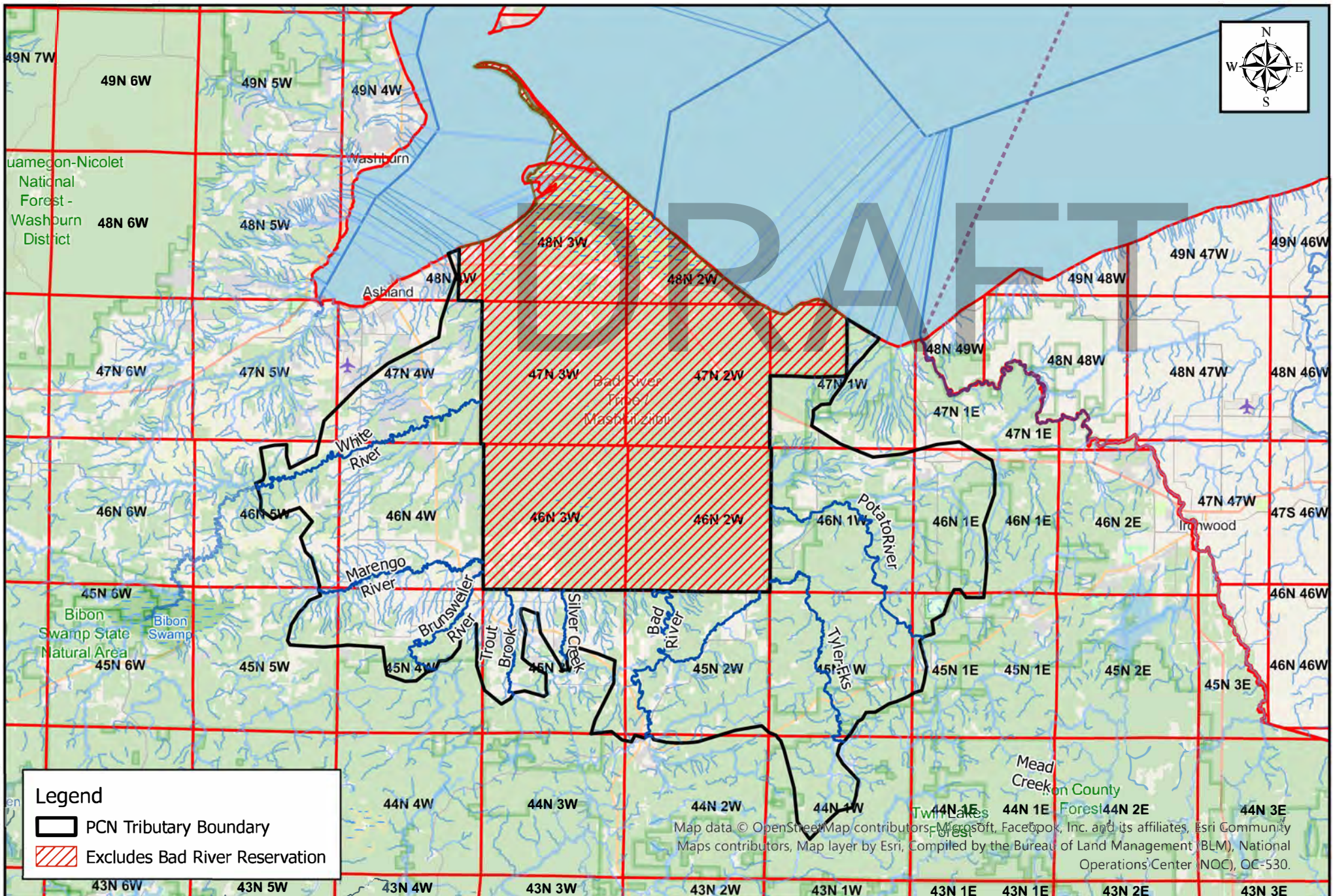


Feet

Map Center: 90.761717°W 46.548825°N

Date: 10/19/2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere



**Legend**

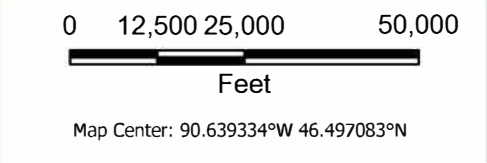
- PCN Tributary Boundary
- Excludes Bad River Reservation

Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, Compiled by the Bureau of Land Management (BLM), National Operations Center (NOC), OC-530.



**Tributaries subject to PCN in Aquatic Resources item 6, sub 5.**

**Transportation GP, Map 2**



Date: 10/23/2023

Coordinate System: NAD 1983 HARN Wisconsin TM

Projection: Transverse Mercator

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)**

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## Kaitlyn Wehner

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**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 3:30 PM  
**To:** tyler.jennifer@epa.gov  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project  
**Attachments:** RWY 1R-19L - EPA Initial Project Review Letter.pdf; Attachment 1 - RWY 1R-19L Location Map.pdf; Attachment 2 - RWY 1R-19L Airport Property Map.pdf; Attachment 3 - RWY 1R-19L Airport Diagram Map.pdf; Attachment 4 - RWY 1R-19L Area of Potential Effects Map.pdf; Attachment 5 - Wetland Delineation Confirmation.pdf; Attachment 6 - RWY 1R-19L Photo log.pdf

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226





November 8, 2023

Jennifer Tyler

Office of the Regional Administrator

U.S. Environmental Protection Agency – Region 5

77 W Jackson Boulevard

Chicago, IL 60604-3507

*Via Electronic Mail Only to tyler.jennifer@epa.gov*

RE: Milwaukee General Mitchell International Airport  
Proposed Runway 1R-19L Decommissioning and Removal

Dear Ms. Tyler:

General Mitchell International Airport (Airport) is beginning preliminary studies for improvements to the Airport. (See Attachment 1 – Site Location Map & Attachment 2 – Airport Property Map) These proposed improvements include the decommissioning and removal of Runway 1R-19L (Project).

Recently the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards. Additionally, the proposed project will align the airfield for future development and reduce the operation and maintenance costs of deteriorating pavements.

Currently, Runway 1R-19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 1R-19L primarily serves military aircraft capable on operating on a 4,000-foot-long runway. In 2020 a pavement inspection was completed and very poor to fair pavement conditions were identified.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDs.
- Two alternatives to maintain airfield access for the 128<sup>th</sup> WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or



- Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.

A wetland delineation was performed at the proposed location and submitted to the Wisconsin Department of Natural Resources (WIDNR). The delineation identified wetlands present in a ditch line (See Attachment 5 – Wetland Delineation Confirmation) that may be impacted if the proposed project moves forward with implementation.

The proposed project area was entered into the WIDNR Natural Heritage Inventory Public Portal, it was identified that endangered resources are located within the 1-mile and 2-mile buffer of the project area. If requested, the public portal ID can be provided for reference. The proposed project was entered into the U.S. Fish & Wildlife Service Information for Planning and Consultation (IPaC) portal and endangered resources were identified as potentially affected by activities in the project location.

A cultural resources investigation was completed for the proposed project area, no cultural resources were identified during a pedestrian survey. Consultation with the Wisconsin State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act will be completed during the Preliminary Environmental Assessment (PEA) process.

Additional project studies include a Phase 1 Environmental Site Assessment for hazardous materials. A noise analysis is being completed to assess the DNL contours of existing operational conditions, no project forecast year, and with project forecast year.

The proposed project location is located within airport property located in Sections 28 and 33 of Township 06 North, Range 22 East. The project area is currently pavement and mowed grass fields with no structures. (See Attachment 6 – Site Photographs)

We are requesting that you identify any concerns the U.S. Environmental Protection Agency may have regarding the proposed project or related information about the area. Concerns or comments will be included in the PEA. Additionally, you will be included on the distribution list for the preliminary and final environmental assessments. If you would like to receive additional information regarding this proposed project, please contact Justin Weiss at 414-747-6233 or at [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com). Thank you for your assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Christine Turk'.

Christine Turk, ACE  
Airport Planning Manager  
General Mitchell International Airport

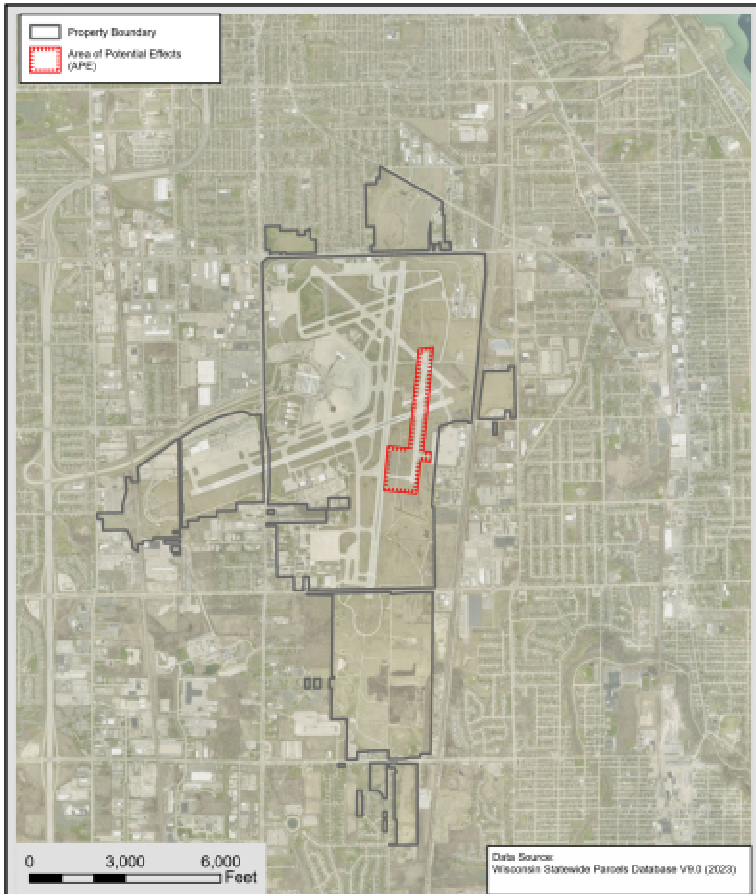


**Attachments:**

1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects
5. Wetland Delineation Confirmation
6. Site Pictures

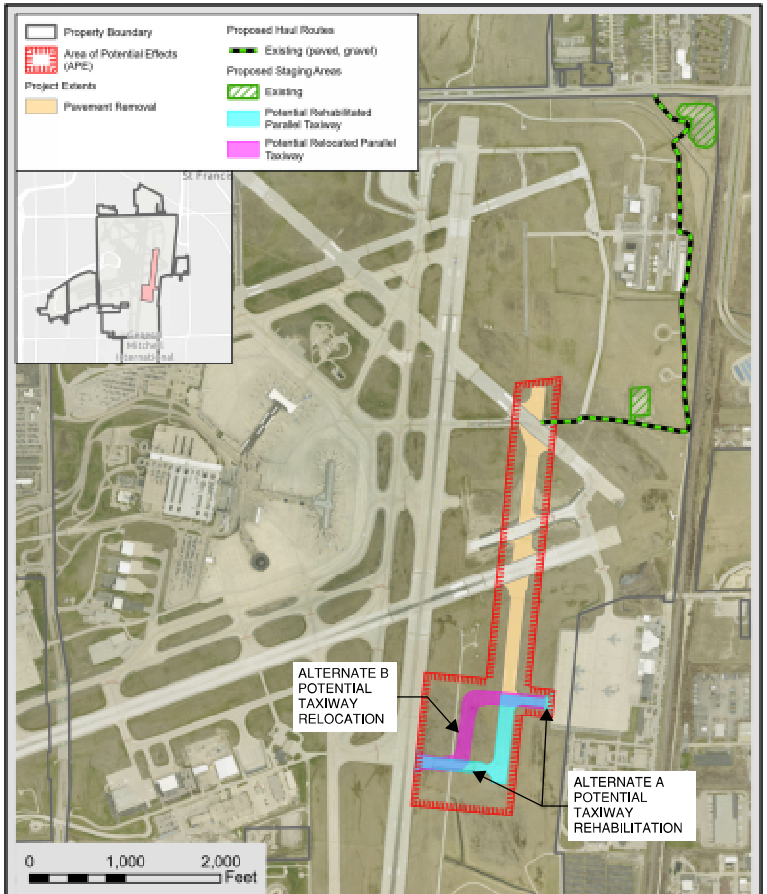
**Cc:** Justin Weiss, General Mitchell Airport Project Manager (by email)  
Wendy Hottenstein, WisDOT BOA (by email)  
Mallory Palmer, WisDOT BOA (by email)  
Kaitlyn Wehner, Westwood (by email)





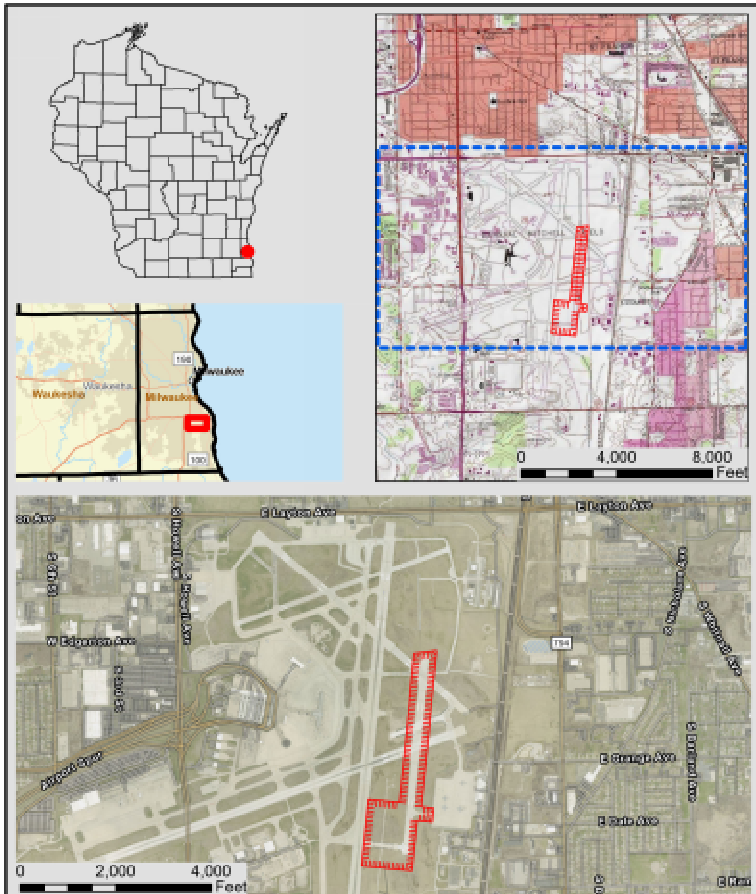
<p>1 Systems Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT PROPERTY MAP</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 3,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>2</b>	SCALE: 1 in = 1,000 ft PROJECT NO: <b>R3001844.00</b>

FIGURE NO. 2  
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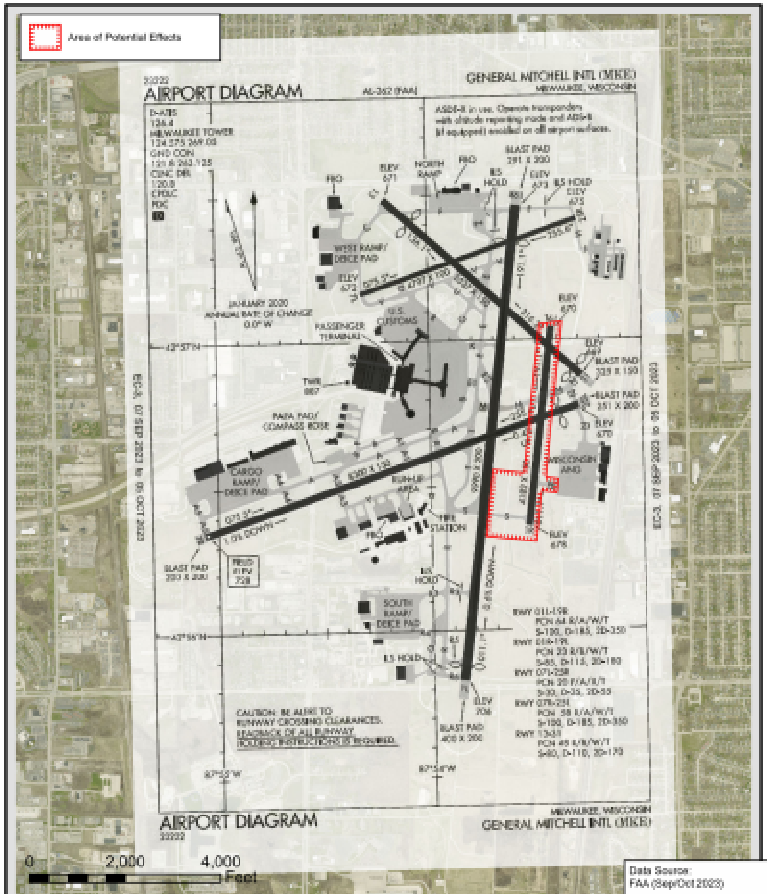
<p>1 Systems Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AREA OF POTENTIAL EFFECTS</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 1,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>4</b>	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>

FIGURE NO. 4  
Printed: 10/17/2023 8:27 PM



<p>1 Systems Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>1</b>	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>

FIGURE NO. 1  
Printed: 10/17/2023 8:34 PM



<p>1 Systems Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP</b>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>3</b>	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>

FIGURE NO. 3  
Printed: 10/17/2023 8:34 PM



State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
1027 W St Paul Ave  
Milwaukee WI, WI, 53233

Tony Evers, Governor  
Adam N. Payne, Secretary  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



09/28/2023 WIC-SE-2023-41-03089

Justin Weiss  
General Mitchell International Airport  
[sent electronically]

RE: Wetland Delineation Confirmation for "MKE Runways 1R-19L & 13-31" located in NW 1/4, SE 1/4, Section 28, Township 06N, Range 22E, in the City of Milwaukee, Milwaukee County

Dear Justin Weiss

We have reviewed the wetland delineation report from Quest Civil Engineers, LLC prepared for the above-mentioned site. This letter will serve as confirmation that the wetland boundaries shown on the enclosed wetland delineation figure are acceptable. This finding is based upon a detailed report review and interview with the delineator. Any filling or grading within these areas may require DNR approvals. Our wetland confirmation is valid for five years. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

In order to comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at calvin.lawrence@wisconsin.gov).

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization, to comply with the state's Endangered Species Law. To ensure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <https://dnr.wi.gov/topic/ERR/Review/Review.html>. The Endangered Resources Program will provide a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

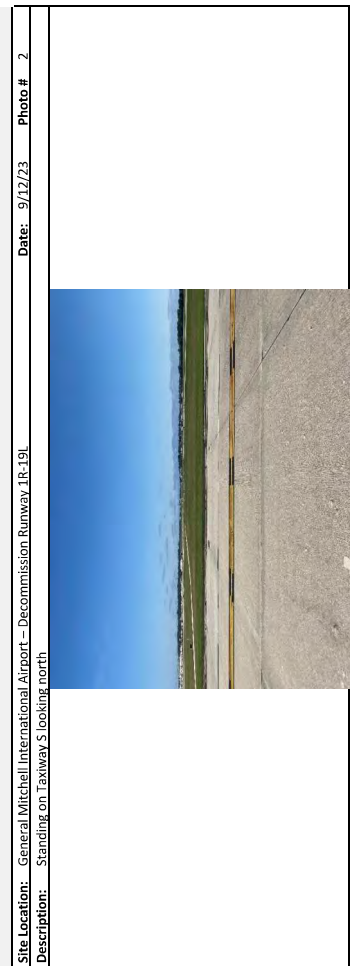
In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

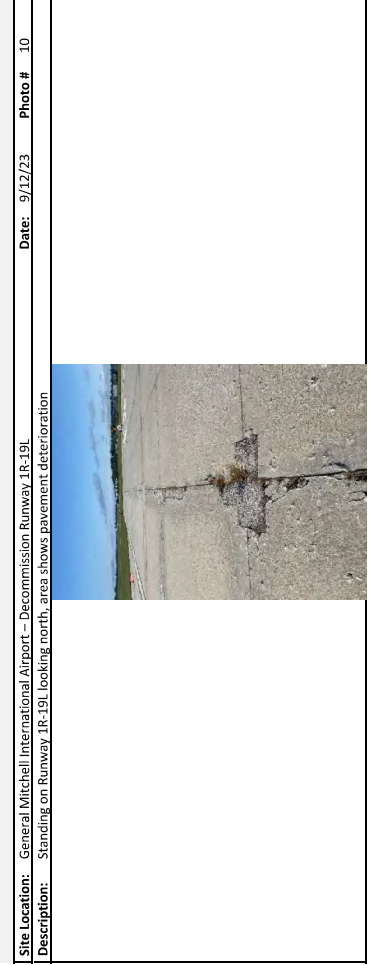
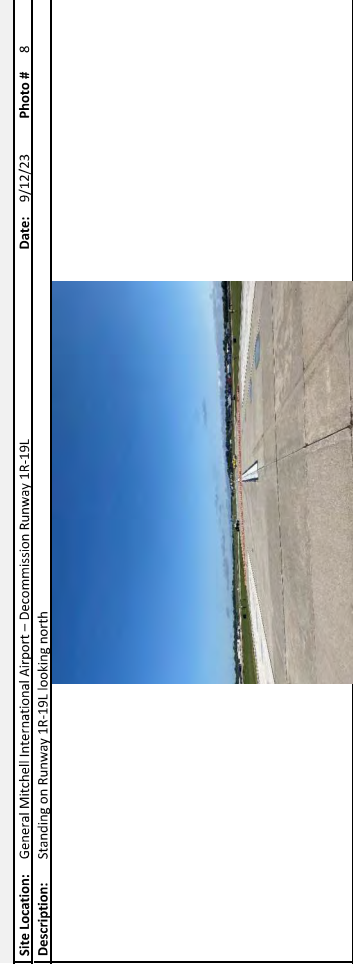
If you have any questions, please call me at (414) 306-6760 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely,  
*Kara Brooks*  
Kara Brooks  
Wetland Identification Specialist

Enclosures: Project Location Figure  
Wetland Delineation Figure

Email CC: USACE Project Manager  
Brian Krostedt, Quest





## Kaitlyn Wehner

---

**From:** Tyler, Jennifer (Blonn) (she/her/hers) <Tyler.Jennifer@epa.gov>  
**Sent:** Wednesday, November 8, 2023 3:52 PM  
**To:** Turk, Christine; McClain, Krystle  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** RE: Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Thank you, Christine. I am no longer with EPA's NEPA program. I am including the new NEPA Supervisor, Krystle McClain. I will forward project materials on to her. Best, Jen

Jen Tyler  
Supervisor, Tribal and International Affairs  
Tribal and Multi-media Programs Office  
U.S. Environmental Protection Agency, Region 5  
312-886-6394

---

**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 3:30 PM  
**To:** Tyler, Jennifer (Blonn) (she/her/hers) <Tyler.Jennifer@epa.gov>  
**Cc:** Weiss, Justin <jweiss@mitchellairport.com>; Hottenstein, Wendy - DOT <wendy.hottenstein@dot.wi.gov>; Palmer, Mallory K - DOT <malloryk.palmer@dot.wi.gov>; Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project

**Caution:** This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226



**ASQ BEST AIRPORT AWARD | NORTH AMERICA 2022**

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**TRIBAL NOTIFICATION**

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## Kaitlyn Wehner

---

**From:** Weiss, Justin <jweiss@mitchellairport.com>  
**Sent:** Friday, December 8, 2023 9:06 AM  
**To:** Kaitlyn Wehner  
**Subject:** FW: WisDOT request for comment and notification of Federal undertaking under 36 CFR 800 (0740-40-114)  
**Attachments:** Attachments RWY 1R-19L.pdf; Attachments RWY 13-31.pdf

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good Morning Kaitlyn,

See below for the tribal notification email for the runway decommissioning projects.

Let me know if you have any questions.

### Justin Weiss, PE

Project Manager, Airport Engineering  
Milwaukee Mitchell International Airport  
5300 South Howell Avenue  
Milwaukee, WI 53207  
Email: [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com)  
Office: 414-747-6233  
Cell: 414-309-4694

---

**From:** DOT BOA Environmental <DOTBOAEnvironmental@dot.wi.gov>  
**Sent:** Friday, December 8, 2023 8:42 AM  
**To:** DOT DL THPOs <DOTDLTHPOs@dot.wi.gov>  
**Cc:** MikeW <Mikew@badriver-nsn.gov>; FCPGrantsChairman@fcp-nsn.gov; Greendeer, Jon - DNR <maasusga@ho-chunk.com>; Louis Taylor <Louis.taylor@lco-nsn.gov>; Johnson, J <jjohnsonsr@ldftribe.com>; Chairman-MITW <chairman@mitw.org>; Shannon Holsey <shannon.holsey@mohican-nsn.gov>; Hill, Tehassi - DNR <thill7@oneidanation.org>; Boyd, Nicole - DNR <Nicole.boyd@redcliff-nsn.gov>; Fowler, Thomas - DNR <thomasf@stcroixobjwe-nsn.gov>; VanZile, Robert - DNR <robert.vanzile@scc-nsn.gov>; Hottenstein, Wendy - DOT <wendy.hottenstein@dot.wi.gov>; DOT BOA Environmental <DOTBOAEnvironmental@dot.wi.gov>; Turk, Christine <cturk@mitchellairport.com>; Weiss, Justin <jweiss@mitchellairport.com>  
**Subject:** WisDOT request for comment and notification of Federal undertaking under 36 CFR 800 (0740-40-114)

Some people who received this message don't often get email from [dotboaenvironmental@dot.wi.gov](mailto:dotboaenvironmental@dot.wi.gov). [Learn why this is important](#)

**WisDOT Project: 0740-40-114**

**AIP#: AIP-114**

**Airport Name: General Mitchell International Airport (MKE)**

**County: Milwaukee**

**Township, Range, Section: T06N, R22E, Sections 27, 28, & 33**

The Wisconsin Department of Transportation (WisDOT), in cooperation with the Federal Aviation Administration (FAA), is considering an undertaking located at Milwaukee General Mitchell International Airport. The proposed undertaking will consist of the following:

**RUNWAY 1R-19L**

- **Decommissioning and removal of Runway 1R-19L and associated electrical utilities.**
- **Potential rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting (Alternate A) or,**
- **Potential partial parallel taxiway and connector relocation including associated lighting. Located west of the existing Runway 1R-19L connecting Taxiway W and Taxiway S (Alternate B).**

**RUNWAY 13-31**

- **Decommissioning and Removal of Runway 13-31 and associated electrical utilities.**
- **Removal of Taxiway G, Taxiway U, Taxiway N connector and associated electrical utilities.**
- **Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.**

Attached is information regarding the proposed undertaking to assist you in providing comments regarding the determination of the area of potential effect (APE) and potential impacts to historic properties and/or burial sites.

WisDOT would be pleased to receive any comments your tribe wishes to share regarding the determination of the APE or potential impacts to historic properties and/or burials in this undertaking. Additionally, you may use this opportunity to request consultation pursuant to 36 CFR 800.3. WisDOT understands that your tribe is a sovereign nation and as such has the discretion to consult government to government with the FAA directly. Also other environmental studies may be conducted to include endangered species survey, contaminated material investigations, soil testing and right-of-way surveys. Results of these studies will assist the engineers in the design to avoid, minimize or mitigate the proposed project's effect upon cultural and natural resources. If WisDOT identifies the potential for historic properties to be affected, you will be provided more information.

To ensure your comments are considered during this early phase of project development, WisDOT requests a response within 30 days of receipt of this letter.

If your tribe wishes to become a consulting party under Section 106 of the National Historic Preservation Act or would like to receive additional information regarding this proposed project, please reply to this email or contact:

**WisDOT Project Manager: Wendy Hottenstein, P.E.**

**Phone: 608-261-6278**

**Address: Wisconsin Department of Transportation – Bureau of Aeronautics, 4822 Madison Yards Way, 5<sup>th</sup> Floor South, Madison, WI 53705**

Thank you,

Bureau of Aeronautics Environmental Team

[DOTBOAEnvironmental@dot.wi.gov](mailto:DOTBOAEnvironmental@dot.wi.gov)

Mallory Palmer | (608) 261-5861 | [malloryk.palmer@dot.wi.gov](mailto:malloryk.palmer@dot.wi.gov)

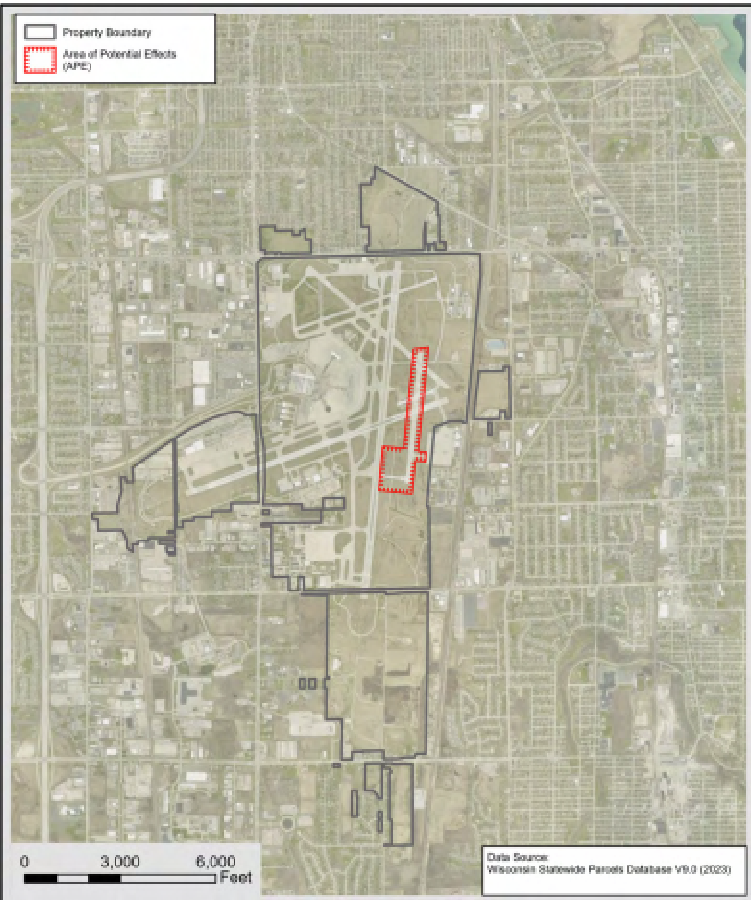
Kelly Halada | (608) 267-3633 | [kelly.halada@dot.wi.gov](mailto:kelly.halada@dot.wi.gov)



Attachments: Project Location Maps (Site Location Map, Airport Property Map, Airport Diagram Map, Area of Potential Effects Map)

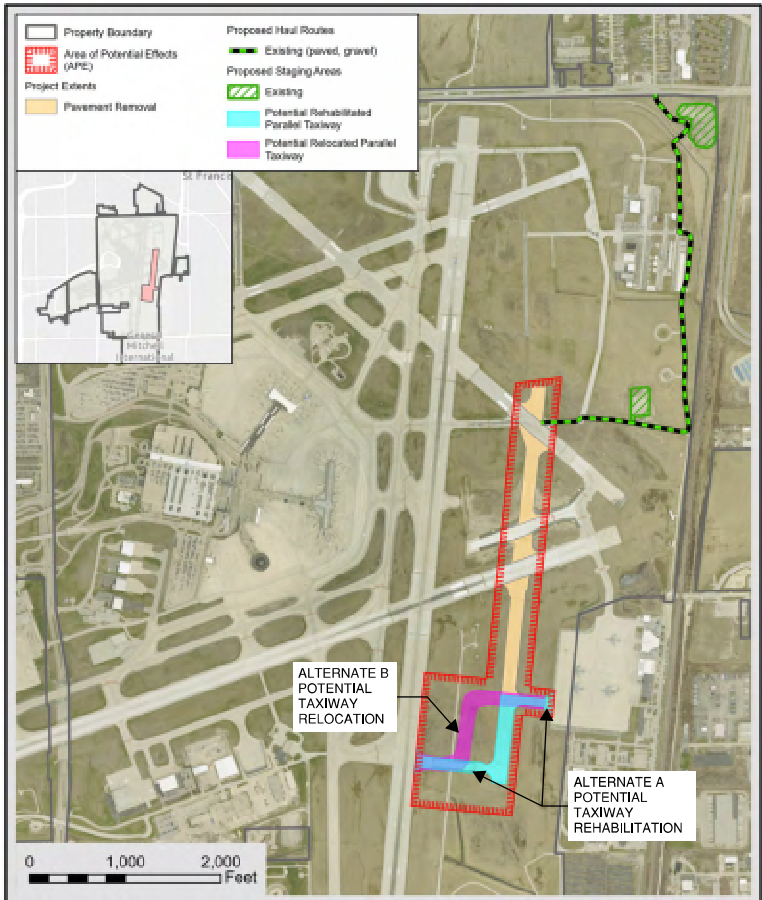
EC: Regional Tribal Liaison  
Tribal Leader

CC: Johnathon Buffalo, NAGPRA Rep. – Sac and Fox Tribe of the Mississippi in Iowa  
Cultural Preservation Office - Iowa Tribe of Oklahoma  
Hattie Mitchell, THPO – Prairie Band Potawatomi Nation



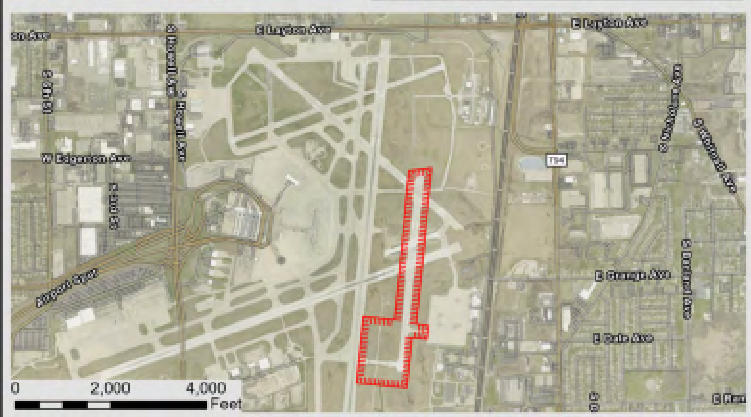
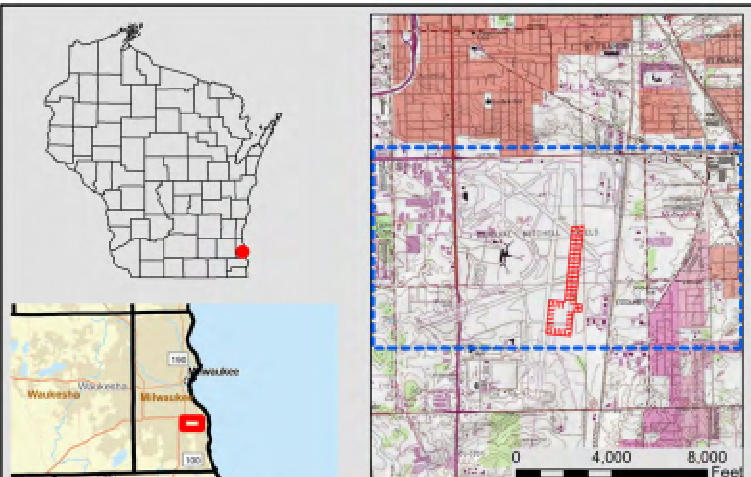
<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL AIRPORT PROPERTY MAP</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH Date: 10/17/2023	SCALE: 1 in = 3,000 ft PROJECT NO: R3001844.00 FIGURE NO: 2
		<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL AREA OF POTENTIAL EFFECTS</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>	

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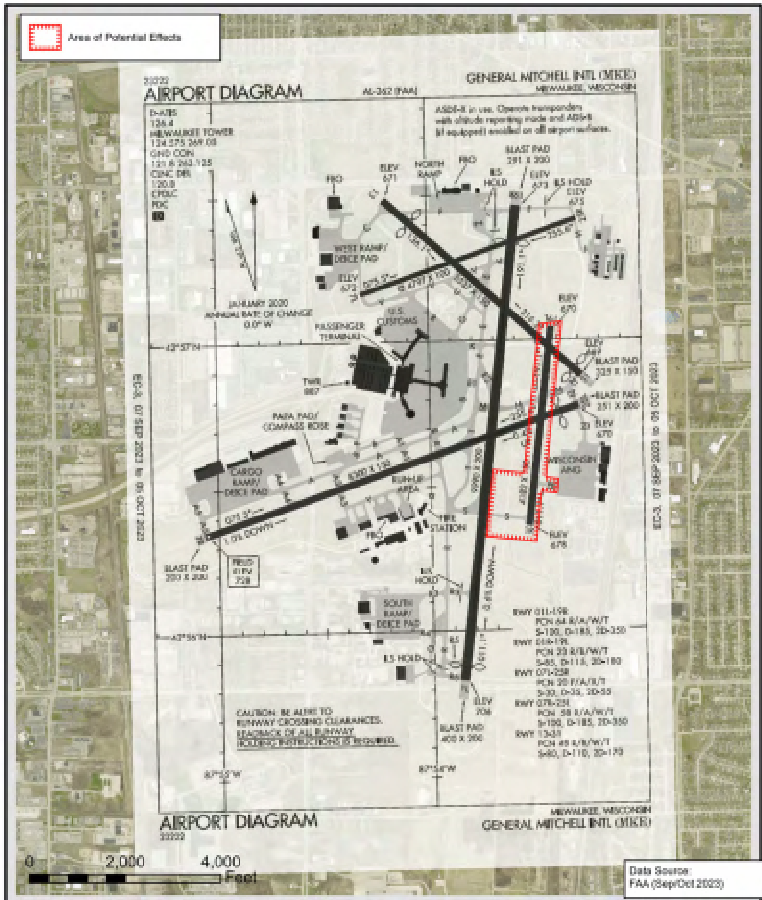
<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL AREA OF POTENTIAL EFFECTS</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH Date: 10/17/2023	SCALE: 1 in = 1,000 ft PROJECT NO: R3001844.00 FIGURE NO: 4
		<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>	

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<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH Date: 10/17/2023	SCALE: 1 in = 2,000 ft PROJECT NO: R3001844.00 FIGURE NO: 1
		<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>	

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<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>		Project Manager: JCH Project Engineer: JCH Drawn By: JCH Checked By: JCH Date: 10/17/2023	SCALE: 1 in = 2,000 ft PROJECT NO: R3001844.00 FIGURE NO: 3
		<p>1 Systems Center Appleton, WI 54914   (920) 731-8882 www.westwoodinfo.com</p>		<p><b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b></p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p>	

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**MILWAUKEE COUNTY HISTORICAL SOCIETY**

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## Kaitlyn Wehner

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**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 12:54 PM  
**To:** info@milwaukeehistory.net  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project  
**Attachments:** MKE RWY 1R-19L - Milwaukee Co Historical Society Letter.pdf; Attachment 1 - RWY 1R-19L Location Map.pdf; Attachment 2 - RWY 1R-19L Airport Property Map.pdf; Attachment 3 - RWY 1R-19L Airport Diagram Map.pdf; Attachment 4 - RWY 1R-19L Area of Potential Effects Map.pdf

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226





November 8, 2023

Milwaukee County Historical Society

910 North Dr. Martin Luther King Jr. Dr

Milwaukee, WI 53203

*Via Electronic Mail Only to [info@milwaukeehistory.net](mailto:info@milwaukeehistory.net)*

RE: Milwaukee General Mitchell International Airport  
Proposed Runway 1R-19L Decommissioning and Removal

Dear Milwaukee County Historical Society:

General Mitchell International Airport (Airport) is beginning preliminary studies for improvements to the Airport. (See Attachment 1 – Site Location Map & Attachment 2 – Airport Property Map) These proposed improvements include the decommissioning and removal of Runway 1R-19L (Project).

Recently, the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards. Additionally, the proposed project will align the airfield for future development and reduce the operation and maintenance costs of deteriorating pavements.

Currently, Runway 1R-19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 1R-19L primarily services military aircraft capable of operating on a 4,000-foot-long runway. In 2020 a pavement inspection was completed and very poor to fair pavement conditions were identified.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDs.
- Two alternatives to maintain airfield access for the 128<sup>th</sup> WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or
  - Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.





The Wisconsin National Register of Historic Places online database was searched. No records in or near the proposed project area were identified. The closest identified property is the New Coeln House located at 5905 South Howell Avenue.

We are requesting that the Milwaukee County Historical Society identify any concerns they may have regarding the proposed project. If you would like to receive additional information regarding this proposed project, please contact Justin Weiss at 414-747-6233 or at [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com). Thank you for your assistance.

Sincerely,

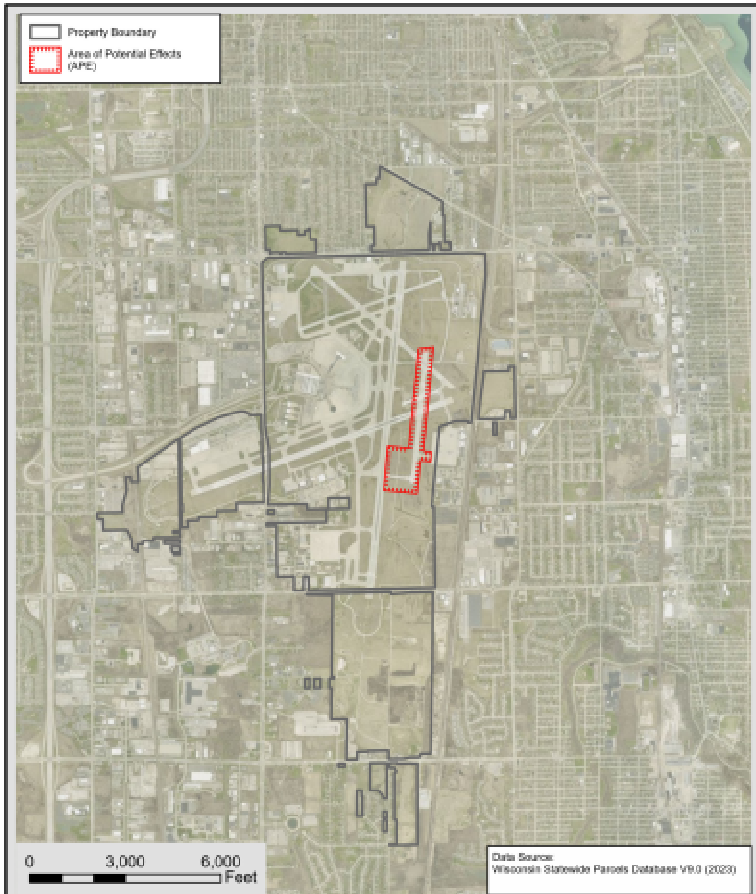
A handwritten signature in black ink, appearing to read "Christine Turk".

Christine Turk, ACE  
Airport Planning Manager  
General Mitchell International Airport

Attachments:

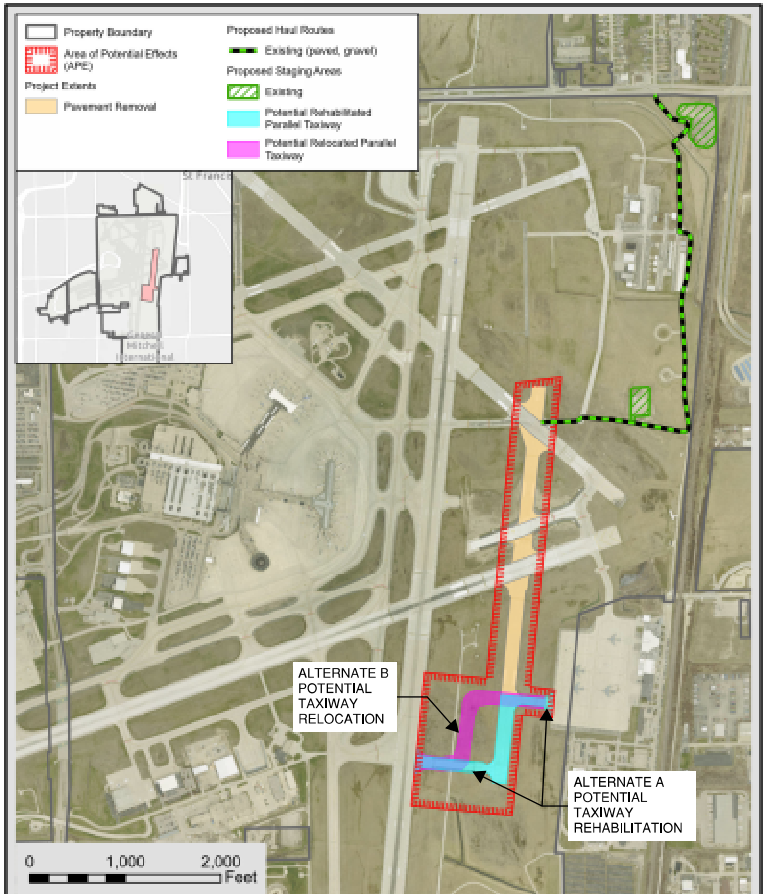
1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects

Cc: Justin Weiss, General Mitchell Airport Project Manager (by email)  
Wendy Hottenstein, WisDOT BOA (by email)  
Mallory Palmer, WisDOT BOA (by email)  
Kaitlyn Wehner, Westwood (by email)



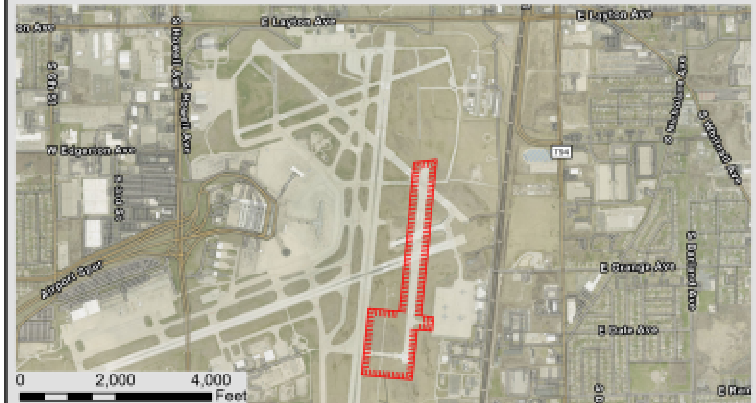
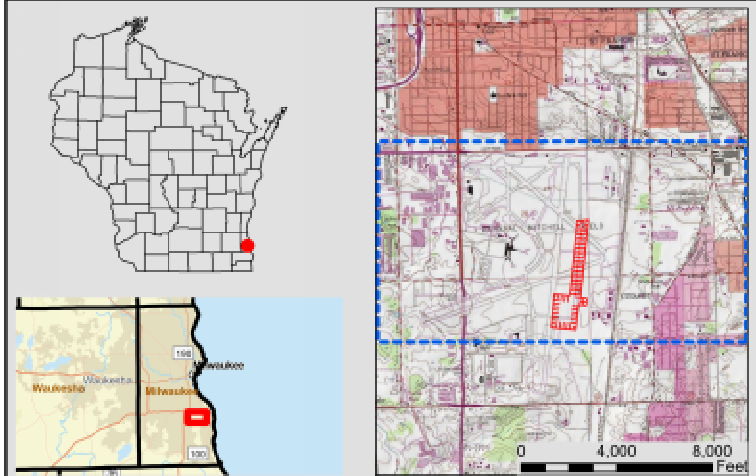
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		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: 2	Project Manager: Project Engineer: JOHN Drawn By: Checked By:

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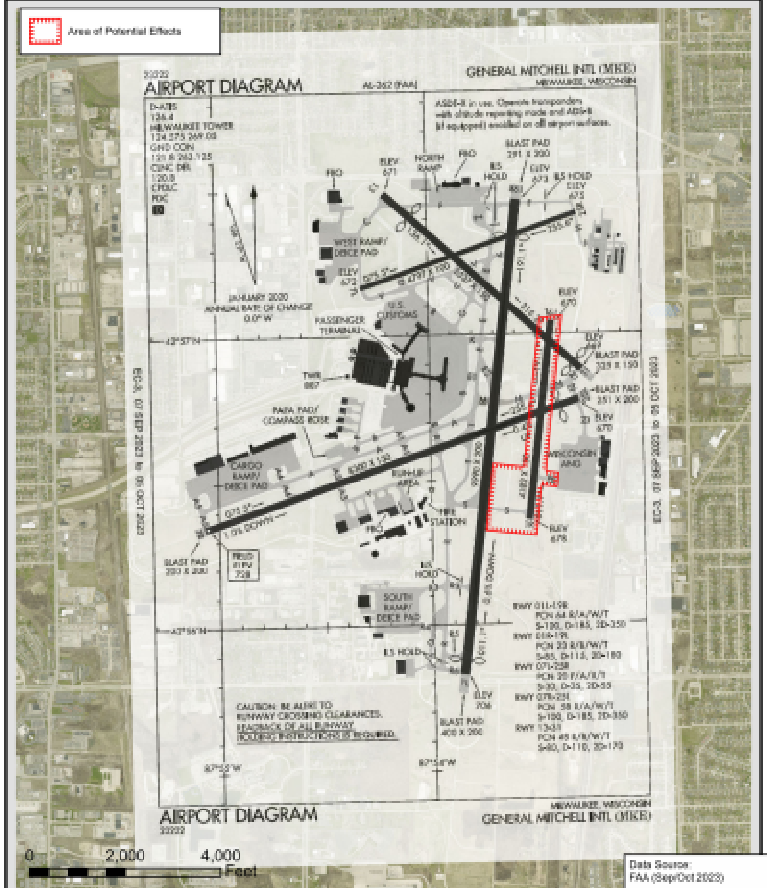
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<p>1 System Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b>		Project Manager: Project Engineer: JOHN Drawn By: Checked By:	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: 1	Project Manager: Project Engineer: JOHN Drawn By: Checked By:

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<p>1 System Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP</b>		Project Manager: Project Engineer: JOHN Drawn By: Checked By:	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: 3	Project Manager: Project Engineer: JOHN Drawn By: Checked By:

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 Printed: 08/29/2023 8:33 PM

**MILWAUKEE METROPOLITAN SEWERAGE DISTRICT**

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## Kaitlyn Wehner

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**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 3:23 PM  
**To:** mklappasullivan@mmsd.com  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project  
**Attachments:** MKE RWY 1R-19L - MMSD Letter.pdf; Attachment 1 - RWY 1R-19L Location Map.pdf; Attachment 2 - RWY 1R-19L Airport Property Map.pdf; Attachment 3 - RWY 1R-19L Airport Diagram Map.pdf; Attachment 4 - RWY 1R-19L Area of Potential Effects Map.pdf; Attachment 5 - Wetland Delineation Confirmation.pdf; Attachment 6 - RWY 1R-19L Photo log.pdf

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226





November 8, 2023

Micki Klappa-Sullivan, PE, ENV SP

Manager of Engineering Planning

Milwaukee Metropolitan Sewerage District (MMSD)

260 W. Seeboth Street

Milwaukee, WI 53204

*Via Electronic Mail Only to [mklappasullivan@mmsd.com](mailto:mklappasullivan@mmsd.com)*

RE: Milwaukee General Mitchell International Airport  
Proposed Runway 1R-19L Decommissioning and Removal

Dear Ms. Klappa-Sullivan:

General Mitchell International Airport (Airport) is beginning preliminary studies for improvements to the Airport. (See Attachment 1 – Site Location Map & Attachment 2 – Airport Property Map) These proposed improvements include the decommissioning and removal of Runway 1R-19L (Project).

Recently, the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards. Additionally, the proposed project will align the airfield for future development and reduce the operation and maintenance costs of deteriorating pavements.

Currently, Runway 1R-19L is 4,182 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 1R-19L primarily services military aircraft capable on operating on a 4,000-foot-long runway. In 2020 a pavement inspection was completed, very poor to fair pavement conditions were identified.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 1R-19L
- Removal of approximately 53,000 SY of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDs.
- Two alternatives to maintain airfield access for the 128<sup>th</sup> WI Air National Guard Unit located east of Runway 1R-19L.
  - Alternate A: Rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation, or



- Alternate B: Partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S.

A wetland delineation was performed at the proposed location and submitted to the Wisconsin Department of Natural Resources. The delineation identified wetlands present in a ditch line (See Attachment 5 – Wetland Delineation Confirmation) that may be impacted if the proposed project moves forward with implementation.

The proposed project is located within airport property specifically located in Sections 28 and 33 of Township 06 North, Range 22 East. The project area is currently pavement and mowed grass fields with no structures. (See Attachment 6 – Site Photographs)

We are requesting that you identify any concerns the Milwaukee Metropolitan Sewerage District may have about the proposed project. Additionally, you will be included on the distribution list for the preliminary and final environmental assessments. If you would like to receive additional information regarding this proposed project, please contact Justin Weiss at 414-747-6233 or at [jweiss@mitchellairport.com](mailto:jweiss@mitchellairport.com). Thank you for your assistance.

Sincerely,

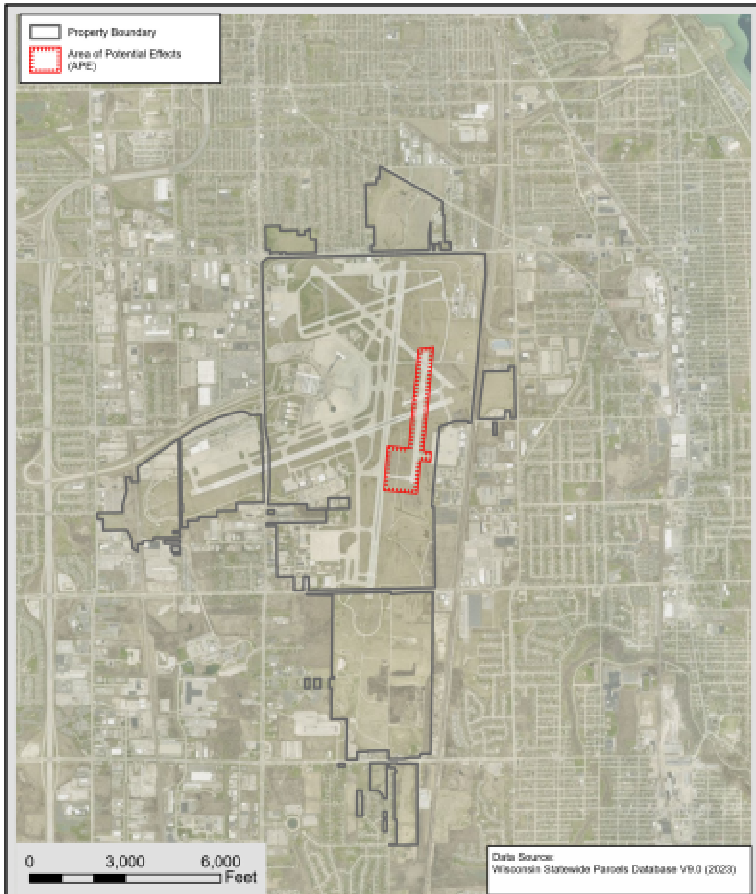
A handwritten signature in blue ink, appearing to read "Christine Turk".

Christine Turk, ACE  
Airport Planning Manager  
General Mitchell International Airport

**Attachments:**

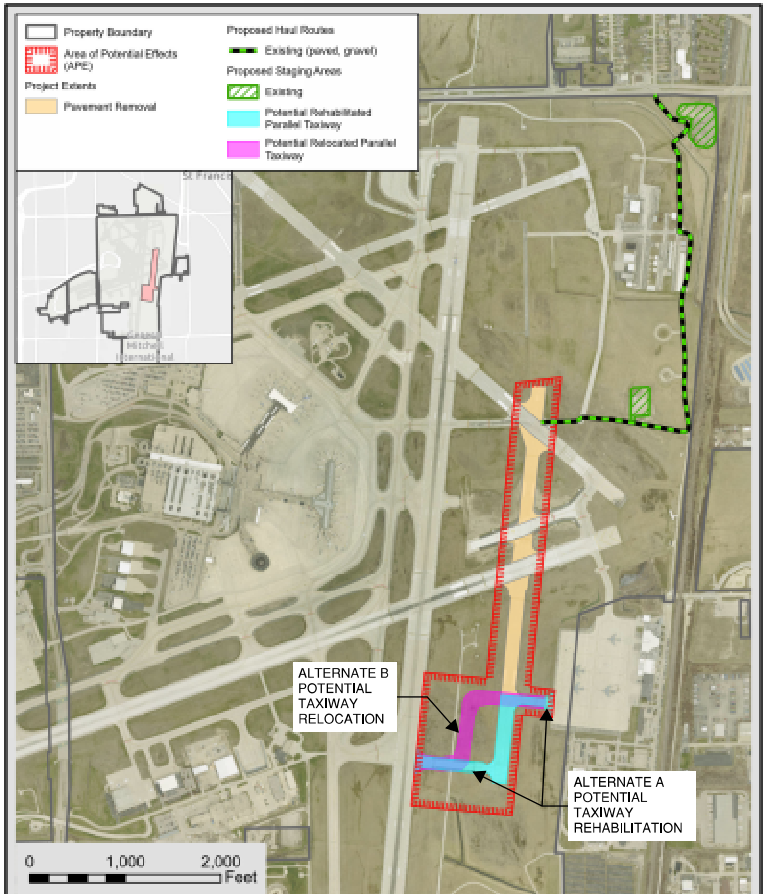
1. Site Location Map
2. Airport Property Map
3. Airport Diagram Map
4. Area of Potential Effects
5. Wetland Delineation Confirmation
6. Site Pictures

Cc: Justin Weiss, General Mitchell Airport Project Manager (by email)  
Wendy Hottenstein, WisDOT BOA (by email)  
Mallory Palmer, WisDOT BOA (by email)  
Kaitlyn Wehner, Westwood (by email)



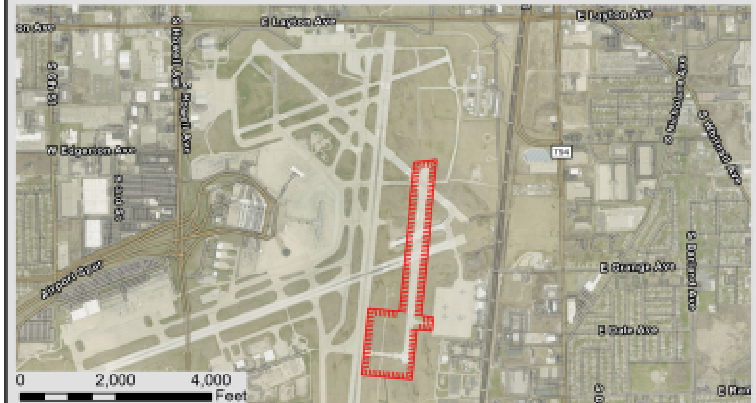
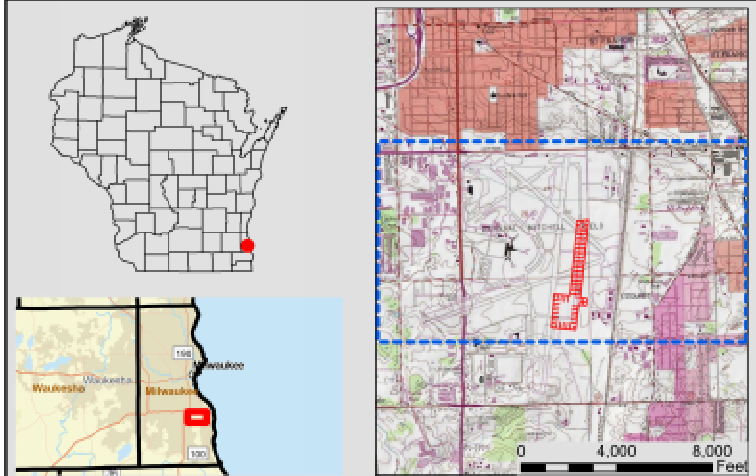
<p>1 System Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT PROPERTY MAP</b>		Project Manager: Project Engineer: Drawn By: JOHN Checked By:	SCALE: 1 in = 3,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>2</b>	SCALE: 1 in = 1,000 ft PROJECT NO: <b>R3001844.00</b>

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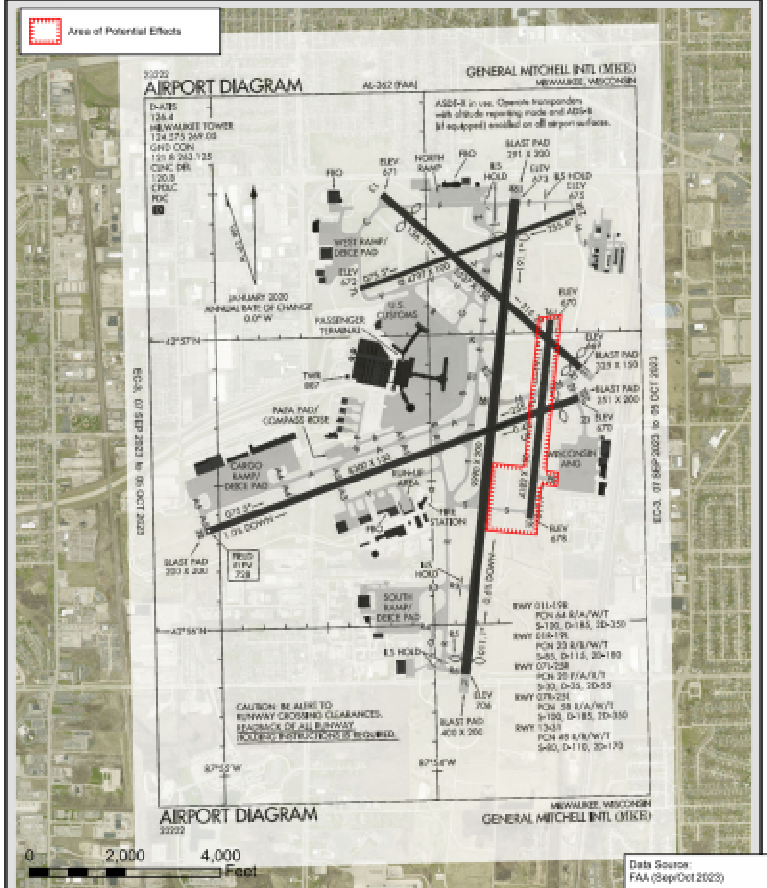
<p>1 System Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AREA OF POTENTIAL EFFECTS</b>		Project Manager: Project Engineer: Drawn By: JOHN Checked By:	SCALE: 1 in = 1,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>4</b>	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>

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 Printed: 08/11/2023 8:27 PM



<p>1 System Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL LOCATION MAP</b>		Project Manager: Project Engineer: Drawn By: JOHN Checked By:	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>1</b>	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>

R:\081844\08232\Drawings\AerialMap - Copy.aprx  
 Printed: 08/11/2023 8:34 PM



<p>1 System Drive Appleton, WI 54914 www.westwood.com</p>		<b>MKE RUNWAY 1R-19L REMOVAL AIRPORT DIAGRAM MAP</b>		Project Manager: Project Engineer: Drawn By: JOHN Checked By:	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>
		GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN		Date: 10/17/2023 FIGURE NO.: <b>3</b>	SCALE: 1 in = 2,000 ft PROJECT NO: <b>R3001844.00</b>

R:\081844\08232\Drawings\AerialMap - Copy.aprx (Airport Diagram Map)  
 Printed: 08/11/2023 8:33 PM

Data Source: FAA (Sept/Oct 2023)





**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Standing on Runway 1R-19L looking east at Taxiway W

Date: 9/12/23 Photo # 5



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Standing on Runway 1R-19L north of Taxiway W looking south

Date: 9/12/23 Photo # 6



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Standing on Runway 1R-19L looking south

Date: 9/12/23 Photo # 7



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Standing on Runway 1R-19L looking north

Date: 9/12/23 Photo # 8




**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Standing on Runway 1R-19L and Runway 13-31 intersection looking south

Date: 9/12/23 Photo # 9



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Standing on Runway 1R-19L looking north, area shows pavement deterioration

Date: 9/12/23 Photo # 10



**Site Location:** General Mitchell International Airport – Decommission Runway 1R-19L  
**Description:** Site Aerial Overview

Date: N/A Photo # 11



## Kaitlyn Wehner

---

**From:** Klappa-Sullivan, Micki <MKlappaSullivan@mmsd.com>  
**Sent:** Tuesday, November 14, 2023 9:38 AM  
**To:** Turk, Christine  
**Cc:** Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner  
**Subject:** RE: [EXT] Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project

**CAUTION: External Sender. Please do not click on links or open attachments from senders you do not trust.**

Thank you. I have no questions at this time.

### Micki Klappa-Sullivan, PE, ENV SP

Manager of Engineering Planning | MMSD

**P:** 414.225.2178

**M:** 414.416.5389

**E:** [MKlappaSullivan@mmsd.com](mailto:MKlappaSullivan@mmsd.com)

---

**From:** Turk, Christine <cturk@mitchellairport.com>  
**Sent:** Wednesday, November 8, 2023 3:23 PM  
**To:** Klappa-Sullivan, Micki <MKlappaSullivan@mmsd.com>  
**Cc:** Weiss, Justin <jweiss@mitchellairport.com>; Hottenstein, Wendy - DOT <wendy.hottenstein@dot.wi.gov>; Palmer, Mallory K - DOT <malloryk.palmer@dot.wi.gov>; Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>  
**Subject:** [EXT] Milwaukee Mitchell International Airport Proposed Runway 1R-19L Decommissioning and Removal Project

Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 1R-19L at Milwaukee Mitchell International Airport.

Let us know if you have any questions or concerns regarding the proposed project.

Thank you,

Christine Turk, ACE  
Airport Planning Manager  
Milwaukee Mitchell International Airport  
5300 S Howell Avenue  
Milwaukee, WI 53207  
Office: 414-747-6226



**ASQ BEST AIRPORT AWARD | NORTH AMERICA 2022**

## **APPENDIX 3 – EJSCREEN COMMUNITY REPORT**

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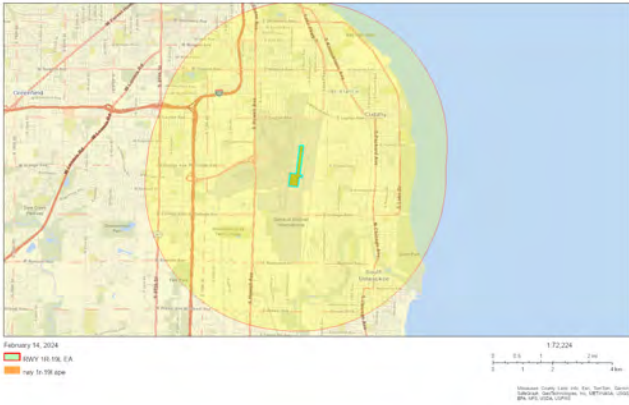
# EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

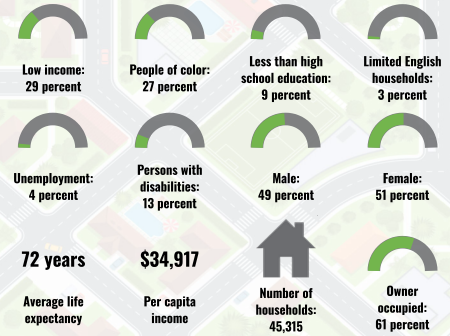
## Milwaukee, WI

3 miles Ring around the Area  
 Population: 102,234  
 Area in square miles: 34.6

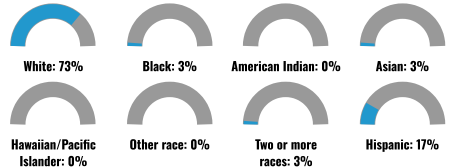
A3 Landscape



### COMMUNITY INFORMATION



### BREAKDOWN BY RACE



### BREAKDOWN BY AGE



### LIMITED ENGLISH SPEAKING BREAKDOWN



### LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	82%
Spanish	11%
Russian, Polish, or Other Slavic	1%
Other Indo-European	2%
Other Asian and Pacific Island	2%
Arabic	2%
Total Non-English	18%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

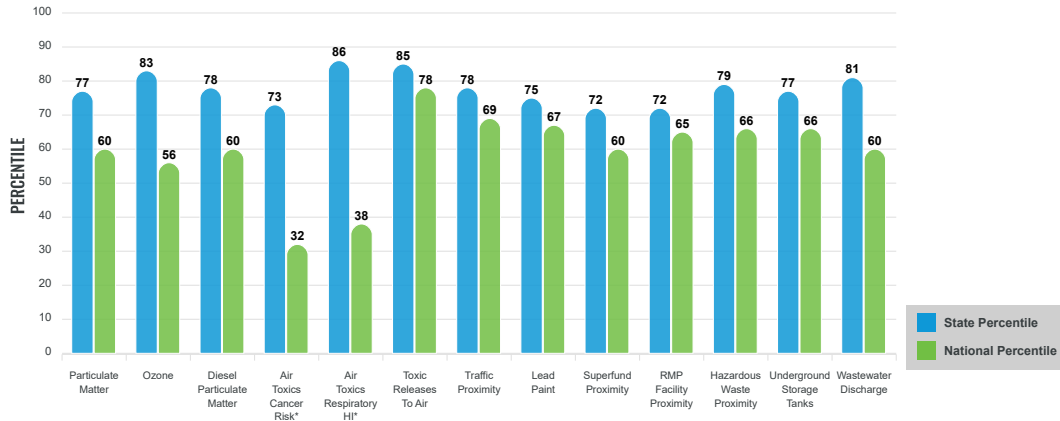
## Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

### EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

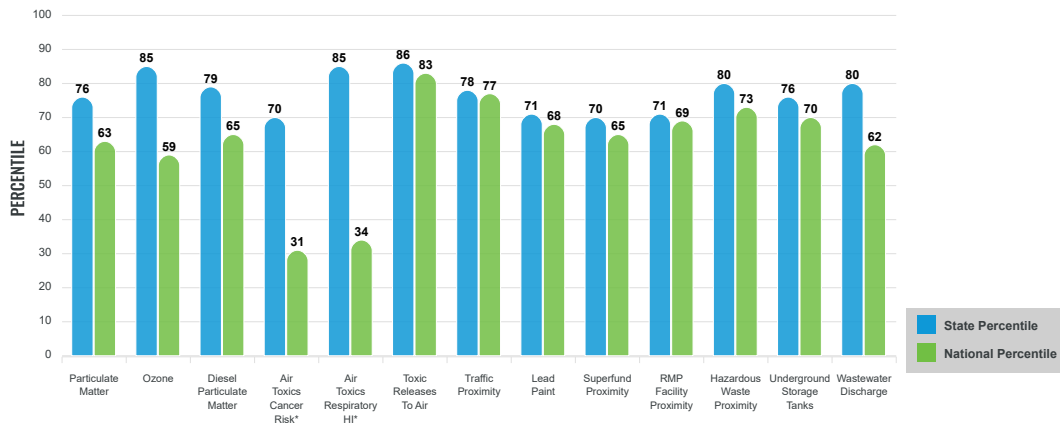
#### EJ INDEXES FOR THE SELECTED LOCATION



### SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

#### SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 3 miles Ring around the Area



# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>POLLUTION AND SOURCES</b>					
Particulate Matter (µg/m <sup>3</sup> )	8.49	7.98	61	8.08	58
Ozone (ppb)	61.5	58.6	89	61.6	53
Diesel Particulate Matter (µg/m <sup>3</sup> )	0.251	0.179	78	0.261	58
Air Toxics Cancer Risk* (lifetime risk per million)	20	19	12	25	5
Air Toxics Respiratory HI*	0.23	0.21	7	0.31	4
Toxic Releases to Air	160,000	8,100	99	4,600	99
Traffic Proximity (daily traffic count/distance to road)	740	320	86	210	94
Lead Paint (% Pre-1960 Housing)	0.55	0.4	70	0.3	77
Superfund Proximity (site count/km distance)	0.08	0.12	59	0.13	59
RMP Facility Proximity (facility count/km distance)	0.59	0.59	67	0.43	79
Hazardous Waste Proximity (facility count/km distance)	2.5	1.4	79	1.9	77
Underground Storage Tanks (count/km <sup>2</sup> )	5.2	3.3	80	3.9	78
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0072	0.028	79	22	65
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index	28%	24%	72	35%	48
Supplemental Demographic Index	13%	12%	67	14%	51
People of Color	27%	21%	77	39%	47
Low Income	29%	28%	61	31%	53
Unemployment Rate	4%	4%	62	6%	47
Limited English Speaking Households	3%	1%	84	5%	66
Less Than High School Education	9%	8%	69	12%	54
Under Age 5	6%	5%	61	6%	60
Over Age 64	17%	18%	49	17%	54
Low Life Expectancy	19%	19%	58	20%	50

\*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/air-toxics-data-update>

**Sites reporting to EPA within defined area:**

Superfund .....	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities .....	10
Water Dischargers .....	59
Air Pollution .....	15
Brownfields .....	7
Toxic Release Inventory .....	58

**Other community features within defined area:**

Schools .....	32
Hospitals .....	3
Places of Worship .....	39

**Other environmental data:**

Air Non-attainment .....	Yes
Impaired Waters .....	Yes

Selected location contains American Indian Reservation Lands* .....	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community .....	Yes
Selected location contains an EPA IRA disadvantaged community .....	Yes

Report for 3 miles Ring around the Area

# EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	19%	19%	58	20%	50
Heart Disease	5.8	5.8	46	6.1	44
Asthma	9.4	9.9	32	10	36
Cancer	6.6	6.6	40	6.1	57
Persons with Disabilities	12.6%	12.1%	58	13.4%	50

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	5%	9%	37	12%	41
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	14%	14%	54	14%	58
Lack of Health Insurance	6%	6%	65	9%	45
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

*Report for 3 miles Ring around the Area*

[www.epa.gov/ejscreen](http://www.epa.gov/ejscreen)

## **APPENDIX 4 – NOISE ANALYSIS**

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# Milwaukee Mitchell International Airport Runway 1R-19L Decommissioning Environmental Assessment

## DRAFT Noise Technical Report

HMMH Report No. 23-0069B.001

April 2024

**Prepared for:**

**Kaitlyn Wehner**

**Westwood**

1 Systems Drive

Appleton, WI 54914

**Prepared by:**

Vincent Ma

Trent Tougas

Scott Polzin



**HMMH**

700 District Avenue, Suite 800

Burlington, MA 01803

T 781.229.0707



## Executive Summary

In support of an Environmental Assessment (EA) for Milwaukee County, this Noise Technical Report provides an assessment of the potential noise impacts associated with the proposed decommissioning of Runway 1R-19L at Milwaukee Mitchell International Airport (MKE). Harris Miller Miller & Hanson, Inc. (HMMH) evaluated potential impacts from noise due to the Proposed Action under the National Environmental Policy Act (NEPA) in accordance with Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*.

HMMH assessed noise changes for two specific periods: calendar year (CY) 2028, which corresponds to the year immediately following the completion of the proposed project, and CY 2033, representing a five-year interval beyond the implementation year. For each future period, a No Action and Proposed Action alternative was prepared.

Aircraft operations are not forecasted to increase as a result of the Proposed Action. Instead, the future operations on Runway 1R-19L will shift to the parallel runway, Runway 1L-19R in the future under the Proposed Action scenarios.

The Proposed Action will not result in a significant impact in noise as a result of the decommissioning of Runway 1R-19L. The Proposed Action will cause a slight decrease in acreage of the DNL 65 dB contours in both 2028 and 2033 forecast years respectively and will not impact any additional noncompatible land use.

There are projected to be no additional housing units or noise sensitive sites within the Proposed Action DNL 65 dB contours for 2028 or 2033. Therefore, no mitigation is proposed or required for Proposed Action.

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## Appendix

Appendix A: Aircraft Noise Terminology ..... A-1

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# 1 Introduction

An Environmental Assessment (EA) is being prepared by Westwood for Milwaukee County to evaluate the potential environmental consequences of the Proposed Action at Milwaukee Mitchell International Airport (MKE) in Milwaukee County, Wisconsin. The EA is needed to assess the potential environmental impacts of the proposed decommissioning of Runway 1R-19L. Federal Aviation Administration (FAA) approval of the proposed project is considered a Federal Action, subject to the National Environmental Policy Act (NEPA). This EA does not include consideration of noise from non-airport related sources, such as commercial activity, highway traffic, or noise from local roadways.

This Noise Technical Report was prepared in support of the EA by Harris Miller Miller & Hanson Inc. (HMMH). HMMH modeled five scenarios:

- Existing Conditions (2023)
- Forecast year 2028 No-Action
- Forecast year 2028 Proposed Action
- Forecast year 2033 No-Action
- Forecast year 2033 Proposed Action

For a NEPA noise analysis of aircraft operations, the FAA requires the use of the Day-Night Average Sound Level (DNL) metric. The 24-hour analysis period must represent the average annual day (AAD), meaning average daily aircraft operations over a 365-day period or over a 366-day period in a leap year.

**Section 2** of this report presents the regulatory setting, **Section 3** presents the modeling methodology, **Section 4** presents the existing (2023) conditions, and **Section 5** presents the future (2028 and 2033) alternative scenarios. An explanation of the acoustical terminology is provided in **Appendix A**.

## 2 Regulatory Setting

### 2.1 FAA Order 1050.1F, Environmental Impacts: Policies and Procedures

FAA Order 1050.1F serves as the FAA’s policy and procedures for compliance with NEPA and implementing regulations issued by the Council on Environmental Quality (CEQ). The provisions of this Order and the CEQ Regulations apply to actions directly undertaken by the FAA and to actions undertaken by a non-federal entity where the FAA has authority to condition a permit, license, or other approval. The requirements in this Order apply to, but are not limited to, the following actions: grants, loans, contracts, leases, construction and installation actions, procedural actions, research activities, rulemaking and regulatory actions, certifications, licensing, permits, plans submitted to the FAA by state and local agencies for approval, and legislation proposed by the FAA. Order 1050.1F and the 1050.1F 2023 Desk Reference provide the specific requirements for this EA.

### 2.2 FAA Order 5050.4B, National Environmental Policy Act Implementing Instructions for Airport Actions

FAA’s Office of Airports (ARP) is responsible for identifying major federal actions involving the Nation’s public-use airports. After determining that an airport sponsor is proposing a major Federal Action such as this EA, ARP is responsible for analyzing the environmental effects of that action and its alternatives. FAA Order 5050.4B, “National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions,” provides instruction on evaluating those environmental effects. Order 5050.4B supplements FAA Order 1050.1F, “Environmental Impacts: Policies and Procedures.”

These laws and guidance documents specify the use of DNL as the noise metric used in all FAA aviation noise studies in airport communities. DNL, a cumulative sound level, provides a measure of total sound energy. DNL is a logarithmic average of the sound levels of multiple events at one location over a 24-hour period. A 10 dB penalty is added to all sounds occurring during nighttime hours (between 10:00 p.m. and 6:59 a.m.). The 10 dB increase for nighttime events accounts for the added disturbance of noise during typical sleeping hours as ambient sound levels during nighttime hours are typically about 10 dB lower than during daytime hours.

The noise analysis compares the No Action Alternative and Proposed Action Alternative for the future year using the FAA’s thresholds of significance. **Table 1** defines the significance threshold for changes in noise in accordance with FAA Order 1050.1F. When an action (compared to the No Action Alternative for the same timeframe) would cause noise-sensitive areas to have a DNL greater than or equal to 65 dB and experience a change in noise of at least 1.5 dB, the impact is considered significant. For example, an increase from No Action DNL 65.5 dB to Proposed Action DNL 67 dB is considered a significant impact, as is an increase from No Action DNL 63.5 dB to Proposed Action DNL 65 dB. **Table 1** also lists FAA-defined reportable changes of noise levels.

**Table 1. Aircraft DNL Thresholds and Impact Categories**

Source: FAA Order 1050.1F and the 1050.1F 2023 Desk Reference

	DNL 65 dB or Greater	Greater than or equal to DNL 60 dB but less than DNL 65 dB	Greater than or equal to DNL 45 dB but less than DNL 60 dB
Minimum Change in DNL When Compared to the Higher of the Proposed Action Alternative or No Action Alternative DNL over noise sensitive land use	1.5 dB	3.0 dB	5.0 dB
Level Of Change	Significant	Reportable	Reportable

In addition to defining significant impacts, FAA Order 1050.1F includes additional reporting requirements, including:

- The location and number of noise-sensitive uses at or above DNL 65 dB.
- The disclosure of potentially newly noncompatible land use regardless of whether there is a significant noise impact.
- Maps depicting the number of residences or people residing at or above DNL 65 dB, 70 dB, and 75 dB exposure levels.

FAA Order 1050.1F states, “Special consideration needs to be given to the evaluation of the significance of noise impacts on noise-sensitive areas within Section 4(f) properties (including, but not limited to, noise-sensitive areas within national parks; national wildlife and waterfowl refuges; and historic sites, including traditional cultural properties) where the land use compatibility guidelines in 14 CFR Part 150 are not relevant to the value, significance, and enjoyment of the area in question.”<sup>1</sup> For example, the DNL 65 dB threshold does not adequately address the impacts of noise on visitors to areas within a national park or national wildlife and waterfowl refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute. There are no areas of natural quiet near the proposed project; therefore, special consideration for these areas do not apply.

### 2.2.1 Land Use Compatibility Guidelines

The objective of airport noise compatibility planning is to promote compatible land use in communities surrounding airports. NEPA requires the review of land uses surrounding an airport to determine land use compatibility associated with aircraft activity at the airport. This includes delineation of land uses within the DNL 65 dB and higher aircraft noise exposure contours on the noise contour exhibits and identification of noise-sensitive uses that may be noncompatible with that level of noise exposure. Identification of a noise-sensitive use within the DNL 65 dB contour does not necessarily mean that the use is either considered noncompatible or that it is eligible for mitigation. Rather, identification merely indicates that the use is generally considered noncompatible but requires further investigation. Factors that influence compatibility and/or eligibility may include but are not limited to previous sound reduction treatments, current interior noise levels, structure condition, ambient and self-generated

<sup>1</sup> FAA Order 1050.1F, Section 4-3, Exhibit 4-1, [https://www.faa.gov/documentlibrary/media/order/faq\\_order\\_1050\\_1f.pdf](https://www.faa.gov/documentlibrary/media/order/faq_order_1050_1f.pdf).

noise levels, whether a given use is considered temporary or permanent, and the timeframe within which a given structure was constructed.

The FAA has published land use compatibility designations, as set forth in Part 150, Appendix A, Table 1 (reproduced here as **Table 2**). As the table indicates, the FAA generally considers all land uses to be compatible with aircraft related DNL below 65 dB, including residential, hotels, retirement homes, intermediate care facilities, hospitals, nursing homes, schools, preschools, and libraries. These categories are referenced throughout the EA. Institutional or public land use consists of schools, hospitals, nursing homes, churches, auditoriums, concert halls, governmental services, transportation, and parking. While all these uses are compatible with aircraft related DNL below 65 dB, schools are not compatible above DNL 65 dB without mitigation and are listed separately in the EA.

**Table 2. Part 150 Land Use Compatibility with Yearly Day-Night Average Sound Levels**

Source: FAA Part 150, Appendix A, Table 1, 2007

Land Use	Yearly Day-Night Average Sound Level [DNL] in Decibels (Key and notes on following page)					
	Below 65	65 – 70	70 – 75	75 – 80	80 – 85	Over 85
<b>Residential Uses</b>						
Residential other than mobile homes and transient lodgings	Y	N <sup>(a)</sup>	N <sup>(a)</sup>	N	N	N
Mobile home park	Y	N	N	N	N	N
Transient lodgings	Y	N <sup>(a)</sup>	N <sup>(a)</sup>	N <sup>(a)</sup>	N	N
<b>Public Uses</b>						
Schools	Y	N <sup>(a)</sup>	N <sup>(a)</sup>	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y <sup>(b)</sup>	Y <sup>(c)</sup>	Y <sup>(d)</sup>	Y <sup>(d)</sup>
Parking	Y	Y	Y <sup>(b)</sup>	Y <sup>(c)</sup>	Y <sup>(d)</sup>	N
<b>Commercial Uses</b>						
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y <sup>(b)</sup>	Y <sup>(c)</sup>	Y <sup>(d)</sup>	N
Communication	Y	Y	25	30	N	N
<b>Manufacturing and Production</b>						
Manufacturing general	Y	Y	Y <sup>(b)</sup>	Y <sup>(c)</sup>	Y <sup>(d)</sup>	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y <sup>(f)</sup>	Y <sup>(g)</sup>	Y <sup>(h)</sup>	Y <sup>(h)</sup>	Y <sup>(h)</sup>
Livestock farming and breeding	Y	Y <sup>(f)</sup>	Y <sup>(g)</sup>	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y

Land Use	Yearly Day-Night Average Sound Level [DNL] in Decibels (Key and notes on following page)					
	Below 65	65 – 70	70 – 75	75 – 80	80 – 85	Over 85
<b>Recreational</b>						
Outdoor sports arenas and spectator sports	Y	Y <sup>(e)</sup>	Y <sup>(e)</sup>	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

**Key:**

SLUCM = Standard Land Use Coding Manual

Y(Yes): Land use and related structures compatible without restrictions.

N(No): Land use and related structures are not compatible and should be prohibited.

NLR: Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35: Land use and related structures generally compatible; measures to achieve NLR of 25 dBA, 30 dBA, or 35 dBA must be incorporated into design and construction of structure.

**Notes:**

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses.

(a) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dBA and 30 dBA should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dBA, thus, the reduction requirements are often stated as 5 dBA, 10 dBA, or 15 dBA over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(b) Measures to achieve NLR of 25 dBA must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(c) Measures to achieve NLR of 30 dBA must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas or where the normal noise level is low.

(d) Measures to achieve NLR of 35 dBA must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(e) Land use compatible provided special sound reinforcement systems are installed.

(f) Residential buildings require an NLR of 25 dBA

(g) Residential buildings require an NLR of 30 dBA

(h) Residential buildings not permitted

## 3 Noise Modeling Methodology

The following sections present the modeling methodology and data inputs for the noise analysis for the Existing Condition, Future No Action, and Future Proposed Action alternatives.

### 3.1 Aviation Environmental Design Tool

For an action occurring on or in the vicinity of a single airport, or as part of an air traffic action, the FAA directs the use of the latest version of the Aviation Environmental Design Tool (AEDT) for detailed noise modeling or another model, as approved by FAA. The model must be used to produce DNL 65 dB, DNL 70 dB, and DNL 75 dB contours, and other contours as needed. The aircraft noise analysis for this EA uses AEDT Version 3e (released May 9, 2022).<sup>2</sup> All AEDT modeling conducted for this study adheres to “Guidance on Using the Aviation Environmental Design Tool (AEDT) to Conduct Environmental Modeling for FAA Actions Subject to NEPA.”<sup>3</sup>

AEDT is a combined noise and emission model that uses a database of aircraft noise and performance characteristics. The AEDT predicts ground based DNL values from user input for aircraft types, AAD aircraft operations, airport operating conditions, aircraft performance, and flight patterns. AEDT also calculates air pollutant emissions from aircraft engines for air quality analyses, enables noise and air quality calculations on a regional basis (as opposed to in the immediate airport environment only), and includes updated databases for newer aircraft models.

The noise pattern calculated by the AEDT for an airport is a function of several factors, including the number of aircraft operations during the period evaluated, the types of aircraft flown, the time of day when they are flown, the way they are flown, how frequently each runway is used for landing and takeoff, and the routes of flight used to and from the runways. Substantial variations in any one of these factors may, when extended over a long period of time, cause marked changes to the noise pattern. The primary data input categories for the AEDT are listed in **Table 3**.

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<sup>2</sup> FAA released AEDT Version 3f in December 2023, however FAA policy allows for the version of AEDT already in use to be used to complete the project.

<sup>3</sup> FAA, “Guidance on Using the Aviation Environmental Design Tool (AEDT) to Conduct Environmental Modeling for FAA Actions Subject to NEPA,” 2017, [https://aedt.faa.gov/Documents/guidance\\_aedt\\_nepa.pdf](https://aedt.faa.gov/Documents/guidance_aedt_nepa.pdf).



**Table 3. Data Sources of Noise Model Inputs**

AEDT Input Category	Data Source(s) – all inputs remain consistent for alternatives except aircraft operations
Physical description of the airfield layout	FAA 5010 Airport Data and Information Portal
Aircraft noise and performance characteristics	Standard AEDT database
Aircraft flight operations	MKE NOMS system data from November 2022 through October 2023, FAA OPSNET
Runway utilization rates	MKE NOMS system data from November 2022 through October 2023
Flight track geometry and utilization rates	MKE NOMS system data from November 2022 through October 2023
Meteorological conditions	AEDT database - National Climatic Data Center data
Terrain data	United States Geological Survey National Elevation Dataset - geoTIFF

NOMS = Noise and Operations Monitoring System

### 3.1.1 Noise Exposure Contours

Noise contours (i.e., lines of equal noise exposure, usually expressed in terms of DNL) are used to illustrate average daily noise exposure around an airport. Noise contours are conceptually similar to topographic contour maps. A set of concentric contours, representing successively lower DNL, usually extends away from the airport’s runways. DNL contours are typically presented in 5 dB increments on a base map, with each successive contour representing a 5 dB decrease in noise exposure on an AAD basis. Contours developed for the EA include DNL 65 dB, DNL 70 dB, and DNL 75 dB. Notably, a line drawn on a map does not imply that a particular noise condition exists on one side of the line and not the other. For further information on noise and its effects on people, please refer to **Appendix A**.

### 3.1.2 Grid Point Noise Calculations

Besides noise contours, the AEDT provides another way to show noise levels in the airport environs. DNL (or other metrics supported by the AEDT) can be calculated for specific locations, defined as grid points, and can be presented in a number of formats. Grid point analyses can show the change in noise levels over specific locations and are helpful in determining where significant or reportable noise changes may occur. For the EA, noise levels are developed for one area-wide grid set. The noise study area (NSA) grid points are defined to cover the complete NSA area. The NSA grid consists of a rectangle with points spaced 0.02 nautical miles (nmi; 122 feet) apart, extending approximately 5 nmi to the east and west and 5 nmi to the north and south from the Airport Reference Point (which is near the geographic center of MKE’s runways).

## 3.2 Study Area

To adequately capture the effects of aircraft noise, the NSA must include not only the immediate airport environs, where aircraft flight paths are aligned with the runways, but also other potentially affected areas over which aircraft would fly as they follow any modified flight corridors that join the surrounding airspace. The NSA was developed to encompass an area that would contain at least the lateral extent of

the estimated DNL 65 dB contour resulting from aircraft flight and ground operations contemplated under the Proposed Action, with an adequate buffer to accommodate potential changes in the contour between the No Action and Proposed Action alternatives.

MKE is located in Milwaukee County, Wisconsin approximately 5 miles south of the city center of Milwaukee. **Figure 1** displays nearby land uses to the airport within the NSA. The NSA is approximately 2 nmi to the east, 2.8 nmi to the west, 2.3 nmi to the north, and 2.4 nmi to the south. Existing land use in the nearby area consist primarily of airport property, agricultural use, some residential uses, manufacturing and production, and industrial land uses, as shown on **Figure 1**. All noise-sensitive sites such as schools, nursing homes, hospitals and places of worship have been identified and are shown on **Figure 1**. Any potential noncompatible land use and the noise-sensitive sites within the study area are evaluated in the EA.

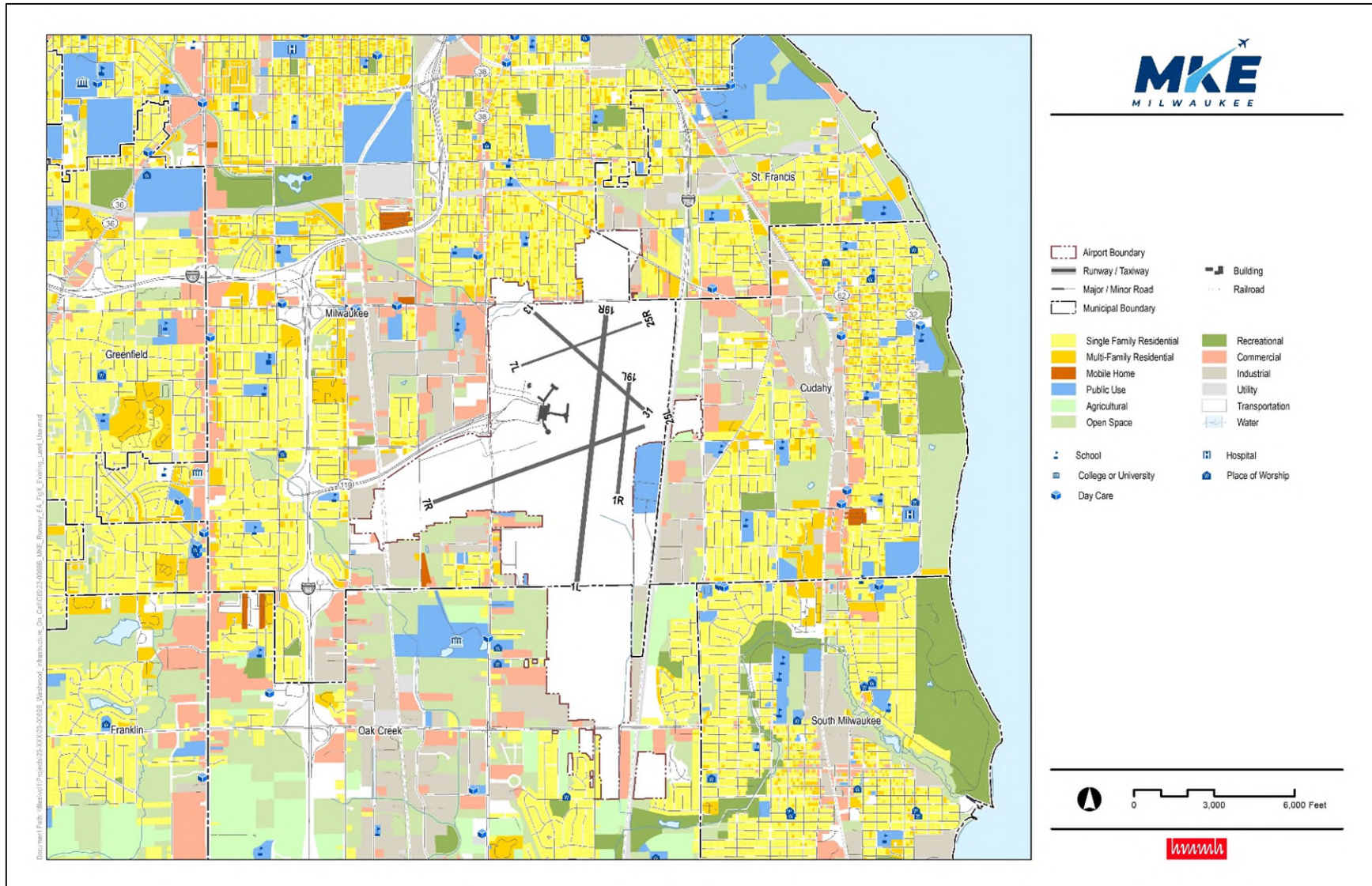


Figure 1. Existing Land Use

### 3.2.1 Airfield Layout

Airfield layout includes the coordinates of each runway centerline endpoint, runway widths, approach threshold crossing heights, and runway end elevations. As shown in **Figure 2**, the existing condition airfield layout of MKE is comprised of five runways: two sets of parallel runways, Runway 1L-19R and Runway 1R-19L and Runway 7L-25R and Runway 7R-25L, and one crosswind runway, Runway 13-31.

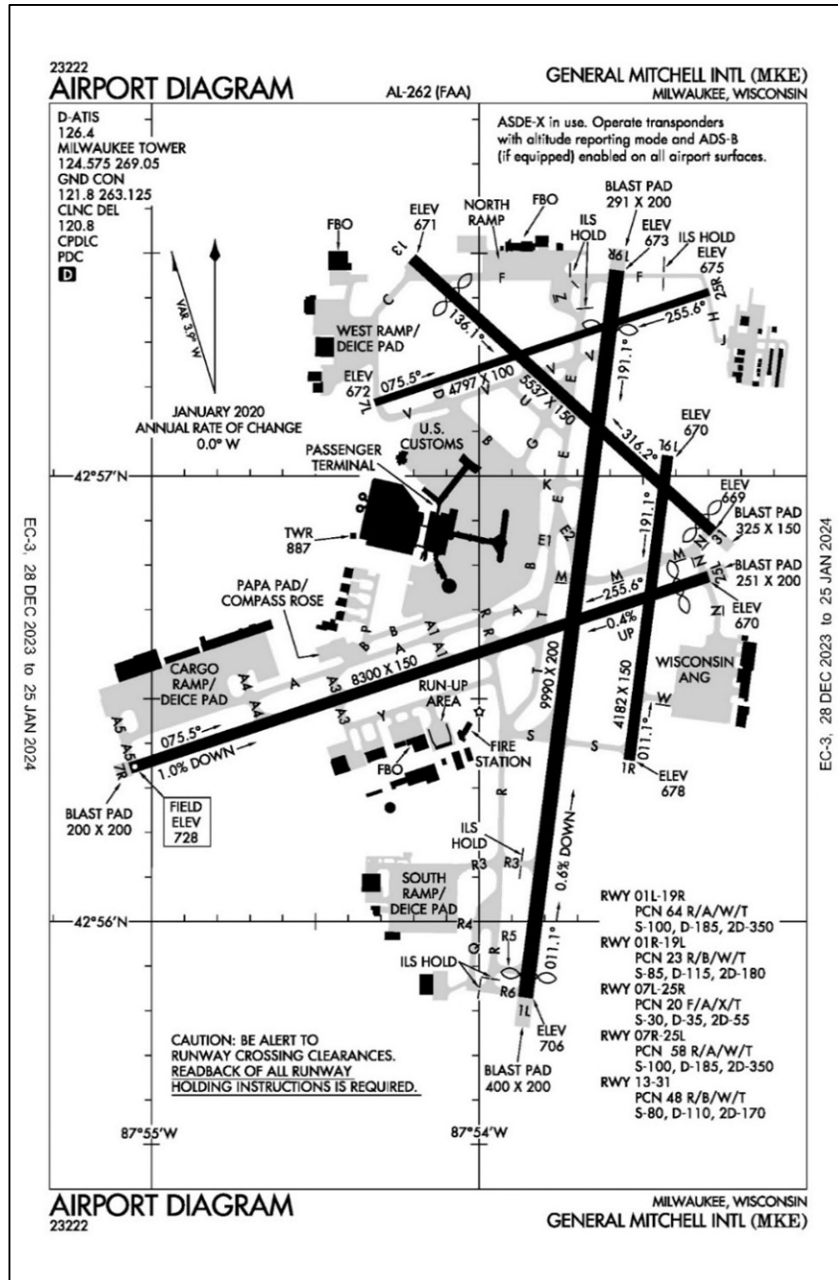


Figure 2. MKE Existing Airport Layout

Source: FAA

Runway width, instrumentation, and declared distances do not directly affect noise calculations. However, these parameters may affect which aircraft might use a particular runway and under what conditions and therefore how often a runway would be used relative to the other runways at the Airport. **Table 4** provides the detailed parameters for each runway end.

**Table 4. Existing and Future Runway Information**

Sources: FAA National Airspace System Resources (NASR) and MKE

Runway	Latitude (degrees)	Longitude (degrees)	Elevation (feet, MSL)	Displaced Landing Threshold (feet)	Glide Slope (degrees)	Magnetic Orientation (degrees)	True Heading (degrees)
1L	42.930499	-87.897643	705.8	300	3	11	7
1R	42.939379	-87.892362	677.7	0	-	11	7
7L	42.952747	-87.905308	671.5	0	3	76	72
7R	42.939074	-87.917753	728.4	0	3	76	72
13	42.958133	-87.903415	671.4	738	3	136	132
19L	42.950762	-87.890413	669.6	0	-	191	187
19R	42.957694	-87.892993	672.7	785	3	191	187
25L	42.946243	-87.888333	669.9	433	3	256	252
25R	42.956890	-87.888304	674.6	0	3	256	252
31	42.947919	-87.888107	668.6	205	3	316	312
H1	42.957390	-87.906362	729.0	-	-	-	-

Notes: NASR data retrieved from <https://adip.faa.gov/agis/public/#/simpleAirportMap/MKE> on January 2, 2024.  
MSL = mean sea level

### 3.3 Meteorological Data

AEDT uses meteorological data to adjust aircraft performance and sound propagation based on average weather conditions at the airport. The meteorological parameters include temperature, barometric pressure, relative humidity, and wind speed. AEDT 3e database includes 10-year average weather (2012 to 2021) from National Oceanic and Atmospheric Administration Integrated Surface Data. These data for MKE are:

- Temperature: 48.8° F
- Station Pressure: 990.69 mbar
- Sea Level Pressure: 1016.66 mbar
- Dew point: 39.05° F
- Relative humidity: 68.93%
- Wind speed: 8.38 knots

### 3.4 Terrain Data

AEDT uses terrain data to adjust the aircraft-to-ground path length, which is the distance between the modeled location on the ground and the aircraft in flight, making the ground closer to or farther from the aircraft relative to flat-earth conditions. AEDT does not use terrain data to account for shielding or reflective effects of terrain.

### 3.5 Flight Tracks

The AEDT pre-processor automates the process of preparing AEDT inputs directly from recorded flight operations and models the full range of aircraft activity as precisely as possible. The pre-processor directly converts the flight track recorded by the MKE Noise and Operations Monitoring System (NOMS) for every identified aircraft operation to an AEDT track, rather than assigning all operations to a limited number of prototypical tracks. All arrival and departure operations were modeled as flown from November 2022 – October 2023, including deviations due to weather, safety, or other reasons from the typical flight patterns. The flight tracks used in the modeling of 2023 operations are depicted in **Figure 3** and **Figure 4**. Each flight track is represented by a single continuous line. When lines overlap and become layered, the color shifts from cool (blue) to warm (red) indicates a greater degree of flight track concentration.

In the future Proposed Action scenarios, the operations previously conducted on Runway 1R-19L will be redirected to use established "donor" tracks from Runway 1L-19R. These "donor" tracks will be specifically chosen based on their high utilization in the existing scenario, meaning they were heavily used in the past. This approach ensures that the most frequently utilized tracks are utilized for aircraft operations when transitioning from Runway 1R-19L to Runway 1L-19R in the proposed action.

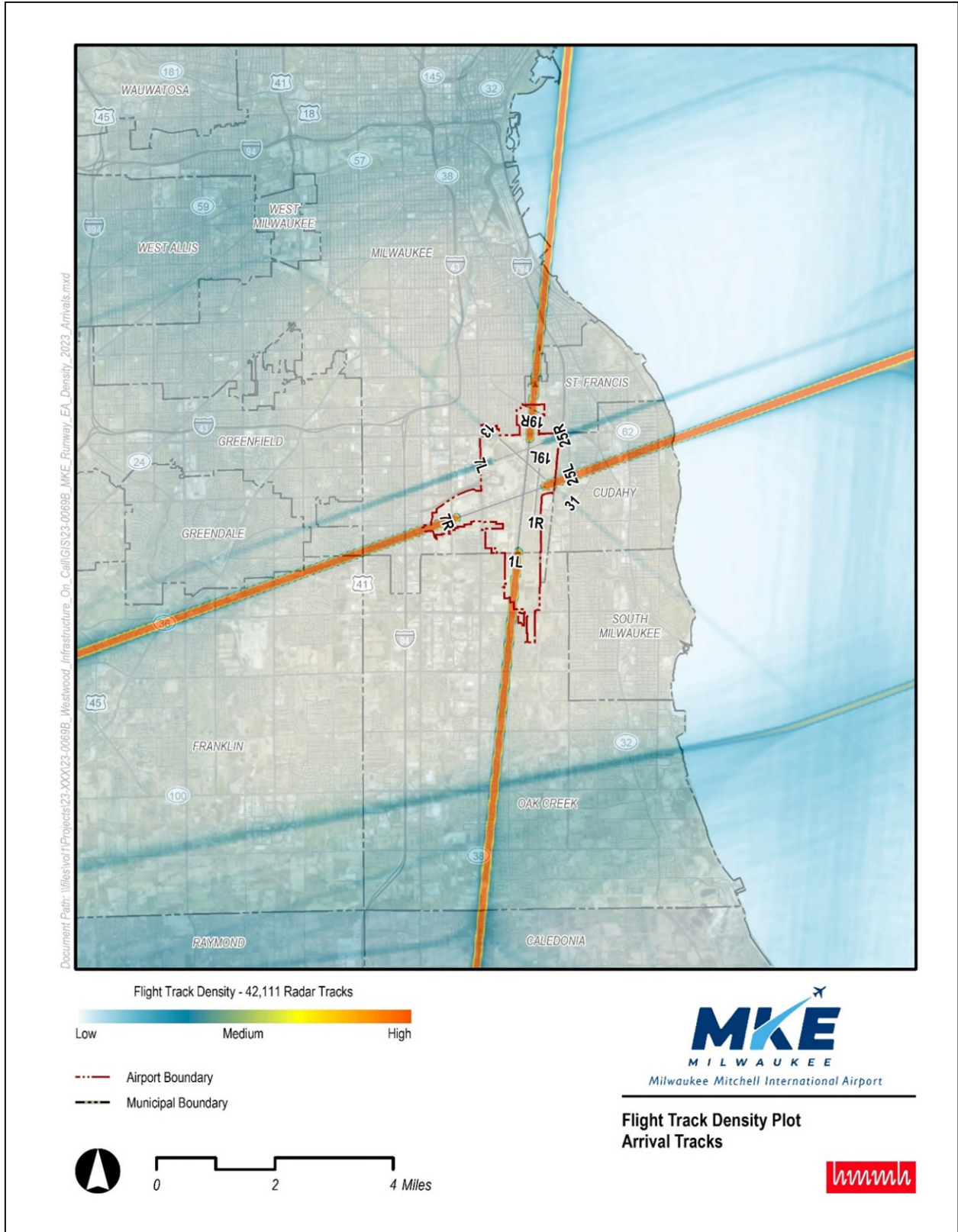


Figure 3. Existing Modeled Arrival Tracks

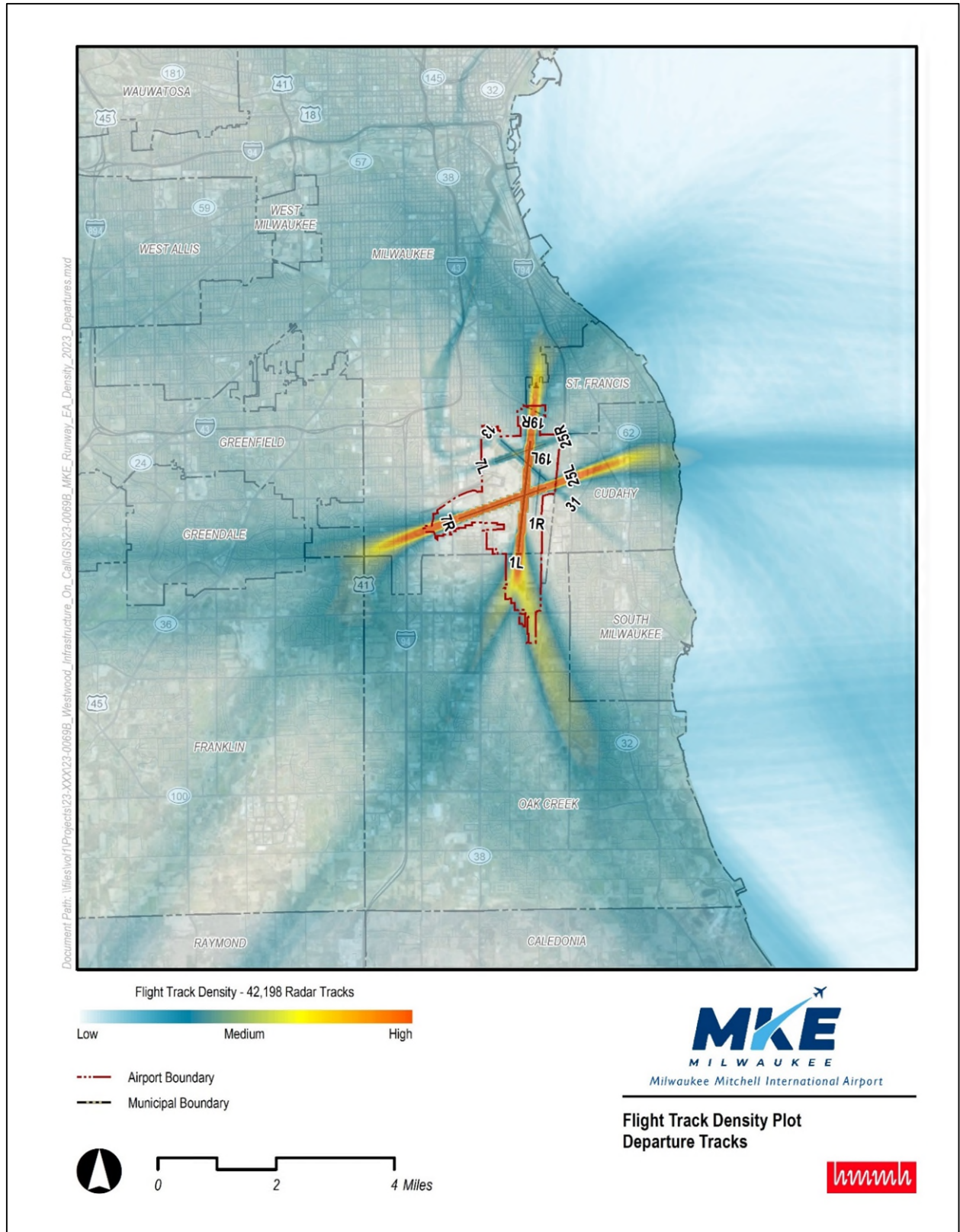


Figure 4. Existing Modeled Departure Tracks



### 3.6 Aircraft Stage Length and Operational Profiles

Within the AEDT database, aircraft departure profiles are defined by a range of trip distances identified as “stage lengths.” Stage length is assigned according to each departure’s trip distance to its destination, using city-pair information provided in the operations forecast. The assigned stage length then determines the appropriate flight performance profile from the AEDT database. Higher stage lengths (longer trip distances) are associated with heavier aircraft due to the increase in fuel requirements for the flight. For example, a departure aircraft with a trip distance less than 500 nmi would be assigned a stage length value of one, where a departure aircraft with a trip distance of 3,000 nmi would be assigned a stage length value of five. **Table 5** provides the stage length classifications by their associated trip distances. The stage lengths flown from MKE are based on the city pair information provided by the radar data operations.

**Table 5. AEDT Stage Length Categories**

*Source: AEDT 3e User Guide, May 2022*

Category	Stage Length (nmi)
1	0-500
2	500-1000
3	1000-1500
4	1500-2500
5	2500-3500
6	3500-4500
7	4500-5500
8	5500-6500
9	6500+

Note: Stage Length is defined as the distance an aircraft travels from takeoff to landing

AEDT includes standard flight procedure data for each aircraft that represents each phase of flight to or from the airport. Information related to aircraft speed, altitude, thrust settings, flap settings, and distance is available and used by AEDT to calculate noise levels on the ground. Standard aircraft departure profiles are supplied from the runway (field elevation) up to 10,000 feet above field elevation. Aircraft arrival profiles are supplied from 6,000 feet above field elevation down to the runway including the application of reverse thrust and rollout. The FAA requires that these standard arrival and departure profiles be used unless there is evidence that they are not applicable. The noise calculations presented in this document used the standard AEDT departure profiles.

## 4 Existing Condition

This section provides the description of current noise conditions within the study area from aircraft noise. Typically, a recent calendar year (CY) data set is utilized to develop the existing condition information, and for this EA, CY 2023 was used.

### 4.1 Aircraft Activity Levels and Fleet Mix

HMMH obtained data from MKE’s NOMS database for November 2022 through October 2023. The air carrier, air taxi, general aviation, and military operations data were then scaled to the FAA-reported tower counts for CY 2023. **Table 6** shows the FAA-reported tower counts for CY 2023 and AAD operations count by aircraft category.

**Table 6. 2023 Existing Conditions Operations**

*Source: FAA OPSNET*

Modeling Scenario	Air Carrier	Air Taxi	General Aviation	Military	Total
Existing Annual Operations	55,223	23,771	15,767	1,994	96,755
AAD	151.3	65.1	43.2	5.5	265.1

HMMH utilized the 2022/2023 NOMS fleet mix for the Forecast No Action and Proposed Action conditions. The AEDT database contains noise and performance data for more than 300 different aircraft types. AEDT accesses the noise and performance data for takeoff, landing, and pattern operations by those aircraft. The database provides single-event noise levels for slant distances from 200 feet to 25,000 feet for several thrust or power settings for each aircraft type. Performance data includes thrust, speed, and altitude profiles for takeoffs and landings. All aircraft types evaluated for the MKE modeling are either in the AEDT database or have approved substitutions within the model.

**Table 7** provides the annual operations, by aircraft type, that were used in AEDT for the existing conditions. The average daily number of aircraft arrivals and departures for the CY2023 Noise Contour are calculated by determining the total annual operations and dividing by 365 (days in a year). For the purposes of EA, daytime is defined as 7:00 a.m. to 9:59 p.m., while nighttime is defined as 10:00 p.m. to 6:59 a.m. Departures and arrivals were the two types of flight operations modeled for the EA.

Maintenance run-ups occur at the ground run-up enclosure located south of Runway 7R-25L. These run-ups occur in the ground run-up enclosure, which typically reduces engine run-up noise by more than 50% through its aerodynamic design and the use of sound reducing panels. As such, run-up activity will likely not have any influence on the 65 DNL contour. Because of this, run-ups were not modeled for this EA.

**Table 7. Existing Condition (2023) Modeled Annual Aircraft Operations by AEDT Aircraft Type**

Source: MKE NOMS, FAA OPSNET, and HMMH, 2024

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
Air Carrier	717200	1,234.0	11.2	1,245.2	1,108.0	137.2	1,245.2	2,490.4
	737300	1.0	-	1.0	1.0	-	1.0	2.0
	737400	53.1	53.1	106.2	20.4	85.8	106.2	212.5
	737700	4,255.2	1,008.7	5,263.9	4,314.9	949.0	5,263.9	10,527.7
	737800	3,113.3	1,160.7	4,274.0	3,062.5	1,211.5	4,274.0	8,548.0
	757300	6.1	2.0	8.2	5.1	3.1	8.2	16.3
	767300	1.0	1.0	2.0	1.0	1.0	2.0	4.1
	727EM2	1.0	-	1.0	-	1.0	1.0	2.0
	7378MAX	1,217.0	543.1	1,760.1	1,223.8	536.3	1,760.1	3,520.1
	757PW	199.2	102.2	301.3	196.8	104.5	301.3	602.7
	757RR	7.2	104.2	111.3	5.2	106.2	111.3	222.7
	7673ER	299.0	56.5	355.5	279.9	75.6	355.5	711.0
	767CF6	4.1	2.0	6.1	1.0	5.1	6.1	12.3
	767JT9	3.1	2.0	5.1	1.0	4.1	5.1	10.2
	7773ER	1.0	-	1.0	-	1.0	1.0	2.0
	A300-622R	275.6	213.7	489.3	323.8	165.5	489.3	978.6
	A319-131	1,452.4	159.6	1,611.9	1,528.2	83.8	1,611.9	3,223.9
	A320-211	913.8	125.1	1,038.9	854.0	184.9	1,038.9	2,077.8
	A320-232	536.2	143.1	679.3	624.1	55.2	679.3	1,358.6
	A320-271N	566.9	272.7	839.7	580.6	259.1	839.7	1,679.4
	A321-232	1,360.4	818.5	2,178.9	1,705.9	473.0	2,178.9	4,357.8
	A330-343	2.0	-	2.0	1.0	1.0	2.0	4.1
	ATR72-212A	1.0	-	1.0	-	1.0	1.0	2.0
	CRJ9-ER	2,622.9	86.1	2,709.1	2,333.1	375.9	2,709.1	5,418.1
	DC93LW	1.0	-	1.0	1.0	-	1.0	2.0
	EMB170	239.0	10.3	249.2	242.1	7.2	249.2	498.5
	EMB175	3,526.1	475.2	4,001.3	3,623.3	378.0	4,001.3	8,002.5
	EMB190	89.9	1.0	90.9	88.9	2.0	90.9	181.8
	HS748A	3.1	-	3.1	3.1	-	3.1	6.1
	MD11GE	4.4	79.4	83.8	77.6	6.1	83.8	167.5
MD11PW	7.2	177.7	184.9	177.5	7.4	184.9	369.8	
MD83	3.1	2.0	5.1	5.1	-	5.1	10.2	
<b>Subtotal</b>		<b>22,000.2</b>	<b>5,611.3</b>	<b>27,611.5</b>	<b>22,390.0</b>	<b>5,221.5</b>	<b>27,611.5</b>	<b>55,223.0</b>
Air Taxi	1900D	256.7	-	256.7	253.3	3.4	256.7	513.4
	BD-700-1A10	17.6	-	17.6	16.5	1.2	17.6	35.3
	BD-700-1A11	15.4	-	15.4	13.2	2.2	15.4	30.8
	BEC58P	75.9	45.3	121.2	45.2	76.0	121.2	242.4
	CL600	2,658.5	268.8	2,927.3	2,559.7	367.6	2,927.3	5,854.6

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	CL601	58.4	1.1	59.5	57.3	2.2	59.5	119.0
	CNA208	2,315.3	30.3	2,345.6	1,489.5	856.0	2,345.6	4,691.2
	CNA510	1.1	-	1.1	1.1	-	1.1	2.2
	CNA525C	323.9	26.4	350.4	282.0	68.3	350.4	700.7
	CNA55B	256.6	7.8	264.4	245.7	18.7	264.4	528.8
	CNA560E	2.2	-	2.2	2.2	-	2.2	4.4
	CNA560U	35.3	-	35.3	35.3	-	35.3	70.5
	CNA560XL	210.4	12.1	222.6	217.0	5.5	222.6	445.1
	CNA680	565.2	27.5	592.7	560.6	32.1	592.7	1,185.5
	CNA750	185.1	3.3	188.4	181.8	6.6	188.4	376.8
	COMSEP	1.1	-	1.1	1.1	-	1.1	2.2
	DHC6	1,755.1	267.7	2,022.8	879.2	1,143.6	2,022.8	4,045.6
	DHC830	2.2	-	2.2	2.2	-	2.2	4.4
	ECLIPSE500	5.5	-	5.5	5.5	-	5.5	11.0
	EMB120	279.1	206.8	485.9	334.9	150.9	485.9	971.7
	EMB145	13.2	-	13.2	13.2	-	13.2	26.4
	EMB14L	365.8	-	365.8	365.8	-	365.8	731.6
	FAL20	2.2	-	2.2	2.2	-	2.2	4.4
	FAL900EX	39.6	1.1	40.8	39.7	1.1	40.8	81.5
	G650ER	30.8	-	30.8	25.3	5.5	30.8	61.7
	GASEPF	3.3	-	3.3	3.3	-	3.3	6.6
	GASEPV	2.2	-	2.2	2.2	-	2.2	4.4
	GIV	115.7	7.7	123.4	97.8	25.6	123.4	246.8
	GV	39.4	3.6	43.0	40.8	2.2	43.0	85.9
	HS748A	152.0	126.7	278.7	236.7	42.0	278.7	557.5
	IA1125	18.7	3.3	22.0	19.8	2.2	22.0	44.1
	LEAR35	514.2	38.9	553.1	515.6	37.5	553.1	1,106.1
	MU3001	46.3	1.1	47.4	46.3	1.1	47.4	94.7
	PA30	11.0	-	11.0	11.0	-	11.0	22.0
	SD330	403.5	25.1	428.6	415.4	13.2	428.6	857.1
	SF340	1.1	1.1	2.2	2.2	-	2.2	4.4
	<b>Subtotal</b>	<b>10,779.7</b>	<b>1,105.8</b>	<b>11,885.5</b>	<b>9,020.6</b>	<b>2,864.9</b>	<b>11,885.5</b>	<b>23,771.0</b>
General Aviation	737700	11.3	-	11.3	11.3	-	11.3	22.7
	1900D	4.9	-	4.9	4.9	-	4.9	9.7
	757PW	-	1.6	1.6	-	1.6	1.6	3.2
	A319-131	1.6	-	1.6	1.6	-	1.6	3.2
	B206L	-	8.1	8.1	3.2	4.9	8.1	16.2
	B222	1.6	-	1.6	-	1.6	1.6	3.2
	BD-700-1A10	157.1	4.9	162.0	157.1	4.9	162.0	324.0
	BD-700-1A11	4.9	-	4.9	3.2	1.6	4.9	9.7
	BEC58P	119.8	3.3	123.1	118.2	4.9	123.1	246.2

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	CIT3	81.5	9.3	90.7	81.0	9.7	90.7	181.4
	CL600	184.7	9.7	194.4	181.4	13.0	194.4	388.7
	CL601	252.7	27.5	280.2	255.1	25.2	280.2	560.4
	CNA172	494.3	30.6	524.8	474.6	50.2	524.8	1,049.6
	CNA182	61.4	1.8	63.2	61.6	1.6	63.2	126.3
	CNA206	6.5	-	6.5	6.5	-	6.5	13.0
	CNA208	221.9	63.2	285.1	199.9	85.2	285.1	570.2
	CNA20T	3.2	-	3.2	3.2	-	3.2	6.5
	CNA441	48.6	3.2	51.8	48.6	3.2	51.8	103.7
	CNA500	14.6	-	14.6	14.6	-	14.6	29.2
	CNA510	106.9	-	106.9	105.2	1.7	106.9	213.8
	CNA525C	649.5	45.4	694.9	660.4	34.5	694.9	1,389.8
	CNA55B	330.4	42.1	372.6	325.4	47.2	372.6	745.1
	CNA560E	3.2	1.6	4.9	4.9	-	4.9	9.7
	CNA560U	93.9	6.5	100.4	97.0	3.4	100.4	200.9
	CNA560XL	200.8	11.4	212.2	200.9	11.3	212.2	424.4
	CNA680	189.3	6.7	196.0	191.1	4.9	196.0	392.0
	CNA750	630.1	29.2	659.3	620.4	38.9	659.3	1,318.5
	COMSEP	223.3	8.3	231.6	213.8	17.8	231.6	463.3
	CRJ9-ER	6.5	-	6.5	6.5	-	6.5	13.0
	DHC6	304.0	19.9	324.0	302.9	21.1	324.0	647.9
	EC130	10.4	13.9	24.3	8.1	16.2	24.3	48.6
	ECLIPSE500	38.9	1.6	40.5	38.8	1.7	40.5	81.0
	EMB145	55.1	4.9	59.9	53.3	6.7	59.9	119.9
	EMB14L	4.9	-	4.9	4.9	-	4.9	9.7
	FAL900EX	168.5	22.7	191.1	154.6	36.6	191.1	382.3
	G650ER	34.0	-	34.0	30.6	3.4	34.0	68.0
	GASEPF	656.4	36.9	693.3	664.1	29.2	693.3	1,386.5
	GASEPV	400.1	9.7	409.8	390.3	19.5	409.8	819.6
	GIV	181.4	4.9	186.3	163.6	22.7	186.3	372.6
	GV	422.8	16.2	439.0	383.9	55.1	439.0	877.9
	HS748A	1.6	-	1.6	1.6	-	1.6	3.2
	IA1125	25.9	-	25.9	25.9	-	25.9	51.8
	LEAR35	343.4	32.4	375.8	348.3	27.5	375.8	751.6
	MD81	1.6	-	1.6	1.6	-	1.6	3.2
	MU3001	186.3	19.4	205.7	197.5	8.2	205.7	411.4
	PA30	19.4	-	19.4	17.7	1.8	19.4	38.9
	R44	427.6	-	427.6	427.6	-	427.6	855.2
<b>Subtotal</b>		<b>7,386.6</b>	<b>496.9</b>	<b>7,883.5</b>	<b>7,266.8</b>	<b>616.7</b>	<b>7,883.5</b>	<b>15,767.0</b>

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
Military	737700	45.3	-	45.3	45.3	-	45.3	90.6
	CNA208	90.6	-	90.6	90.6	-	90.6	181.3
	DHC6	90.6	-	90.6	90.6	-	90.6	181.3
	KC135	770.4	-	770.4	770.4	-	770.4	1,540.8
<b>Subtotal</b>		<b>997.0</b>	<b>-</b>	<b>997.0</b>	<b>997.0</b>	<b>-</b>	<b>997.0</b>	<b>1,994.0</b>
<b>Grand Total</b>		<b>41,163.5</b>	<b>7,214.0</b>	<b>48,377.5</b>	<b>39,674.5</b>	<b>8,703.0</b>	<b>48,377.5</b>	<b>96,755.0</b>

Note: Totals may not add up due to rounding.

## 4.2 Runway Utilization

Weather, particularly wind direction and wind speed, is the primary factor affecting runway use at airports. Additional factors that may affect runway use include the position of a facility (such as a passenger terminal) relative to the runways and temporary runway closures, generally for airfield maintenance and construction. HMMH derived the Existing Condition runway usage by aircraft category from the analysis of 2022/2023 radar flight track data. **Table 8** presents the runway usage rates modeled for each runway for day and night periods in the Existing Conditions and Future No Action cases.

**Table 8. Existing Conditions Runway Use**

Source: MKE NOMS

Runway	Arrival		Departure	
	Day	Night	Day	Night
01L	19.4%	29.3%	19.3%	24.4%
01R	0.1%	0.0%	0.3%	0.0%
07L	1.3%	0.1%	1.1%	0.2%
07R	26.0%	17.1%	23.3%	16.7%
13	0.2%	0.1%	0.8%	0.2%
19L	0.1%	0.0%	0.3%	0.1%
19R	16.4%	28.6%	29.0%	30.9%
25L	35.0%	24.6%	24.2%	27.1%
25R	1.0%	0.1%	0.6%	0.2%
31	0.2%	0.1%	0.1%	0.1%
H1	0.4%	0.0%	0.8%	0.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Note: Totals may not add up due to rounding.

### 4.3 Existing Noise Exposure Contours

Figure 5 displays the DNL 65 dB – 75 dB noise contours for the 2023 Existing Conditions over a map of the existing land use in the study area. The DNL 65 dB noise contour remains primarily on airport property and does not include any residential land use. There is no residential land use within the DNL 65 dB or higher contours.

Table 9 provides the population exposure, housing unit count, and contour areas for the 2023 DNL noise contours. The DNL 65 dB noise contour covers approximately 1,092.84 acres and contains no residents and no housing units. In addition, no individual noise-sensitive locations, such as schools or places of worship are within the 2023 DNL 65 dB noise contour.

**Table 9. 2023 Existing Conditions Noise Contours Population, Housing, and Area**

*Source: HMMH, 2024; U.S. Census Bureau, 2020*

DNL (dB) Noise Contour	Population Census	Housing Units	Area (acres)
65 - 70	0	0	636.70
70 - 75	0	0	250.85
> 75	0	0	205.29
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1,092.84</b>

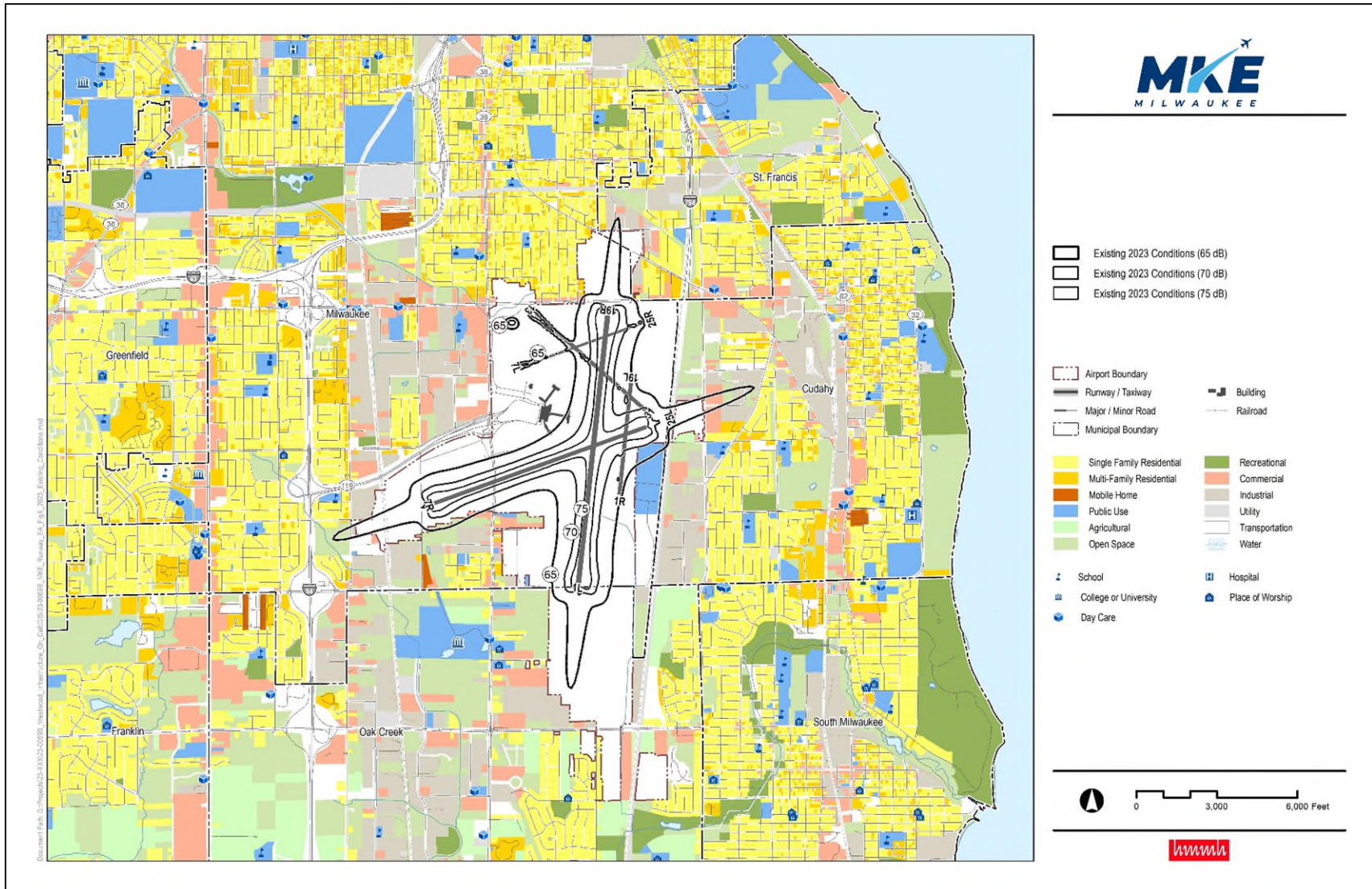


Figure 5. Existing 2023 Conditions



## 5 Future Alternatives

The following sections discuss the development of the future 2028 and 2033 aircraft operational forecast, runway use, flight tracks, and flight track usage for the future 2028/2033 No Action and Proposed Action alternatives. **Section 5.3.3** and **Section 5.3.6** discuss the comparison between the two alternatives for 2028 and 2033.

### 5.1 Forecast Activity Levels and Fleet Mix

Flight operation totals for both future condition model years (2028 and 2033) were scaled from the 2023 FAA approved TAF (published January 2024), as listed in **Table 10**. It is assumed that the Proposed Action would not induce or cause changes to the number of flight operations or day/night split. The future fleet mix includes new generation aircraft replacing those aircraft that are assumed to be no longer operating at the airport due to airlines retiring older, less efficient aircraft. These new aircraft were obtained from the MKE masterplan update published in September 2022. **Table 11** displays the fleet mix breakdown for 2028 Proposed Action and No Action operations. **Table 12** displays the fleet mix breakdown for 2033 Proposed Action and No Action operations.

**Table 10. 2028 and 2033 Future Condition Annual Operations**

Source: FAA OPSNET, FAA TAF, MKE NOMS, and HMMH, 2024

Scenario	Air Carrier	Air Taxi	General Aviation	Military	Total Operations
Existing Condition	55,223	23,771	15,767	1,994	96,755
2028 No Action	72,067	19,412	14,719	2,027	108,225
2028 Proposed Action	72,067	19,412	14,719	2,027	108,225
2033 No Action	78,346	20,531	14,719	2,027	115,623
2033 Proposed Action	78,346	20,531	14,719	2,027	115,623

**Table 11. Future (2028) Proposed Action and No Action Annual Operations**

Source: MKE NOMS, FAA TAF, and HMMH, 2024

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
Air Carrier	BCS100	1,610.4	14.7	1,625.0	1,446.0	179.1	1,625.0	<b>3,250.1</b>
	737300	1.3	-	1.3	1.3	-	1.3	<b>2.7</b>
	737400	69.3	69.3	138.6	26.7	112.0	138.6	<b>277.3</b>
	737700	5,553.1	1,316.4	6,869.4	5,631.0	1,238.4	6,869.4	<b>13,738.9</b>
	737800	4,062.9	1,514.7	5,577.7	3,996.6	1,581.0	5,577.7	<b>11,155.3</b>
	757300	8.0	2.7	10.7	6.7	4.0	10.7	<b>21.3</b>
	767300	1.3	1.3	2.7	1.3	1.3	2.7	<b>5.3</b>
	727EM2	1.3	-	1.3	-	1.3	1.3	<b>2.7</b>

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	7378MAX	1,592.2	711.4	2,303.6	1,603.7	699.9	2,303.6	4,607.1
	757PW	260.0	133.3	393.3	256.8	136.4	393.3	786.5
	757RR	9.3	136.0	145.3	6.7	138.6	145.3	290.6
	7673ER	390.2	73.7	463.9	365.3	98.6	463.9	927.8
	767CF6	5.3	2.7	8.0	1.3	6.7	8.0	16.0
	767JT9	4.0	2.7	6.7	1.3	5.3	6.7	13.3
	7773ER	1.3	-	1.3	-	1.3	1.3	2.7
	A300-622R	359.7	278.9	638.6	422.6	216.0	638.6	1,277.1
	A319-131	1,895.4	208.2	2,103.6	1,994.3	109.3	2,103.6	4,207.2
	A320-211	1,192.5	163.3	1,355.8	1,114.5	241.3	1,355.8	2,711.5
	A320-232	699.8	186.7	886.5	814.5	72.0	886.5	1,773.0
	A320-271N	739.9	355.9	1,095.8	757.7	338.1	1,095.8	2,191.6
	A321-232	1,775.3	1,068.1	2,843.5	2,226.3	617.2	2,843.5	5,687.0
	A330-343	2.7	-	2.7	1.3	1.3	2.7	5.3
	ATR72-212A	1.3	-	1.3	-	1.3	1.3	2.7
	CRJ9-ER	3,423.0	112.4	3,535.4	3,044.8	490.6	3,535.4	7,070.7
	DC93LW	1.3	-	1.3	1.3	-	1.3	2.7
	EMB170	311.9	13.4	325.3	315.9	9.3	325.3	650.5
	EMB175	4,601.6	620.2	5,221.7	4,728.5	493.2	5,221.7	10,443.4
	EMB190	117.3	1.3	118.6	116.0	2.7	118.6	237.3
	HS748A	4.0	-	4.0	4.0	-	4.0	8.0
	MD11GE	5.7	103.6	109.3	101.3	8.0	109.3	218.6
	MD11PW	9.3	232.0	241.3	231.6	9.7	241.3	482.6
<b>Subtotal</b>		<b>28,710.7</b>	<b>7,322.8</b>	<b>36,033.5</b>	<b>29,219.4</b>	<b>6,814.1</b>	<b>36,033.5</b>	<b>72,067.0</b>
Air Taxi	1900D	209.6	-	209.6	206.8	2.8	209.6	419.3
	BD-700-1A10	14.4	-	14.4	13.4	1.0	14.4	28.8
	BD-700-1A11	12.6	-	12.6	10.8	1.8	12.6	25.2
	BEC58P	62.0	37.0	99.0	36.9	62.1	99.0	197.9
	CL600	2,171.0	219.5	2,390.5	2,090.4	300.2	2,390.5	4,781.0
	CL601	47.7	0.9	48.6	46.8	1.8	48.6	97.2
	can208	1,890.7	24.7	1,915.5	1,216.4	699.1	1,915.5	3,830.9
	CNA510	0.9	-	0.9	0.9	-	0.9	1.8
	CNA525C	264.5	21.6	286.1	230.3	55.8	286.1	572.2
	CNA55B	209.6	6.4	215.9	200.6	15.3	215.9	431.9
	CNA560E	1.8	-	1.8	1.8	-	1.8	3.6
	CNA560U	28.8	-	28.8	28.8	-	28.8	57.6
	CNA560XL	171.8	9.9	181.7	177.2	4.5	181.7	363.5
	CNA680	461.5	22.5	484.0	457.8	26.2	484.0	968.1
	CNA750	151.1	2.7	153.8	148.5	5.4	153.8	307.7
COMSEP	0.9	-	0.9	0.9	-	0.9	1.8	

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	DHC6	1,433.2	218.6	1,651.9	718.0	933.9	1,651.9	3,303.7
	DHC830	1.8	-	1.8	1.8	-	1.8	3.6
	ECLIPSE500	4.5	-	4.5	4.5	-	4.5	9.0
	EMB120	227.9	168.9	396.8	273.5	123.3	396.8	793.5
	EMB145	10.8	-	10.8	10.8	-	10.8	21.6
	EMB14L	298.7	-	298.7	298.7	-	298.7	597.4
	FAL20	1.8	-	1.8	1.8	-	1.8	3.6
	FAL900EX	32.4	0.9	33.3	32.4	0.9	33.3	66.6
	G650ER	25.2	-	25.2	20.7	4.5	25.2	50.4
	GASEPF	2.7	-	2.7	2.7	-	2.7	5.4
	GASEPV	1.8	-	1.8	1.8	-	1.8	3.6
	GIV	94.5	6.3	100.8	79.9	20.9	100.8	201.5
	GV	32.2	2.9	35.1	33.3	1.8	35.1	70.2
	HS748A	124.2	103.5	227.6	193.3	34.3	227.6	455.2
	IA1125	15.3	2.7	18.0	16.2	1.8	18.0	36.0
	LEAR35	419.9	31.7	451.7	421.1	30.6	451.7	903.3
	MU3001	37.8	0.9	38.7	37.8	0.9	38.7	77.4
	PA30	9.0	-	9.0	9.0	-	9.0	18.0
	SD330	329.5	20.5	350.0	339.2	10.8	350.0	700.0
	SF340	0.9	0.9	1.8	1.8	-	1.8	3.6
<b>Subtotal</b>		<b>8,802.9</b>	<b>903.1</b>	<b>9,706.0</b>	<b>7,366.5</b>	<b>2,339.5</b>	<b>9,706.0</b>	<b>19,412.0</b>
General Aviation	737700	10.6	-	10.6	10.6	-	10.6	21.2
	1900D	4.5	-	4.5	4.5	-	4.5	9.1
	757PW	-	1.5	1.5	-	1.5	1.5	3.0
	A319-131	1.5	-	1.5	1.5	-	1.5	3.0
	B206L	-	7.6	7.6	3.0	4.5	7.6	15.1
	B222	1.5	-	1.5	-	1.5	1.5	3.0
	BD-700-1A10	146.6	4.6	151.2	146.7	4.5	151.2	302.4
	BD-700-1A11	4.5	-	4.5	3.0	1.5	4.5	9.1
	BEC58P	111.8	3.1	114.9	110.4	4.5	114.9	229.8
	CIT3	76.0	8.6	84.7	75.6	9.1	84.7	169.4
	CL600	172.4	9.1	181.5	169.4	12.1	181.5	362.9
	CL601	235.9	25.7	261.6	238.1	23.5	261.6	523.2
	CNA172	461.4	28.5	489.9	443.1	46.9	489.9	979.9
	CNA182	57.3	1.7	59.0	57.5	1.5	59.0	117.9
	CNA206	6.0	-	6.0	6.0	-	6.0	12.1
	CNA208	207.2	59.0	266.1	186.6	79.5	266.1	532.3
	CNA20T	3.0	-	3.0	3.0	-	3.0	6.0
	CNA441	45.4	3.0	48.4	45.4	3.0	48.4	96.8
CNA500	13.6	-	13.6	13.6	-	13.6	27.2	
CNA510	99.8	-	99.8	98.2	1.6	99.8	199.6	

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	CNA525C	606.4	42.3	648.7	616.5	32.2	648.7	1,297.4
	CNA55B	308.5	39.3	347.8	303.7	44.0	347.8	695.6
	CNA560E	3.0	1.5	4.5	4.5	-	4.5	9.1
	CNA560U	87.7	6.0	93.8	90.6	3.2	93.8	187.5
	CNA560XL	187.4	10.7	198.1	187.5	10.6	198.1	396.2
	CNA680	176.7	6.3	183.0	178.4	4.5	183.0	365.9
	CNA750	588.2	27.2	615.4	579.1	36.3	615.4	1,230.9
	COMSEP	208.5	7.8	216.2	199.6	16.6	216.2	432.5
	CRJ9-ER	6.0	-	6.0	6.0	-	6.0	12.1
	DHC6	283.8	18.6	302.4	282.8	19.7	302.4	604.8
	EC130	9.7	13.0	22.7	7.6	15.1	22.7	45.4
	ECLIPSE500	36.3	1.5	37.8	36.2	1.6	37.8	75.6
	EMB145	51.4	4.5	55.9	49.7	6.2	55.9	111.9
	EMB14L	4.5	-	4.5	4.5	-	4.5	9.1
	FAL900EX	157.3	21.2	178.4	144.3	34.1	178.4	356.9
	G650ER	31.8	-	31.8	28.6	3.2	31.8	63.5
	GASEPF	612.7	34.5	647.2	620.0	27.2	647.2	1,294.4
	GASEPV	373.5	9.1	382.6	364.3	18.2	382.6	765.1
	GIV	169.4	4.5	173.9	152.7	21.2	173.9	347.8
	GV	394.7	15.1	409.8	358.4	51.4	409.8	819.6
	HS748A	1.5	-	1.5	1.5	-	1.5	3.0
	IA1125	24.2	-	24.2	24.2	-	24.2	48.4
	LEAR35	320.6	30.2	350.8	325.2	25.6	350.8	701.6
	MD81	1.5	-	1.5	1.5	-	1.5	3.0
	MU3001	173.9	18.1	192.0	184.4	7.7	192.0	384.1
	PA30	18.1	-	18.1	16.5	1.6	18.1	36.3
	R44	399.2	-	399.2	399.2	-	399.2	798.4
	<b>Subtotal</b>	<b>6,895.6</b>	<b>463.9</b>	<b>7,359.5</b>	<b>6,783.8</b>	<b>575.7</b>	<b>7,359.5</b>	<b>14,719.0</b>
Military	737700	46.1	-	46.1	46.1	-	46.1	92.1
	CNA208	92.1	-	92.1	92.1	-	92.1	184.3
	DHC6	92.1	-	92.1	92.1	-	92.1	184.3
	KC135	783.2	-	783.2	783.2	-	783.2	1,566.3
	<b>Subtotal</b>	<b>1,013.5</b>	<b>-</b>	<b>1,013.5</b>	<b>1,013.5</b>	<b>-</b>	<b>1,013.5</b>	<b>2,027.0</b>
	<b>Grand Total</b>	<b>45,422.7</b>	<b>8,689.8</b>	<b>54,112.5</b>	<b>44,383.2</b>	<b>9,729.3</b>	<b>54,112.5</b>	<b>108,225.0</b>

Note: Totals may not add up due to rounding.

**Table 12. Future (2033) Proposed Action and No Action Annual Operations**

Source: MKE NOMS, FAA TAF, and HMMH, 2024

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
Air Carrier	BCS100	1,750.7	15.9	1,766.6	1,571.9	194.7	1,766.6	<b>3,533.3</b>
	737300	1.4	-	1.4	1.4	-	1.4	<b>2.9</b>
	737400	75.4	75.4	150.7	29.0	121.7	150.7	<b>301.4</b>
	737700	6,036.9	1,431.1	7,467.9	6,121.6	1,346.3	7,467.9	<b>14,935.9</b>
	737800	4,416.9	1,646.7	6,063.6	4,344.8	1,718.8	6,063.6	<b>12,127.3</b>
	757300	8.7	2.9	11.6	7.2	4.3	11.6	<b>23.2</b>
	767300	1.4	1.4	2.9	1.4	1.4	2.9	<b>5.8</b>
	727EM2	1.4	-	1.4	-	1.4	1.4	<b>2.9</b>
	7378MAX	1,730.9	773.3	2,504.2	1,743.4	760.9	2,504.2	<b>5,008.6</b>
	757PW	282.6	144.9	427.5	279.2	148.3	427.5	<b>855.1</b>
	757RR	10.1	147.8	158.0	7.3	150.7	158.0	<b>315.9</b>
	7673ER	424.2	80.2	504.3	397.1	107.2	504.3	<b>1,008.7</b>
	767CF6	5.8	2.9	8.7	1.4	7.2	8.7	<b>17.4</b>
	767JT9	4.3	2.9	7.2	1.4	5.8	7.2	<b>14.5</b>
	7773ER	1.4	-	1.4	-	1.4	1.4	<b>2.9</b>
	A300-622R	391.0	303.2	694.2	459.4	234.8	694.2	<b>1,388.4</b>
	A319-131	2,060.5	226.4	2,286.9	2,168.1	118.8	2,286.9	<b>4,573.8</b>
	A320-211	1,296.4	177.5	1,473.9	1,211.6	262.3	1,473.9	<b>2,947.8</b>
	A320-232	760.8	203.0	963.7	885.5	78.3	963.7	<b>1,927.5</b>
	A320-271N	804.3	386.9	1,191.3	823.7	367.6	1,191.3	<b>2,382.6</b>
	A321-232	1,930.0	1,161.2	3,091.2	2,420.2	671.0	3,091.2	<b>6,182.5</b>
	A330-343	2.9	-	2.9	1.4	1.4	2.9	<b>5.8</b>
	ATR72-212A	1.4	-	1.4	-	1.4	1.4	<b>2.9</b>
	CRJ9-ER	3,721.2	122.2	3,843.4	3,310.1	533.3	3,843.4	<b>7,686.8</b>
	DC93LW	1.4	-	1.4	1.4	-	1.4	<b>2.9</b>
	EMB170	339.1	14.6	353.6	343.5	10.1	353.6	<b>707.2</b>
EMB175	5,002.5	674.2	5,676.7	5,140.5	536.2	5,676.7	<b>11,353.4</b>	
EMB190	127.5	1.4	129.0	126.1	2.9	129.0	<b>258.0</b>	
HS748A	4.3	-	4.3	4.3	-	4.3	<b>8.7</b>	
MD11GE	6.2	112.7	118.8	110.1	8.7	118.8	<b>237.7</b>	
MD11PW	10.1	252.2	262.3	251.8	10.5	262.3	<b>524.6</b>	
<b>Subtotal</b>		<b>31,212.1</b>	<b>7,960.9</b>	<b>39,173.0</b>	<b>31,765.2</b>	<b>7,407.8</b>	<b>39,173.0</b>	<b>78,346.0</b>
Air Taxi	1900D	221.7	-	221.7	218.8	3.0	221.7	<b>443.4</b>
	BD-700-1A10	15.2	-	15.2	14.2	1.0	15.2	<b>30.5</b>
	BD-700-1A11	13.3	-	13.3	11.4	1.9	13.3	<b>26.6</b>
	BEC58P	65.5	39.1	104.7	39.0	65.7	104.7	<b>209.3</b>
	CL600	2,296.1	232.2	2,528.3	2,210.9	317.5	2,528.3	<b>5,056.6</b>
	CL601	50.4	1.0	51.4	49.5	1.9	51.4	<b>102.8</b>
	CNA208	1,999.7	26.1	2,025.9	1,286.5	739.4	2,025.9	<b>4,051.8</b>

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	CNA510	1.0	-	1.0	1.0	-	1.0	1.9
	CNA525C	279.8	22.8	302.6	243.6	59.0	302.6	605.2
	CNA55B	221.6	6.7	228.4	212.2	16.2	228.4	456.8
	CNA560E	1.9	-	1.9	1.9	-	1.9	3.8
	CNA560U	30.5	-	30.5	30.5	-	30.5	60.9
	CNA560XL	181.7	10.5	192.2	187.4	4.8	192.2	384.4
	CNA680	488.2	23.8	511.9	484.2	27.8	511.9	1,023.9
	CNA750	159.8	2.9	162.7	157.0	5.7	162.7	325.4
	COMSEP	1.0	-	1.0	1.0	-	1.0	1.9
	DHC6	1,515.8	231.2	1,747.1	759.4	987.7	1,747.1	3,494.2
	DHC830	1.9	-	1.9	1.9	-	1.9	3.8
	ECLIPSE500	4.8	-	4.8	4.8	-	4.8	9.5
	EMB120	241.0	178.6	419.6	289.3	130.4	419.6	839.3
	EMB145	11.4	-	11.4	11.4	-	11.4	22.8
	EMB14L	315.9	-	315.9	315.9	-	315.9	631.8
	FAL20	1.9	-	1.9	1.9	-	1.9	3.8
	FAL900EX	34.2	1.0	35.2	34.3	1.0	35.2	70.4
	G650ER	26.6	-	26.6	21.9	4.8	26.6	53.3
	GASEPF	2.9	-	2.9	2.9	-	2.9	5.7
	GASEPV	1.9	-	1.9	1.9	-	1.9	3.8
	GIV	99.9	6.7	106.6	84.5	22.1	106.6	213.2
	GV	34.0	3.1	37.1	35.2	1.9	37.1	74.2
	HS748A	131.3	109.4	240.7	204.4	36.3	240.7	481.5
	IA1125	16.2	2.9	19.0	17.1	1.9	19.0	38.1
	LEAR35	444.1	33.6	477.7	445.3	32.4	477.7	955.4
	MU3001	40.0	1.0	40.9	40.0	1.0	40.9	81.8
	PA30	9.5	-	9.5	9.5	-	9.5	19.0
	SD330	348.5	21.7	370.2	358.7	11.4	370.2	740.3
	SF340	1.0	1.0	1.9	1.9	-	1.9	3.8
	<b>Subtotal</b>	<b>9,310.4</b>	<b>955.1</b>	<b>10,265.5</b>	<b>7,791.1</b>	<b>2,474.4</b>	<b>10,265.5</b>	<b>20,531.0</b>
General Aviation	737700	10.6	-	10.6	10.6	-	10.6	21.2
	1900D	4.5	-	4.5	4.5	-	4.5	9.1
	757PW	-	1.5	1.5	-	1.5	1.5	3.0
	A319-131	1.5	-	1.5	1.5	-	1.5	3.0
	B206L	-	7.6	7.6	3.0	4.5	7.6	15.1
	B222	1.5	-	1.5	-	1.5	1.5	3.0
	BD-700-1A10	146.6	4.6	151.2	146.7	4.5	151.2	302.4
	BD-700-1A11	4.5	-	4.5	3.0	1.5	4.5	9.1
	BEC58P	111.8	3.1	114.9	110.4	4.5	114.9	229.8
	CIT3	76.0	8.6	84.7	75.6	9.1	84.7	169.4
	CL600	172.4	9.1	181.5	169.4	12.1	181.5	362.9

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
	CL601	235.9	25.7	261.6	238.1	23.5	261.6	523.2
	CNA172	461.4	28.5	489.9	443.1	46.9	489.9	979.9
	CNA182	57.3	1.7	59.0	57.5	1.5	59.0	117.9
	CNA206	6.0	-	6.0	6.0	-	6.0	12.1
	CNA208	207.2	59.0	266.1	186.6	79.5	266.1	532.3
	CNA20T	3.0	-	3.0	3.0	-	3.0	6.0
	CNA441	45.4	3.0	48.4	45.4	3.0	48.4	96.8
	CNA500	13.6	-	13.6	13.6	-	13.6	27.2
	CNA510	99.8	-	99.8	98.2	1.6	99.8	199.6
	CNA525C	606.4	42.3	648.7	616.5	32.2	648.7	1,297.4
	CNA55B	308.5	39.3	347.8	303.7	44.0	347.8	695.6
	CNA560E	3.0	1.5	4.5	4.5	-	4.5	9.1
	CNA560U	87.7	6.0	93.8	90.6	3.2	93.8	187.5
	CNA560XL	187.4	10.7	198.1	187.5	10.6	198.1	396.2
	CNA680	176.7	6.3	183.0	178.4	4.5	183.0	365.9
	CNA750	588.2	27.2	615.4	579.1	36.3	615.4	1,230.9
	COMSEP	208.5	7.8	216.2	199.6	16.6	216.2	432.5
	CRJ9-ER	6.0	-	6.0	6.0	-	6.0	12.1
	DHC6	283.8	18.6	302.4	282.8	19.7	302.4	604.8
	EC130	9.7	13.0	22.7	7.6	15.1	22.7	45.4
	ECLIPSE500	36.3	1.5	37.8	36.2	1.6	37.8	75.6
	EMB145	51.4	4.5	55.9	49.7	6.2	55.9	111.9
	EMB14L	4.5	-	4.5	4.5	-	4.5	9.1
	FAL900EX	157.3	21.2	178.4	144.3	34.1	178.4	356.9
	G650ER	31.8	-	31.8	28.6	3.2	31.8	63.5
	GASEPF	612.7	34.5	647.2	620.0	27.2	647.2	1,294.4
	GASEPV	373.5	9.1	382.6	364.3	18.2	382.6	765.1
	GIV	169.4	4.5	173.9	152.7	21.2	173.9	347.8
	GV	394.7	15.1	409.8	358.4	51.4	409.8	819.6
	HS748A	1.5	-	1.5	1.5	-	1.5	3.0
	IA1125	24.2	-	24.2	24.2	-	24.2	48.4
	LEAR35	320.6	30.2	350.8	325.2	25.6	350.8	701.6
	MD81	1.5	-	1.5	1.5	-	1.5	3.0
	MU3001	173.9	18.1	192.0	184.4	7.7	192.0	384.1
	PA30	18.1	-	18.1	16.5	1.6	18.1	36.3
	R44	399.2	-	399.2	399.2	-	399.2	798.4
<b>Subtotal</b>		<b>6,895.6</b>	<b>463.9</b>	<b>7,359.5</b>	<b>6,783.8</b>	<b>575.7</b>	<b>7,359.5</b>	<b>14,719.0</b>

Category	Aircraft Type	Arrivals			Departures			Grand Total
		Day	Night	Total	Day	Night	Total	
Military	737700	46.1	-	46.1	46.1	-	46.1	<b>92.1</b>
	CNA208	92.1	-	92.1	92.1	-	92.1	<b>184.3</b>
	DHC6	92.1	-	92.1	92.1	-	92.1	<b>184.3</b>
	KC135	783.2	-	783.2	783.2	-	783.2	<b>1,566.3</b>
<b>Subtotal</b>		<b>1,013.5</b>	<b>-</b>	<b>1,013.5</b>	<b>1,013.5</b>	<b>-</b>	<b>1,013.5</b>	<b>2,027.0</b>
<b>Grand Total</b>		<b>48,431.7</b>	<b>9,379.8</b>	<b>57,811.5</b>	<b>47,353.6</b>	<b>10,457.9</b>	<b>57,811.5</b>	<b>115,623.0</b>

Note: Totals may not add up due to rounding.

## 5.2 Runway Utilization

**Table 13** and **Table 14** present the runway usage rates modeled for each runway for day and night periods in the Future No Action and the Future Proposed Action scenarios. The proposed action shifts usage of Runway 1R-19L to the existing parallel runway, Runway 1L-19R.

**Table 13. Future No Action Runway Use**

Source: MKE NOMS

Runway	Arrival		Departure	
	Day	Night	Day	Night
01L	19.4%	29.3%	19.3%	24.4%
01R	0.1%	0.0%	0.3%	0.0%
07L	1.3%	0.1%	1.1%	0.2%
07R	26.0%	17.1%	23.3%	16.7%
13	0.2%	0.1%	0.8%	0.2%
19L	0.1%	0.0%	0.3%	0.1%
19R	16.4%	28.6%	29.0%	30.9%
25L	35.0%	24.6%	24.2%	27.1%
25R	1.0%	0.1%	0.6%	0.2%
31	0.2%	0.1%	0.1%	0.1%
H1	0.4%	0.0%	0.8%	0.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Note: Totals may not add up due to rounding.



**Table 14. Future Proposed Action Runway Use**

Source: MKE NOMS, HMMH

Runway	Arrival		Departure	
	Day	Night	Day	Night
01L	19.5%	29.3%	19.7%	24.4%
07L	1.3%	0.1%	1.1%	0.2%
07R	26.0%	17.1%	23.3%	16.7%
13	0.2%	0.1%	0.8%	0.2%
19R	16.5%	28.6%	29.3%	31.0%
25L	35.0%	24.6%	24.2%	27.1%
25R	1.0%	0.1%	0.6%	0.2%
31	0.2%	0.1%	0.1%	0.1%
H1	0.4%	0.0%	0.8%	0.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Note: Runway 01R-19L is closed.  
 Totals may not add up due to rounding.

### 5.3 Future Noise Analysis

This section presents the noise modeling results along with an analysis of noise-impacted population and noise-sensitive sites, and the potential noise effects associated with the implementation of the No Action Alternative or the Proposed Action Alternative.

#### 5.3.1 No Action Alternative (2028)

**Figure 6** displays the DNL 65 dB – 75 dB noise contours for the 2028 No Action Alternative over a map of the existing land use in the study area. The DNL 65 dB noise contour remains primarily on airport property with an increase in exposure extending to the north, east, and west into areas of residential land use from the Existing Scenario. There is no residential land use within the DNL 70 dB or higher contours.

**Table 15** provides the population exposure, housing unit count, and contour areas for the 2028 Future No Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,306.52 acres and contains 43 residents and 18 housing units. The 70 dB noise contours associated with the No Action Alternative does not contain any residents or housing units. In addition, no individual noise-sensitive locations, such as schools or places of worship are within the 2028 No Action Alternative DNL 65 dB noise contour.

**Table 15. Future 2028 No Action Noise Contours Population, Housing, and Area**

*Source: HMMH, 2024; U.S. Census Bureau, 2020*

<b>DNL (dB) Noise Contour</b>	<b>Population Census</b>	<b>Housing Units</b>	<b>Area (acres)</b>
65 - 70	43	18	774.02
70 - 75	0	0	292.18
> 75	0	0	240.32
<b>Total</b>	<b>43</b>	<b>18</b>	<b>1,306.52</b>

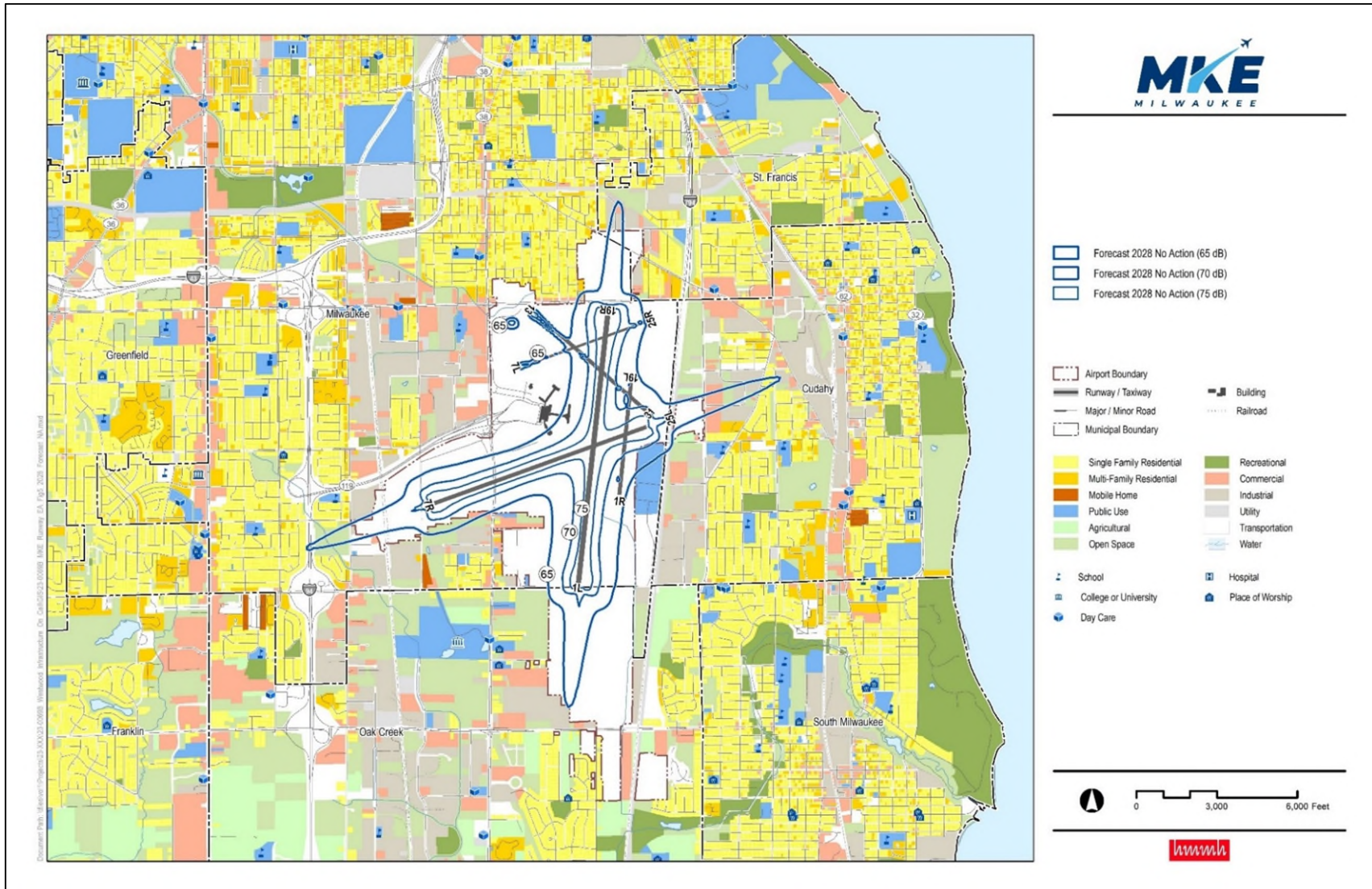


Figure 6. Future Forecast 2028 No Action DNL Contours

### 5.3.2 Proposed Action Alternative (2028)

**Figure 7** displays the DNL 65 dB – 75 dB noise contours for the 2028 Proposed Action Alternative over a map of the existing land use in the study area. Similarly to the No Action Alternative, The DNL 65 dB noise contour remains primarily on airport property with an increase in the DNL 65 dB contour to the north, east, and west into areas of residential land use. There is no residential land use within the DNL 70 dB or higher contours.

**Table 16** provides the population exposure, housing unit count, and contour areas for the 2028 Future Proposed Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,303.81 acres and contains 43 residents and 18 housing units. The 70 dB noise contours associated with the Proposed Action does not contain any residents or housing units. In addition, no individual noise-sensitive locations, such as schools or places of worship, are within the 2028 Proposed Action Alternative DNL 65 dB noise contour.

**Table 16. 2028 Proposed Action Noise Contours Population, Housing, and Area**

*Source: HMMH, 2024; U.S. Census Bureau, 2020.*

DNL (dB) Noise Contour	Population Census	Housing Units	Area (acres)
65 - 70	43	18	774.48
70 - 75	0	0	288.99
> 75	0	0	240.34
<b>Total</b>	<b>43</b>	<b>18</b>	<b>1,303.81</b>

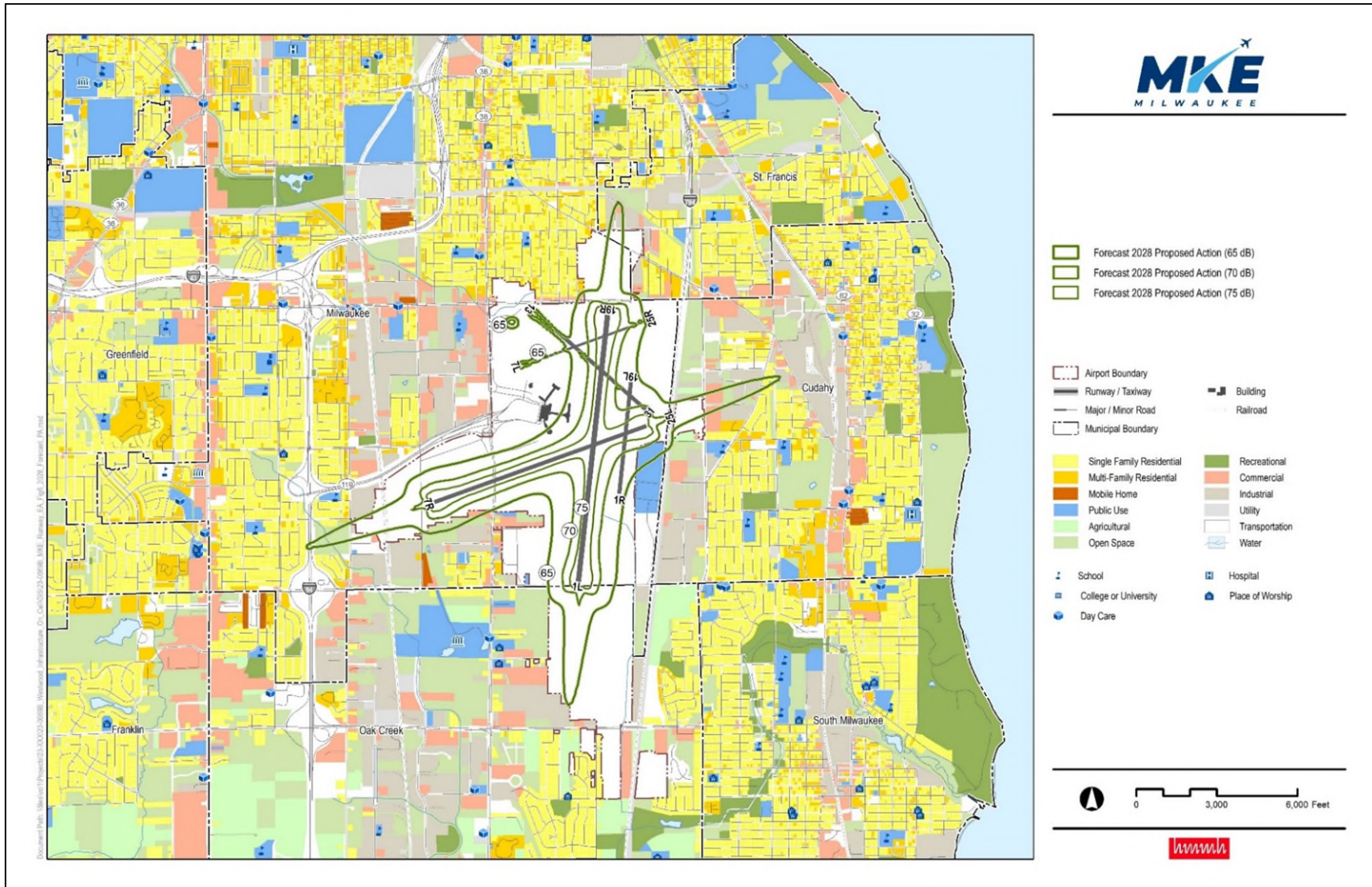


Figure 7. Future Forecast 2028 Proposed Action DNL Contours

### 5.3.3 No Action and Proposed Action Comparison (2028)

The 2028 Proposed Action DNL 65 dB contour is smaller than the 2028 No Action DNL 65 dB contour. The number of people exposed to a DNL 65 dB or greater noise level remains unchanged. There is a decrease in the DNL 65 dB contour area of approximately 2.71 acres.

**Table 17** provides a summary of changes between the 2028 No Action and Proposed Action DNL 65 dB contours. **Figure 8** provides a comparison of the DNL 65 dB contours for each of the 2028 alternatives and shows the grid points that would see a significant or reportable change in DNL when comparing the modeling results for the 2028 No Action Alternative and 2028 Proposed Action. As shown in the figure below, the most significant change as a result of the Proposed Action occurs within the airport boundary and will have minimal impact on residential land use.

**Table 17. Summary of Changes with the 2028 No Action and Proposed Action DNL 65 dB Contour**

DNL 65 dB	No Action	Proposed Action	Difference
2020 Population	43	43	0
2020 Housing Units	18	18	0
Acres	1,306.52	1,303.81	-2.71
Noise Sensitive Sites	0	0	0

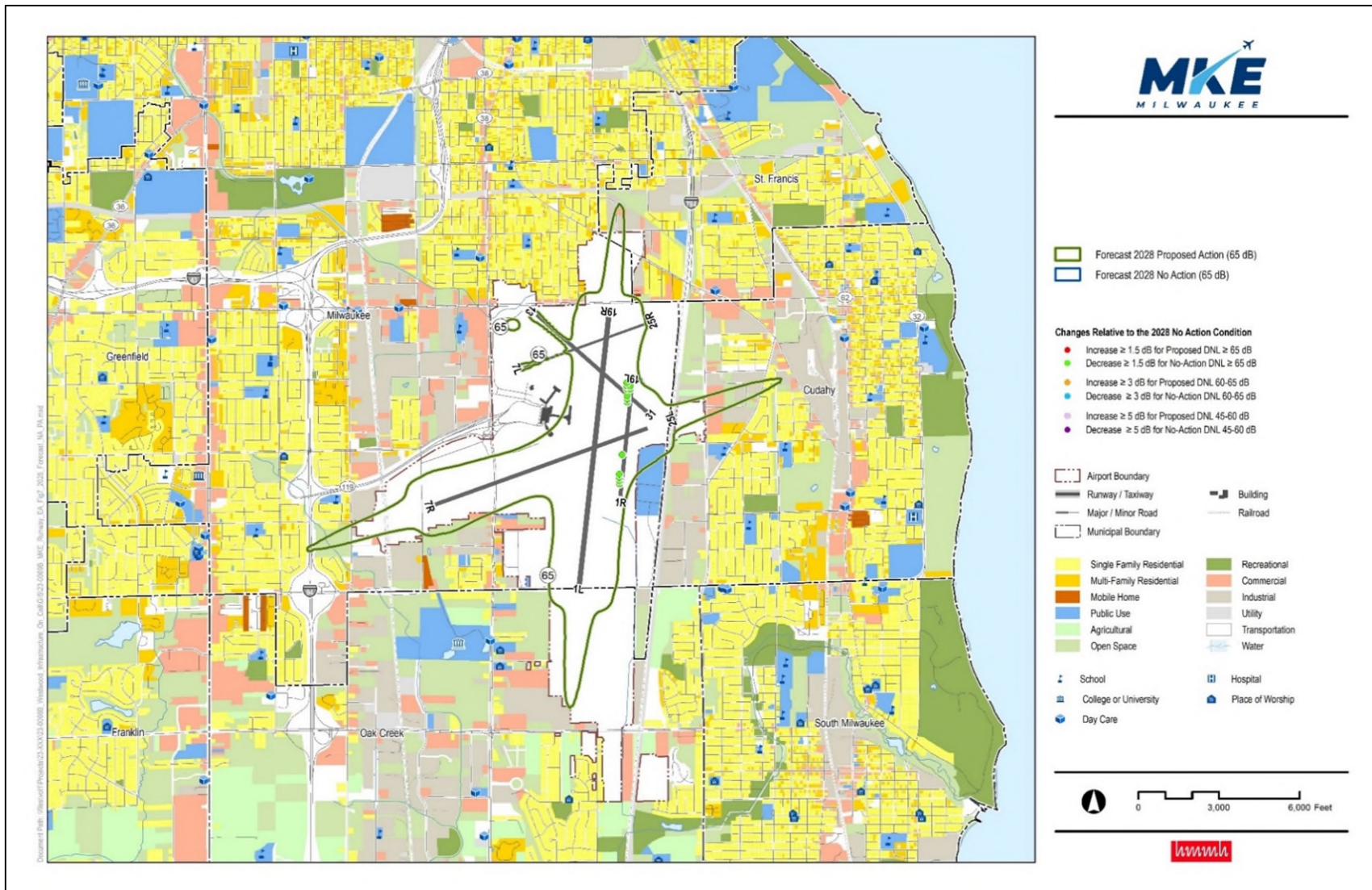


Figure 8. Future Forecast 2028 No Action and Proposed Action DNL 65 dB and Impact Sets

### 5.3.4 No Action Alternative (2033)

**Figure 9** displays the DNL 65 dB – 75 dB noise contours for the 2033 No Action Alternative over a map of the existing land use in the study area. The DNL 65 dB noise contour remains primarily on airport property with an increase in the 65 dB contour to the north, east, and west into areas of residential land use from the Existing Scenario. There is no residential land use within the DNL 70 dB or higher contours.

**Table 18** provides the population exposure, housing unit count, and contour areas for the 2033 Future No Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,398.86 acres and contains 66 residents and 28 housing units. The 70 dB noise contours associated with the No Action Alternative does not contain any residents or housing units. In addition, no individual noise-sensitive locations, such as schools or places of worship are within the 2033 No Action Alternative DNL 65 dB noise contour.

**Table 18. 2033 No Action Noise Contours Population, Housing, and Area**

*Source: HMMH, 2024; U.S. Census Bureau, 2020*

DNL (dB) Noise Contour	Population Census	Housing Units	Area (acres)
65 - 70	66	28	834.64
70 - 75	0	0	310.14
> 75	0	0	254.08
<b>Total</b>	<b>66</b>	<b>28</b>	<b>1,398.86</b>



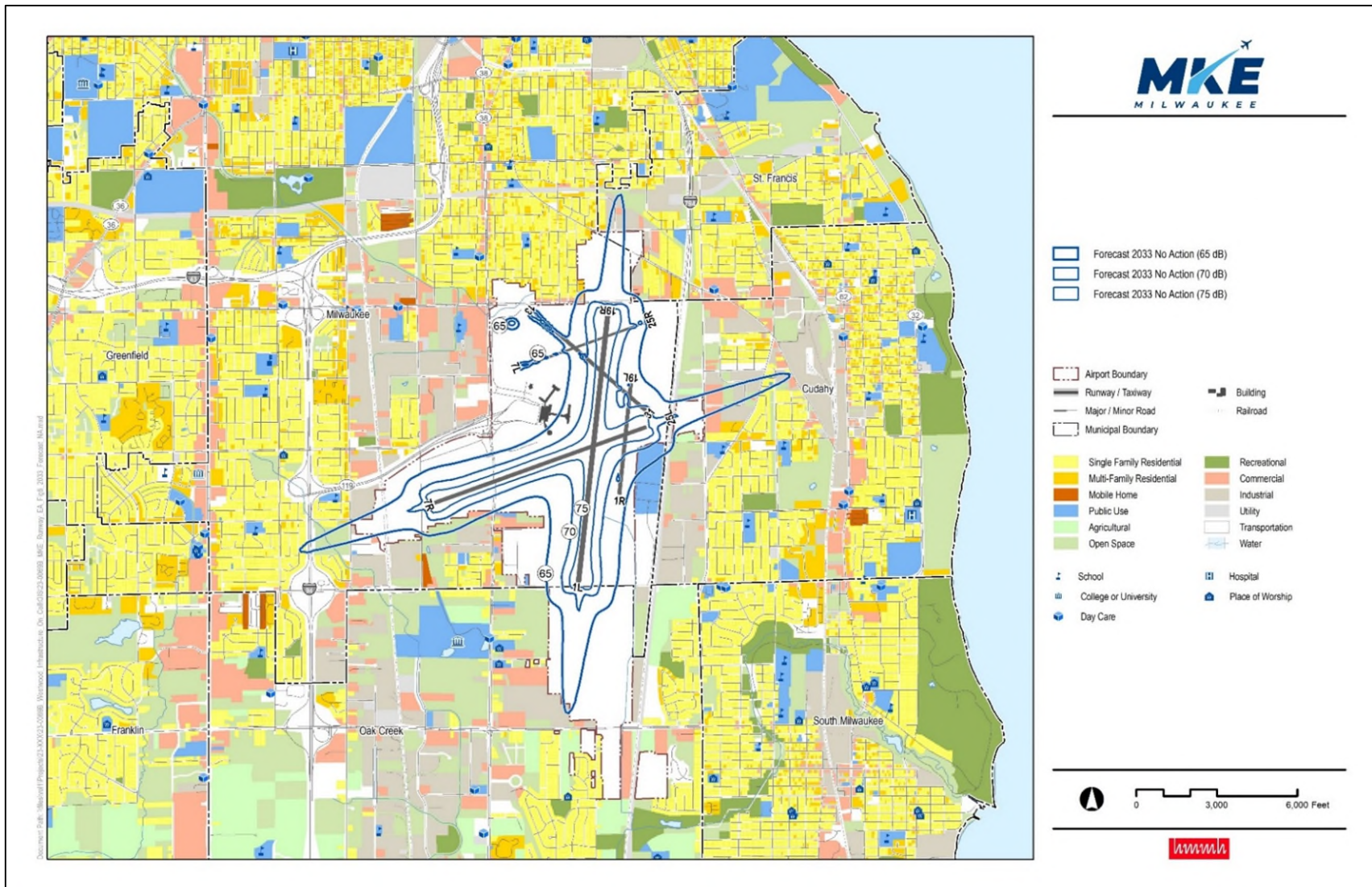


Figure 9. Future Forecast 2033 No Action DNL Contours

### 5.3.5 Proposed Action Alternative (2033)

**Figure 10** displays the DNL 65 dB – 75 dB noise contours for the 2033 Proposed Action Alternative over a map of the existing land use in the study area. The DNL 65 dB noise contour follows the same pattern as the No Action Alternative, remaining primarily on airport property with an increase in the 65 dB contour to the north, east, and west into areas of residential land use. There is no residential land use within the DNL 70 dB or higher contours.

**Table 19** provides the population exposure, housing unit count, and contour areas for the 2033 Future Proposed Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,396.61 acres and contains 66 residents and 28 housing units. There are no residents and housing units within the 70 dB contour as a result of the proposed action. In addition, no individual noise-sensitive locations, such as schools or places of worship are within the 2033 Proposed Action Alternative DNL 65 dB noise contour.

**Table 19. 2033 Proposed Action Noise Contours Population, Housing, and Area**

*Source: HMMH, 2024; U.S. Census Bureau, 2020.*

DNL (dB) Noise Contour	Population Census	Housing Units	Area (acres)
65 - 70	66	28	836.40
70 - 75	0	0	306.14
> 75	0	0	254.07
<b>Total</b>	<b>66</b>	<b>28</b>	<b>1,396.61</b>

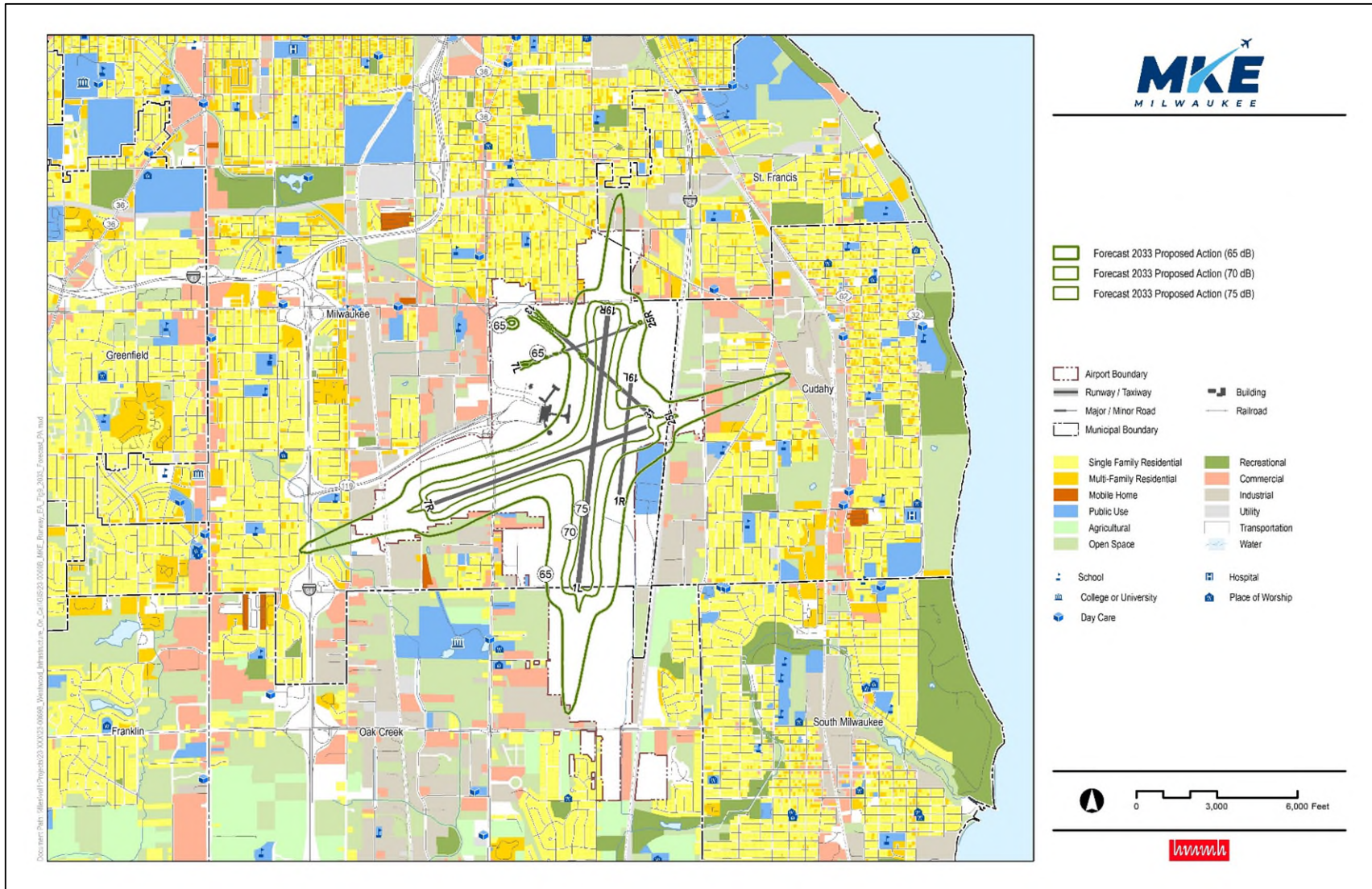


Figure 10. Future Forecast 2033 Proposed Action DNL Contours

### 5.3.6 No Action and Proposed Action Comparison (2033)

The 2033 Proposed Action DNL 65 dB contour is smaller than the No Action DNL 65 dB contour. The number of people exposed to a DNL 65 dB or greater noise level remains unchanged. There is a decrease in the DNL 65 dB contour area of approximately 2.25 acres.

**Table 20** provides a summary of changes between the 2033 No Action and Proposed Action DNL 65 dB contours. **Figure 11** provides a comparison of the DNL 65 dB contours for each of the 2033 alternatives and shows the grid points that would see a significant or reportable change in DNL when comparing the modeling results for the 2033 No Action Alternative and 2033 Proposed Action Alternative. As depicted, the most significant change as a result of the Proposed Action occurs within the airport boundary and will have minimal impact on residential land use.

**Table 20. Summary of Changes with the 2033 No Action and Proposed Action DNL 65 dB Contours**

DNL 65 dB	No Action	Proposed Action	Difference
Population	66	66	0
Housing Units	28	28	0
Acres	1,398.86	1,396.61	-2.25
Noise Sensitive Sites	0	0	0

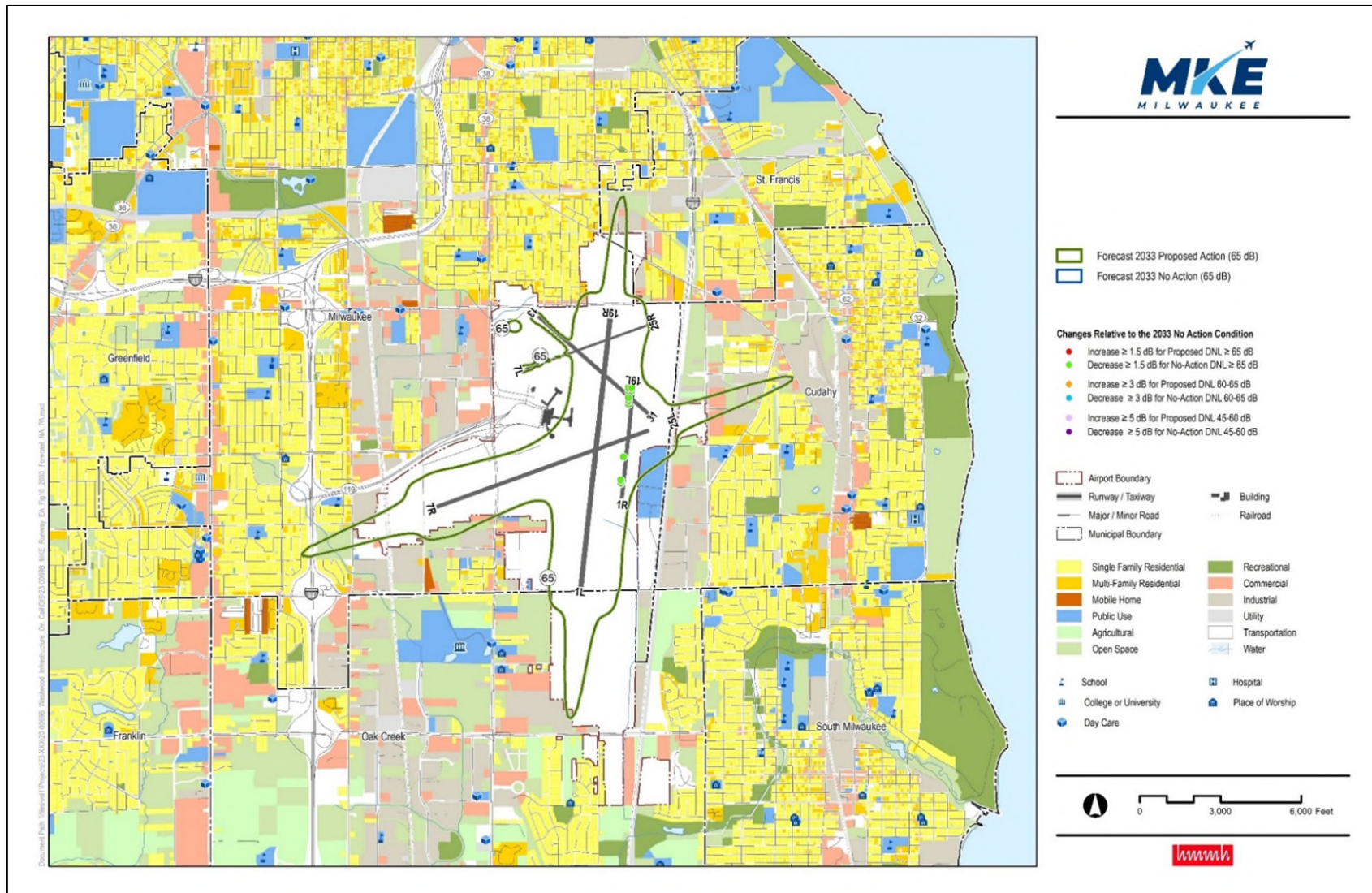


Figure 11. Future Forecast 2033 No Action and Proposed Action DNL Contours and Impact Sets

## 5.4 Mitigation Measures

There are projected to be no areas of significant impact, additional housing units or noise sensitive sites within the Proposed Action DNL 65 dB contours for 2028 or 2033. Therefore, no mitigation is proposed or required for Proposed Action.

## Appendix A Aircraft Noise Terminology

Noise is a complex physical quantity. The properties, measurement, and presentation of noise involve specialized terminology that can be difficult to understand. To provide a basic reference on these technical issues, this section introduces fundamentals of noise terminology, the effects of noise on human activity, and noise propagation.

### A.1 Introduction to Noise Terminology

Analyses of potential impacts from changes in aircraft noise levels rely largely on a measure of cumulative noise exposure over an entire calendar year, expressed in terms of a metric called the Day-Night Average Sound Level (DNL). However, DNL does not provide an adequate description of noise for many purposes. A variety of measures, which are further described in subsequent sub-sections, are available to address essentially any issue of concern, including:

- Sound Pressure Level, SPL, and the Decibel, dB
- A-Weighted Decibel, dBA
- Maximum A-Weighted Sound Level,  $L_{max}$
- Time Above, TA
- Sound Exposure Level, SEL
- Equivalent A-Weighted Sound Level,  $L_{eq}$
- Day-Night Average Sound Level, DNL

#### A.1.1 Sound Pressure Level, SPL, and the Decibel, dB

All sounds come from a sound source – a musical instrument, a voice speaking, an airplane passing overhead. It takes energy to produce sound. The sound energy produced by any sound source travels through the air in sound waves – tiny, quick oscillations of pressure just above and just below atmospheric pressure. The ear senses these pressure variations and – with much processing in our brain – translates them into “sound.”

Our ears are sensitive to a wide range of sound pressures. The loudest sounds that we can hear without pain contain about one million times more energy than the quietest sounds we can detect. To allow us to perceive sound over this very wide range, our ear/brain “auditory system” compresses our response in a complex manner, represented by a term called sound pressure level (SPL), which we express in units called decibels (dB).

Mathematically, SPL is a logarithmic quantity based on the ratio of two sound pressures, the numerator being the pressure of the sound source of interest ( $P_{source}$ ), and the denominator being a reference pressure ( $P_{reference}$ ).<sup>4</sup>

$$Sound\ Pressure\ Level\ (SPL) = 20 * \text{Log} \left( \frac{P_{source}}{P_{reference}} \right) dB$$

The logarithmic conversion of sound pressure to SPL means that the quietest sound that we can hear (the reference pressure) has a sound pressure level of about 0 dB, while the loudest sounds that we hear without pain have sound pressure levels of about 120 dB. Most sounds in our day-to-day environment have sound pressure levels from about 40 to 100 dB.<sup>5</sup>

Because decibels are logarithmic quantities, we cannot use common arithmetic to combine them. For example, if two sound sources each produce 100 dB operating individually, when they operate simultaneously, they produce 103 dB -- not the 200 dB we might expect. Increasing to four equal sources operating simultaneously will add another three decibels of noise, resulting in a total SPL of 106 dB. For every doubling of the number of equal sources, the SPL goes up another three decibels.

If one noise source is much louder than another is, the louder source "masks" the quieter one and the two sources together produce virtually the same SPL as the louder source alone. For example, a 100 dB and 80 dB sources produce approximately 100 dB of noise when operating together.

Two useful "rules of thumb" related to SPL are worth noting: (1) humans generally perceive a six to 10 dB increase in SPL to be about a doubling of loudness,<sup>6</sup> and (2) changes in SPL of less than about three decibels for a particular sound are not readily detectable outside of a laboratory environment.

### A.1.2 A-Weighted Decibel

An important characteristic of sound is its frequency, or "pitch." This is the per-second oscillation rate of the sound pressure variation at our ear, expressed in units known as Hertz (Hz).

When analyzing the total noise of any source, acousticians often break the noise into frequency components (or bands) to consider the "low," "medium," and "high" frequency components. This breakdown is important for two reasons:

- Our ear is better equipped to hear mid and high frequencies and is least sensitive to lower frequencies. Thus, we find mid- and high-frequency noise more annoying.
- Engineering solutions to noise problems differ with frequency content. Low-frequency noise is generally harder to control.

<sup>4</sup> The reference pressure is approximately the quietest sound that a healthy young adult can hear.

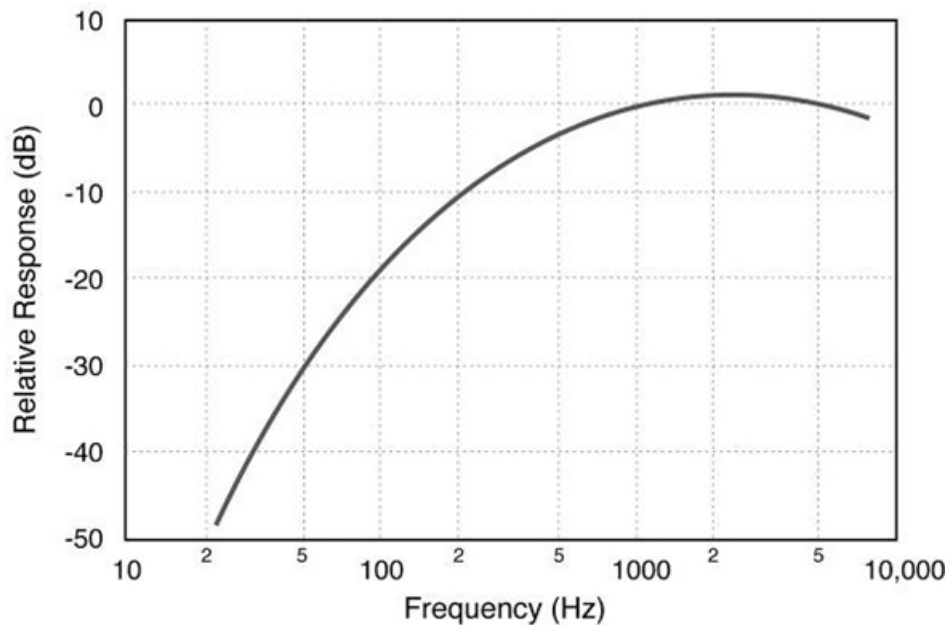
<sup>5</sup> The logarithmic ratio used in its calculation means that SPL changes relatively quickly at low sound pressures and more slowly at high pressures. This relationship matches human detection of changes in pressure. We are much more sensitive to changes in level when the SPL is low (for example, hearing a baby crying in a distant bedroom), than we are to changes in level when the SPL is high (for example, when listening to highly amplified music).

<sup>6</sup> A "10 dB per doubling" rule of thumb is the most often used approximation.



The normal frequency range of hearing for most people extends from a low of about 20 Hz to a high of about 10,000 to 15,000 Hz. Most people respond to sound most readily when the predominant frequency is in the range of normal conversation – typically around 1,000 to 2,000 Hz. The acoustical community has defined several “filters,” which approximate this sensitivity of our ear and thus, help us to judge the relative loudness of various sounds made up of many different frequencies.

The so-called "A" filter (“A weighting”) generally does the best job of matching human response to most environmental noise sources, including natural sounds and sound from common transportation sources. “A-weighted decibels” are abbreviated “dBA.” Because of the correlation with our hearing, the U. S. Environmental Protection Agency (EPA) and nearly every other federal and state agency have adopted A-weighted decibels as the metric for use in describing environmental and transportation noise. **Figure A-1** depicts A-weighting adjustments to sound from approximately 20 Hz to 10,000 Hz.



**Figure A-1. A-Weighting Frequency Response**

Source: Extract from Harris, Cyril M., Editor, “Handbook of Acoustical Measurements and Control,” McGraw-Hill, Inc., 1991, pg. 5.13; HMMH

As **Figure A-1** shows, A-weighting significantly de-emphasizes noise content at lower and higher frequencies where we do not hear as well, and has little effect, or is nearly “flat,” in for mid-range frequencies between 1,000 and 5,000 Hz. All sound pressure levels presented in this document are A-weighted unless otherwise specified.

Figure A-2 depicts representative A-weighted sound levels for a variety of common sounds.

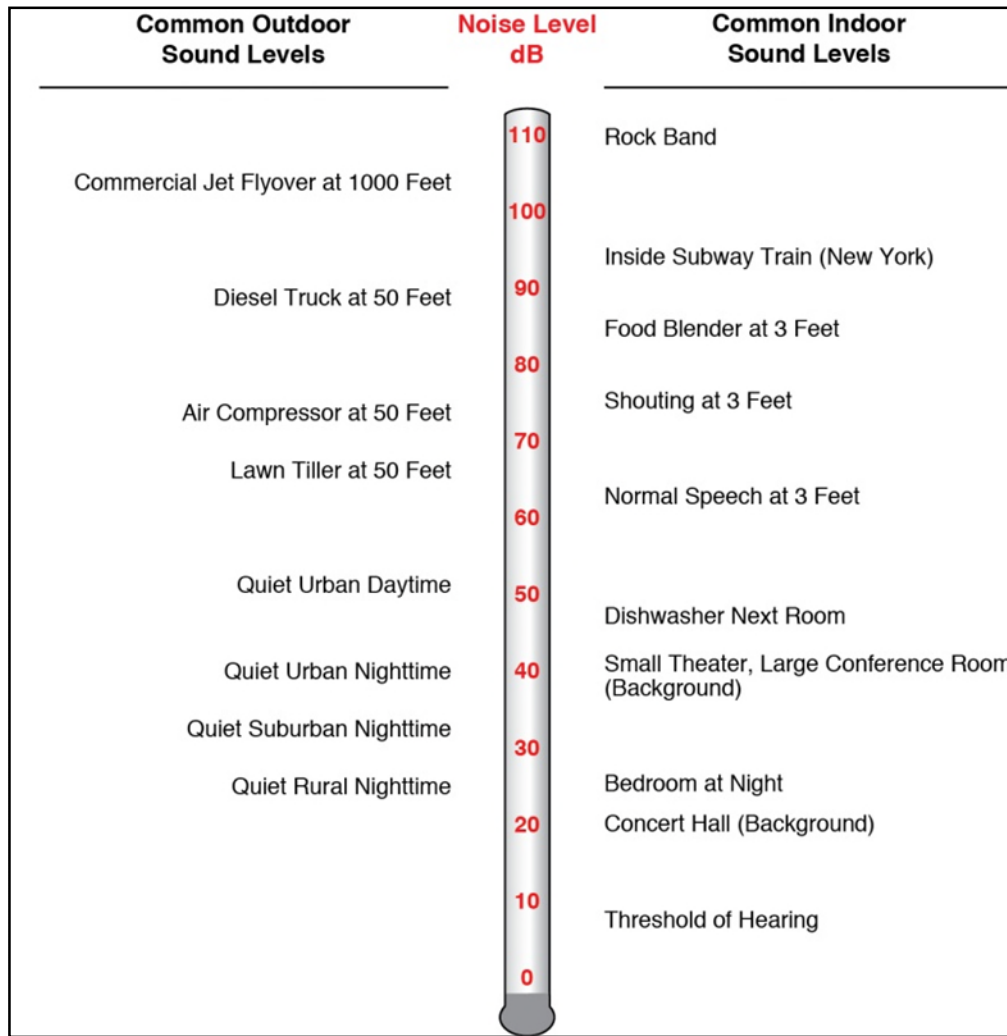


Figure A-2. A-Weighted Sound Levels for Common Sounds

Source: HMMH

### A.1.3 Maximum A-Weighted Sound Level, $L_{max}$

An additional dimension to environmental noise is that A-weighted levels vary with time. For example, the sound level increases as a car or aircraft approaches, then falls and blends into the background as the aircraft recedes into the distance. The background or “ambient” level continues to vary in the absence of a distinctive source, for example due to birds chirping, insects buzzing, leaves rustling, etc. It is often convenient to describe a particular noise “event” (such as a vehicle passing by, a dog barking, etc.) by its maximum sound level, abbreviated as  $L_{max}$ .

Figure A-3 depicts this general concept, for a hypothetical noise event with an  $L_{max}$  of approximately 102 dB.

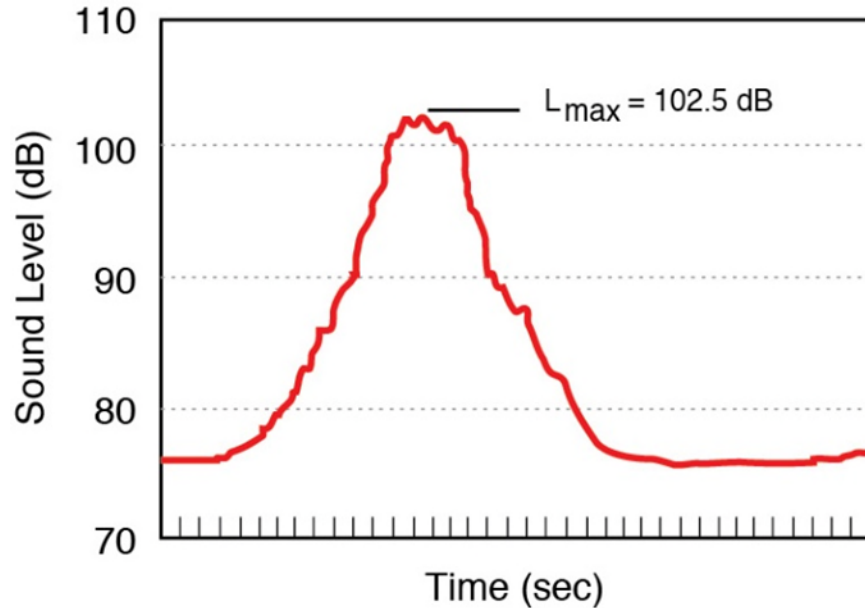


Figure A-3. Variation in A-Weighted Sound Level over Time and Maximum Noise Level

Source: HMMH

While the maximum level is easy to understand, it suffers from a serious drawback when used to describe the relative “noisiness” of an event such as an aircraft flyover; i.e., it describes only one dimension of the event and provides no information on the event’s overall, or cumulative, noise exposure. In fact, two events with identical maximum levels may produce very different total exposures. One may be of very short duration, while the other may continue for an extended period and be judged much more annoying. The next section introduces a measure that accounts for this concept of a noise “dose,” or the cumulative exposure associated with an individual “noise event” such as an aircraft flyover.

#### A.1.4 Sound Exposure Level, SEL

The most commonly used measure of cumulative noise exposure for an individual noise event, such as an aircraft flyover, is the Sound Exposure Level, or SEL. SEL is a summation of the A-weighted sound energy over the entire duration of a noise event. SEL expresses the accumulated energy in terms of the one-second-long steady-state sound level that would contain the same amount of energy as the actual time-varying level.

SEL provides a basis for comparing noise events that generally match our impression of their overall “noisiness,” including the effects of both duration and level. The higher the SEL, the more annoying a noise event is likely to be. In simple terms, SEL “compresses” the energy for the noise event into a single second. **Figure A-4** depicts this compression, for the same hypothetical event shown in **Figure A-3**. Note that the SEL is higher than the  $L_{max}$ .

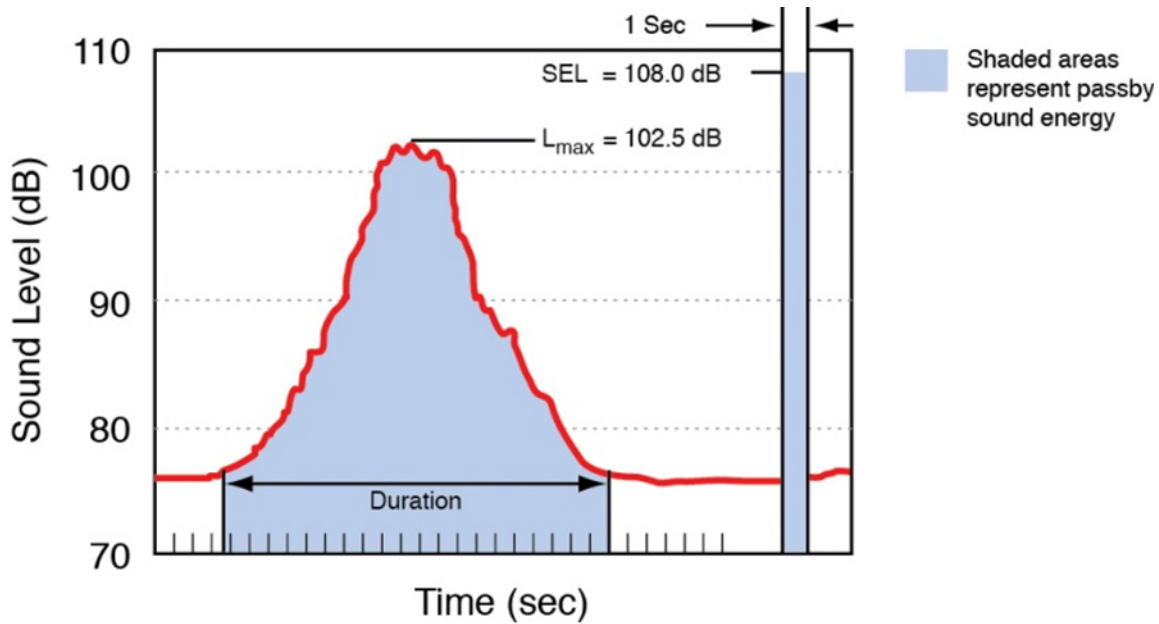


Figure A-4. Graphical Depiction of Sound Exposure Level

Source: HMMH

The “compression” of energy into one second means that a given noise event’s SEL will almost always will be a higher value than its  $L_{max}$ . For most aircraft flyovers, SEL is roughly five to 12 dB higher than  $L_{max}$ . Adjustment for duration means that relatively slow and quiet propeller aircraft can have the same or higher SEL than faster, louder jets, which produce shorter duration events.

### A.1.5 Equivalent A-Weighted Sound Level, $L_{eq}$

The Equivalent Sound Level, abbreviated  $L_{eq}$ , is a measure of the exposure resulting from the accumulation of sound levels over a particular period of interest; e.g., one hour, an eight-hour school day, nighttime, or a full 24-hour day.  $L_{eq}$  plots for consecutive hours can help illustrate how the noise dose rises and falls over a day or how a few loud aircraft significantly affect some hours.

$L_{eq}$  may be thought of as the constant sound level over the period of interest that would contain as much sound energy as the actual varying level. It is a way of assigning a single number to a time-varying sound level. **Figure A-5** illustrates this concept for the same hypothetical event shown in **Figure A-3** and **Figure A-4**. Note that the  $L_{eq}$  is lower than either the  $L_{max}$  or SEL.

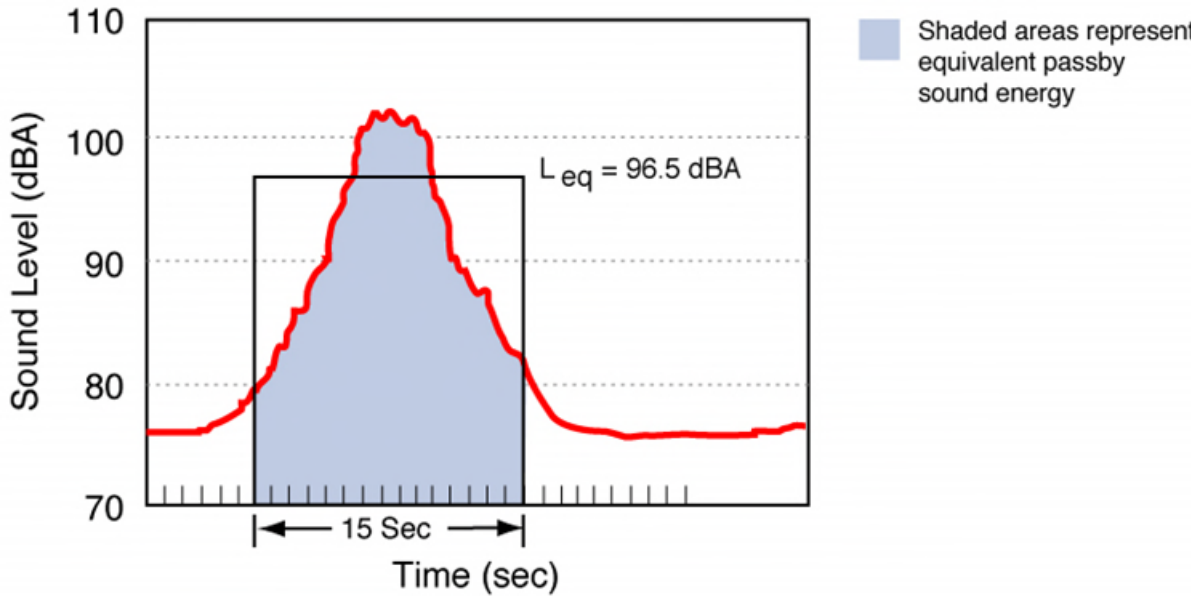


Figure A-5. Example of a 15-Second Equivalent Sound Level

Source: HMMH

### A.1.6 Day-Night Average Sound Level, DNL or $L_{dn}$

The FAA requires that airports use a measure of noise exposure that is slightly more complicated than  $L_{eq}$  to describe cumulative noise exposure – the Day-Night Average Sound Level, DNL.

The U.S. EPA identified DNL as the most appropriate means of evaluating airport noise based on the following considerations.<sup>7</sup>

- The measure should be applicable to the evaluation of pervasive long-term noise in various defined areas and under various conditions over long periods.
- The measure should correlate well with known effects of the noise environment and on individuals and the public.
- The measure should be simple, practical, and accurate. In principle, it should be useful for planning as well as for enforcement or monitoring purposes.
- The required measurement equipment, with standard characteristics, should be commercially available.
- The measure should be closely related to existing methods currently in use.
- The single measure of noise at a given location should be predictable, within an acceptable tolerance, from knowledge of the physical events producing the noise.

<sup>7</sup> "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," U. S. EPA Report No. 550/9-74-004, March 1974.

- The measure should lend itself to small, simple monitors, which can be left unattended in public areas for long periods.

Most federal agencies dealing with noise have formally adopted DNL. The Federal Interagency Committee on Noise (FICON) reaffirmed the appropriateness of DNL in 1992. The FICON summary report stated: “There are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric.”

In 2015, the FAA began a multi-year effort to update the scientific evidence on the relationship between aircraft noise exposure and its effects on communities around airports.<sup>8</sup> This was the most comprehensive study using a single noise survey ever undertaken in the U.S., polling communities surrounding 20 airports nationwide. The FAA Reauthorization Act of 2018 under Section 188 and 173, required FAA to complete the evaluation of alternative metrics to the DNL standard within one year. The Section 188 and 173 Report to Congress was delivered on April 14, 2020<sup>9</sup> and concluded that while no single noise metric can cover all situations, DNL provides the most comprehensive way to consider the range of factors influencing exposure to aircraft noise. In addition, use of supplemental metrics is both encouraged and supported to further disclose and aid in the public understanding of community noise impacts. The full study supporting these reports was released in January 2021. If changes are warranted in the use of DNL, which DNL level to assess or the use of supplemental metrics, FAA will propose revised policy and related guidance and regulations, subject to interagency coordination, as well as public review and comment.

In simple terms, DNL is the 24-hour  $L_{eq}$  with one adjustment; all noises occurring at night (defined as 10 p.m. through 7 a.m.) are increased by 10 dB, to reflect the added intrusiveness of nighttime noise events when background noise levels decrease. In calculating aircraft exposure, this 10 dB increase is mathematically identical to counting each nighttime aircraft noise event ten times.

DNL can be measured or estimated. Measurements are practical only for obtaining DNL values for limited numbers of points, and, in the absence of a permanently installed monitoring system, only for relatively short periods. Most airport noise studies use computer-generated DNL estimates depicted as equal-exposure noise contours (much as topographic maps have contours of equal elevation).

The annual DNL is mathematically identical to the DNL for the AAD—i.e., a day on which the number of operations is equal to the annual total divided by 365 (366 in a leap year). **Figure A-6** graphically depicts the manner in which the nighttime adjustment applies in calculating DNL. **Figure A-7** presents representative outdoor DNL values measured at various U.S. locations.

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<sup>8</sup> FAA. Press Release – FAA To Re-Evaluate Method for Measuring Effects of Aircraft Noise. [https://www.faa.gov/news/press\\_releases/news\\_story.cfm?newsId=18774](https://www.faa.gov/news/press_releases/news_story.cfm?newsId=18774)

<sup>9</sup> FAA. Report to Congress on an evaluation of alternative noise metrics. [https://www.faa.gov/about/plans\\_reports/congress/media/Day-Night\\_Average\\_Sound\\_Levels\\_COMPLETED\\_report\\_w\\_letters.pdf](https://www.faa.gov/about/plans_reports/congress/media/Day-Night_Average_Sound_Levels_COMPLETED_report_w_letters.pdf)

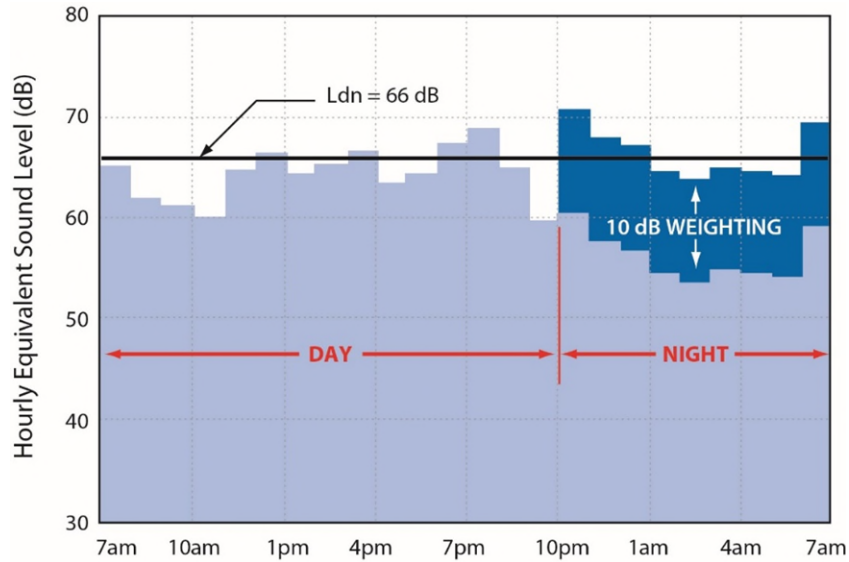


Figure A-6. Example of a Day-Night Average Sound Level Calculation

Source: HMMH

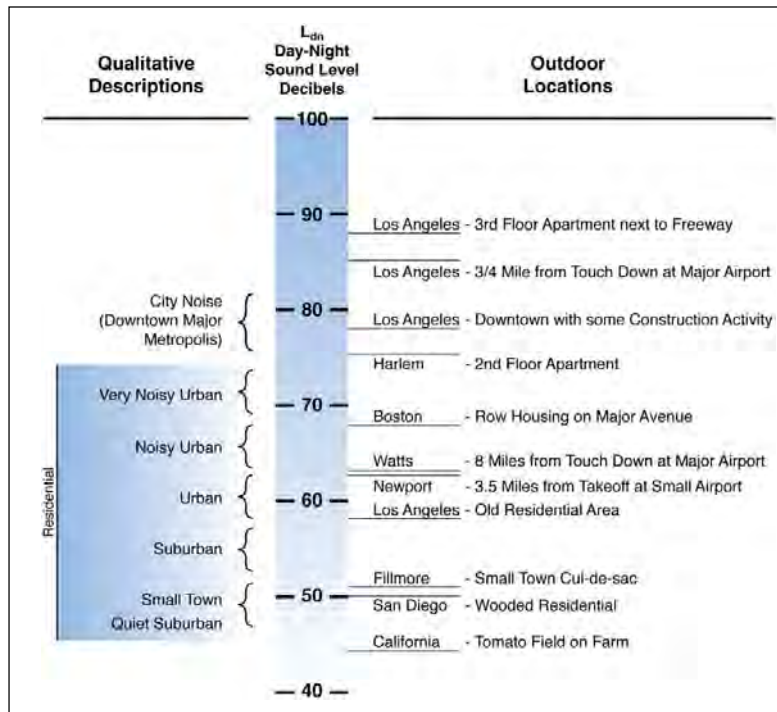


Figure A-7. Examples of Measured Day-Night Average Sound Levels, DNL

Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," March 1974, p.14.

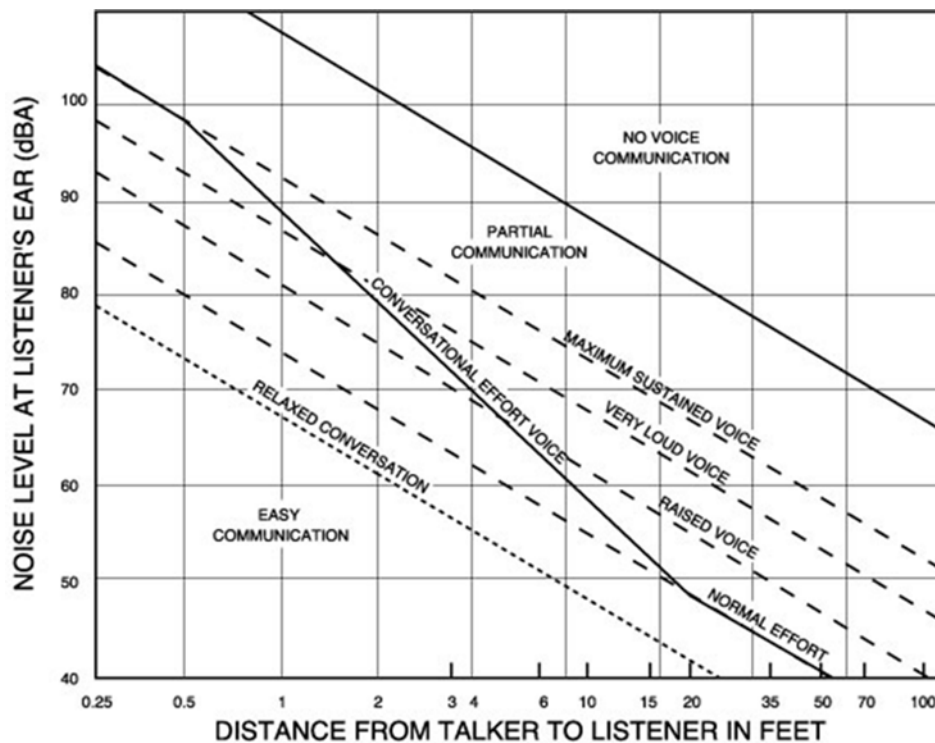
## A.2 Aircraft Noise Effects on Human Activity

Aircraft noise can be an annoyance and a nuisance. It can interfere with conversation and listening to television, disrupt classroom activities in schools, and disrupt sleep. Relating these effects to specific noise metrics helps in the understanding of how and why people react to their environment.

### A.2.1 Speech Interference

One potential effect of aircraft noise is its tendency to "mask" speech, making it difficult to carry on a normal conversation. The sound level of speech decreases as the distance between a talker and listener increases. As the background sound level increases, it becomes harder to hear speech.

**Figure A-8** presents typical distances between talker and listener for satisfactory outdoor conversations, in the presence of different steady A-weighted background noise levels for raised, normal, and relaxed voice effort. As the background level increases, the talker must raise his/her voice, or the individuals must get closer together to continue talking.



**Figure A-8. Outdoor Speech Intelligibility**

Source: U.S. EPA, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," March 1974, p.D-5.



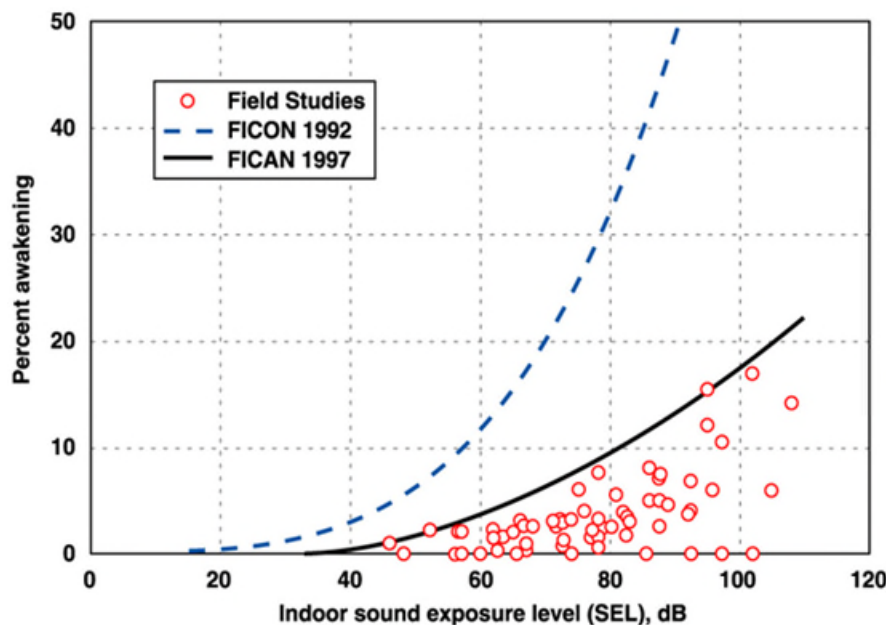
Satisfactory conversation does not always require hearing every word; 95% intelligibility is acceptable for many conversations. In relaxed conversation, however, we have higher expectations of hearing speech and generally require closer to 100% intelligibility. Any combination of talker-listener distances and background noise that falls below the bottom line in the figure (which roughly represents the upper boundary of 100% intelligibility) represents an ideal environment for outdoor speech communication. Indoor communication is generally acceptable in this region as well.

One implication of the relationships in **Figure A-8** is that for typical communication distances of three or four feet, acceptable outdoor conversations can be carried on in a normal voice as long as the background noise outdoors is less than about 65 dB. If the noise exceeds this level, as might occur when an aircraft passes overhead, intelligibility would be lost unless vocal effort were increased or communication distance were decreased.

Indoors, typical distances, voice levels, and intelligibility expectations generally require a background level less than 45 dB. With windows partly open, housing generally provides about 10 to 15 dB of interior-to-exterior noise level reduction. Thus, if the outdoor sound level is 60 dB or less, there is a reasonable chance that the resulting indoor sound level will afford acceptable interior conversation. With windows closed, 24 dB of attenuation is typical.

### A.2.2 Sleep Interference

Research on sleep disruption from noise has led to widely varying observations. In part, this is because (1) sleep can be disturbed without awakening, (2) the deeper the sleep the more noise it takes to cause arousal, (3) the tendency to awaken increases with age, and other factors. **Figure A-9** shows a summary of findings on the topic.



**Figure A-9. Sleep Interference**

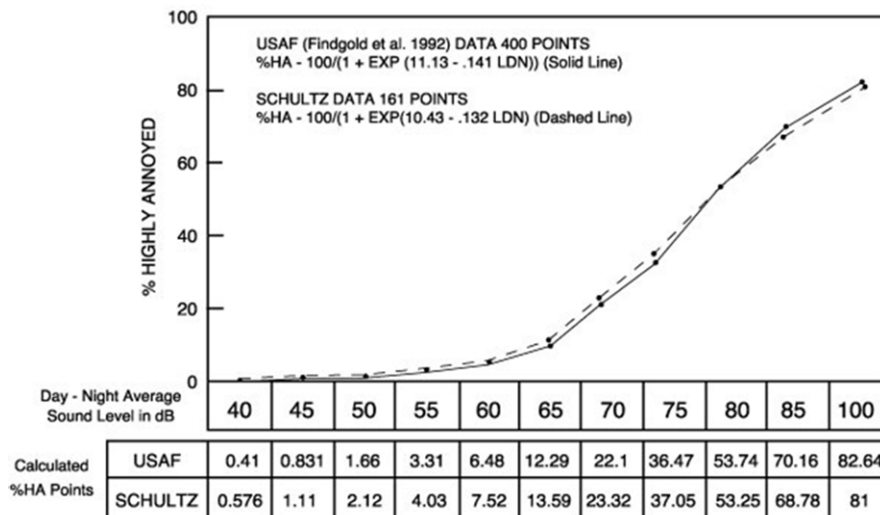
Source: Federal Interagency Committee on Aircraft Noise (FICAN), "Effects of Aviation Noise on Awakenings from Sleep," June 1997, pg. 6

**Figure A-9** uses indoor SEL as the measure of noise exposure; current research supports the use of this metric in assessing sleep disruption. An indoor SEL of 80 dBA results in a maximum of 10% awakening.<sup>10</sup>

### A.2.3 Community Annoyance

Numerous psychoacoustic surveys provide substantial evidence that individual reactions to noise vary widely with noise exposure level. Since the early 1970s, researchers have determined (and subsequently confirmed) that aggregate community response is generally predictable and relates reasonably well to cumulative noise exposure such as DNL. **Figure A-10** depicts the widely recognized relationship between environmental noise and the percentage of people “highly annoyed,” with annoyance being the key indicator of community response usually cited in this body of research. Separate work by the EPA showed that overall community reaction to a noise environment was also correlated with DNL. **Figure A-11** depicts this relationship.

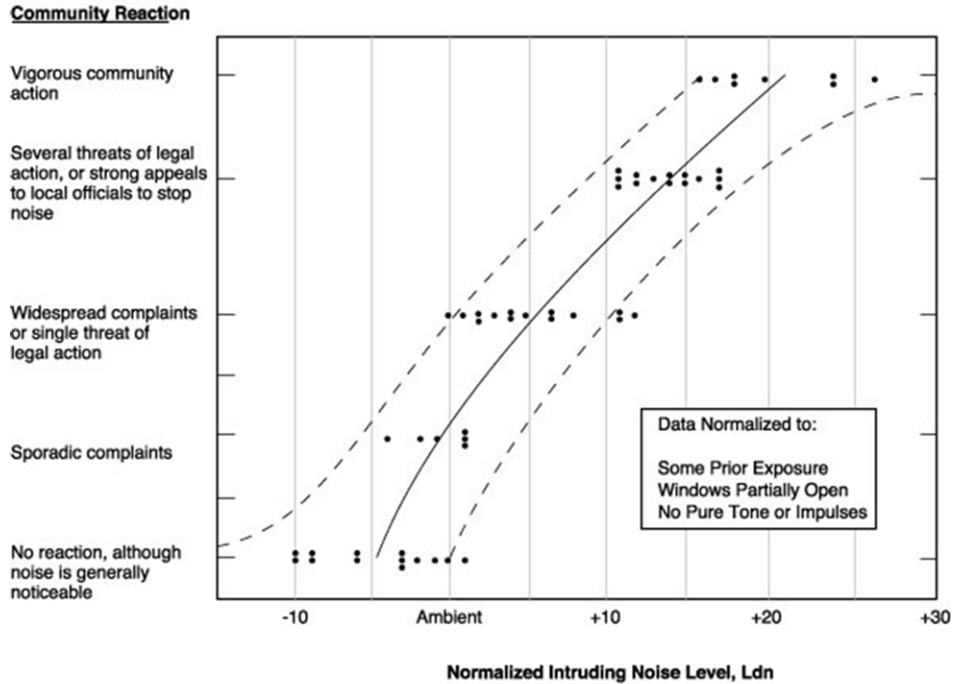
As noted above in the discussion of DNL, the full report on the FAA’s recent research, polling communities surrounding 20 airports nationwide, was released in January 2021. At the time of this reporting, the public review and comment period on that research had ended but FAA had not yet issued new guidance.



**Figure A-10. Percentage of People Highly Annoyed**

Source: FICON, “Federal Agency Review of Selected Airport Noise Analysis Issues,” September 1992

<sup>10</sup> The awakening data presented in Figure A-9 apply only to individual noise events. The American National Standards Institute (ANSI) has published a standard that provides a method for estimating the number of people awakened at least once from a full night of noise events: ANSI/ASA S12.9-2008 / Part 6, “Quantities and Procedures for Description and Measurement of Environmental Sound – Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes.” This method can use the information on single events computed by a program such as the FAA’s AEDT, to compute awakenings.



**Figure A-11. Community Reaction as a Function of Outdoor DNL**

Source: Wyle Laboratories, *Community Noise*, prepared for the U.S. EPA, Office of Noise Abatement and Control, Washington, D.C., December 1971, pg. 63

Data summarized in the figure suggests that little reaction would be expected for intrusive noise levels five decibels below the ambient, while widespread complaints can be expected as intruding noise exceeds background levels by about five decibels. Vigorous action is likely when levels exceed the background by 20 dB.

## A.3 Noise Propagation

This section presents information sound-propagation effect due to weather, source-to-listener distance, and vegetation.

### A.3.1 Weather-Related Effects

Weather (or atmospheric) conditions that can influence the propagation of sound include humidity, precipitation, temperature, wind, and turbulence (or gustiness). The effect of wind – turbulence in particular – is generally more important than the effects of other factors. Under calm-wind conditions, the importance of temperature (in particular vertical “gradients”) can increase, sometimes to very significant levels. Humidity generally has little significance relative to the other effects.

### A.3.2 Influence of Humidity and Precipitation

Humidity and precipitation rarely affect sound propagation in a significant manner. Humidity can reduce propagation of high-frequency noise under calm-wind conditions. This is called “Atmospheric absorption.” In very cold conditions, listeners often observe that aircraft sound “tinny,” because the dry

air increases the propagation of high-frequency sound. Rain, snow, and fog also have little, if any, noticeable effect on sound propagation. A substantial body of empirical data supports these conclusions.<sup>11</sup>

### A.3.3 Influence of Temperature

The velocity of sound in the atmosphere is dependent on the air temperature.<sup>12</sup> As a result, if the temperature varies at different heights above the ground, sound will travel in curved paths rather than straight lines. During the day, the temperature normally decreases with increasing height. Under such "temperature lapse" conditions, the atmosphere refracts ("bends") sound waves upwards and an acoustical shadow zone may exist at some distance from the noise source.

Under some weather conditions, an upper level of warmer air may trap a lower layer of cool air. Such a "temperature inversion" is most common in the evening, at night, and early in the morning when heat absorbed by the ground during the day radiates into the atmosphere.<sup>13</sup> The effect of an inversion is just the opposite of lapse conditions. It causes sound propagating through the atmosphere to refract downward.

The downward refraction caused by temperature inversions often allows sound rays with originally upward-sloping paths to bypass obstructions and ground effects, increasing noise levels at greater distances. This type of effect is most prevalent at night, when temperature inversions are most common and when wind levels often are very low, limiting any confounding factors.<sup>14</sup> Under extreme conditions, one study found that noise from ground-borne aircraft might be amplified 15 to 20 dB by a temperature inversion. In a similar study, noise caused by an aircraft on the ground registered a higher level at an observer location 1.8 miles away than at a second observer location only 0.2 miles from the aircraft.<sup>15</sup>

### A.3.4 Influence of Wind

Wind has a strong directional component that can lead to significant variation in propagation. In general, receivers that are downwind of a source will experience higher sound levels, and those that are upwind will experience lower sound levels. Wind perpendicular to the source-to-receiver path has no significant effect.

The refraction caused by wind direction and temperature gradients is additive.<sup>16</sup> One study suggests that for frequencies greater than 500 Hz, the combined effects of these two factors tends towards two

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<sup>11</sup> Ingard, Uno. "A Review of the Influence of Meteorological Conditions on Sound Propagation," *Journal of the Acoustical Society of America*, Vol. 25, No. 3, May 1953, p. 407.

<sup>12</sup> In dry air, the approximate velocity of sound can be obtained from the relationship:

$c = 331 + 0.6T_c$  (c in meters per second,  $T_c$  in degrees Celsius). Pierce, Allan D., *Acoustics: An Introduction to its Physical Principles and Applications*. McGraw-Hill. 1981. p. 29.

<sup>13</sup> Embleton, T.F.W., G.J. Thiessen, and J.E. Piercy, "Propagation in an inversion and reflections at the ground," *Journal of the Acoustical Society of America*, Vol. 59, No. 2, February 1976, p. 278.

<sup>14</sup> Ingard, p. 407.

<sup>15</sup> Dickinson, P.J., "Temperature Inversion Effects on Aircraft Noise Propagation," (Letters to the Editor) *Journal of Sound and Vibration*. Vol. 47, No. 3, 1976, p. 442.

<sup>16</sup> Piercy and Embleton, p. 1412. Note, in addition, as a result of the scalar nature of temperature and the vector nature of wind, the following is true: under lapse conditions, the refractive effects of wind and temperature add in the upwind direction and cancel each other in the downwind direction. Under inversion conditions, the opposite is true.

extreme values: approximately 0 dB in conditions of downward refraction (temperature inversion or downwind propagation) and -20 dB in upward refraction conditions (temperature lapse or upwind propagation). At lower frequencies, the effects of refraction due to wind and temperature gradients are less pronounced.<sup>17</sup>

Wind turbulence (or “gustiness”) can also affect sound propagation. Sound levels heard at remote receiver locations will fluctuate with gustiness. In addition, gustiness can cause considerable attenuation of sound due to effects of eddies traveling with the wind. Attenuation due to eddies is essentially the same in all directions, with or against the flow of the wind, and can mask the refractive effects discussed above.<sup>18</sup>

### A.3.5 Distance-Related Effects

People often ask how distance from an aircraft to a listener affects sound levels. Changes in distance may be associated with varying terrain, offsets to the side of a flight path, or aircraft altitude. The answer is a bit complex because distance affects the propagation of sound in several ways.

The principal effect results from the fact that any emitted sound expands in a spherical fashion – like a balloon – as the distance from the source increases, resulting in the sound energy being spread out over a larger volume. With each doubling of distance, spherical spreading reduces instantaneous or maximum level by approximately six decibels and SEL by approximately three decibels.

### A.3.6 Vegetation-Related Effects

Sound can be scattered and absorbed as it travels through vegetation. This results in a decrease in sound levels. The literature on the effect of vegetation on sound propagation contains several approaches to calculating its effect. Although these approaches differ in some aspects, they agree on the following:

- The vegetation must be dense and deep enough to block the line of sight.
- The noise reduction is greatest at high frequencies and least at low frequencies.

The International Standard ISO 9613-2<sup>19</sup> provides a useful example of the types of calculations employed in these methods. Originally developed for industrial noise sources, ISO 9613-2 is well-suited for the evaluation of ground-based aircraft noise sources under favorable meteorological conditions for sound propagation. ISO 9613-2’s methodology for calculating sound propagation includes geometric dispersion from acoustical point sources, atmospheric absorption, the effects of areas of hard and soft ground, screening due to barriers, and reflections. The attenuation provided by dense foliage varies by octave band and by distance as shown in **Table A-1**.

For propagation through less than 10 m of dense foliage, no attenuation is assumed. For propagation through 10 m to 20 m of dense foliage, the total attenuation is shown in the first row of **Table A-1**. For

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<sup>17</sup> Piercy and Embleton, p. 1413.

<sup>18</sup> Ingard, pp. 409-410.

<sup>19</sup> International Organization for Standardization, Acoustics – Attenuation of sound during propagation outdoors – Part 2: General Method of calculation, International Standard ISO9613-2, Geneva, Switzerland (15 December 1996).

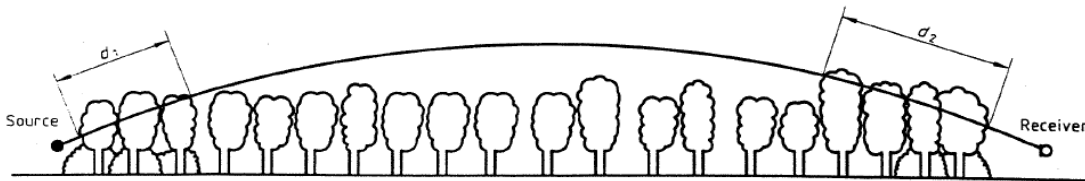
distances between 20 m and 200 m, the total attenuation is computed by multiplying the distance of propagation through dense foliage by the dB/m values shown in the second row of **Table A-1**.

**Table A-1. Dense Foliage Noise Attenuation**

Propagation Distance	Nominal Midband Frequency (Hz)							
	63	125	250	500	1,000	2,000	4,000	8,000
10 m to 20 m (dB Attenuation)	0	0	1	1	1	1	2	3
20 m to 200 m (dB/m Attenuation)	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.12

Source: ISO 9613-2, Table A.1

ISO 9613-2 assumes a moderate downwind condition. The equations in the ISO Standard also hold, equivalently, for average propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs on clear, calm nights. In either case, the sound is refracted downward. The radius of this curved path is assumed to be 5 km. With this curved sound path, only portions of the sound path may travel through the dense foliage, as illustrated by **Figure A-12**. Thus, the relative locations of the source and receiver, the dimensions of the volume of dense foliage, and the contours of the intervening terrain are essential to the estimation of the noise attenuation.



**Figure A-12. Downward Refracting Sound Path**

Source: ISO 9613-2

As illustrated in **Figure A-12**, the foliage only provides attenuation if the sound path passes through the foliage. For aircraft in the air, the sound will pass through little, if any foliage. Additionally, either the noise source or receiver must be near the foliage for it to have an effect.

**APPENDIX 5 – SECTION 106 APPROVAL**

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# BUREAU OF AERONAUTICS

## SECTION 106 REVIEW ARCHAEOLOGICAL/HISTORICAL INFORMATION

Wisconsin Department of Transportation

### I. PROJECT INFORMATION

FOS Project ID AIP-114 (WisDOT ID 0740-40-114) MKE Decommission and Remove RWY 1R-19L	County Milwaukee
Airport Name General Mitchell International Airport (MKE)	Airport Manager Brian Dranzik
Project Engineer/Project Manager Wendy Hottenstein	(Area Code) Telephone Number (608) 261-6278
Planning/Design Consultant Kaitlyn Wehner, Westwood	(Area Code) Telephone Number (920) 830-6183
Archaeological Consultant Rigden Glaab, Westwood	(Area Code) Telephone Number (952) 697-5791
Architecture/History Consultant Sara Nelson, Westwood	(Area Code) Telephone Number (952) 697-5790
Date of Need As soon as possible	24-0405

### II. PROJECT DESCRIPTION

Type of Project     New Construction     Reconstruction     Recondition     Other  
 Wetland Mitigation     Runway Extension     Land Acquisition

Known Cemetery

Amount of land to be disturbed: Acres <u>67.4 acres</u>	Amount of acres to be acquired Acres <u>0.00</u>
--	---

Describe ground disturbing activity associated with proposed construction - e.g., strip construction, slope grading, temporary bypass, realignment, stream channel change, etc.

**Brief Project Description:** (Be specific and include all activities associated with the project.)

The proposed project at General Mitchell International Airport (Airport) consists of the decommissioning and removal of Runway 1R-19L. The Airport owned and operated by Milwaukee County. The airport is located in the City of Milwaukee, Milwaukee County, Wisconsin; approximately two miles west of Lake Michigan and six miles south of downtown Milwaukee. Specifically, the proposed project is located within Airport property in Sections 28 and 33 of Township 6 North, Range 22 East in Milwaukee County, Wisconsin.

Recently the Airport completed a Master Plan Update which established the needs and goals for the future of the Airport. The purpose for the proposed project is to align the airfield configuration with the Master Plan Update goals and the recently approved Airport Layout Plan. The proposed project will enhance airfield compliance with updated Federal Aviation Administration (FAA) standards.

The proposed project activities will consist of the decommissioning of Runway 1R-19L and the removal of approximately 53,000 SY of pavement with restoration to turf between the north end of the Runway 1R-19L and Taxiway W and associated electrical utilities and NAVAIDS. Additionally, two alternatives are being considered to maintain airfield access for the 128th WI Air National Guard Unit located east of Runway 1R-19L. Alternate A consists of the rehabilitation and conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation. Or, Alternate B consists of the construction of a partial parallel taxiway and connectors including associated lighting. The proposed taxiway will be located west of Runway 1R-19L, connecting Taxiway W and Taxiway S to align with the approved Airport Layout Plan. Possible haul routes and staging areas are located on airport property utilizing existing paved or gravel roads and staging areas for other airfield projects.

Construction for the proposed project is anticipated to start during the spring of 2027 and continue through the fall of 2028.

**III. NOTIFICATION**

How has notification of the project been provided to:

- Property Owners
- Public Information Meeting Notice
- Letter [required for Archaeology]
- Telephone Call
- Other

- Historical Societies/Organizations
- Public Information Meeting Notice
- Letter
- Telephone Call
- Other

- Native American Tribes
- Must notify with:**
- Public Info. Mtg. Notice
- Letter

\*Attach one copy of the base letter, list of addresses and comments received. For history include telephone memos as appropriate.

**IV. AREA OF POTENTIAL EFFECTS [APE]**

**HISTORY:** Describe the area of potential effects for buildings/structures.

The area of potential effects lies completely within the airport property boundary. There are no existing building or structures within the area of potential effects. Twenty-nine historical resources stand within one mile of the Project. The proposed project is not anticipated to impact any historical resources.

If you wish to claim there is no APE for buildings/structures, you must justify that claim. [NOTE: If there are no buildings/structures of any kind in the APE, go to Item V., check "Architecture/History survey is not needed" and state why.]

**ARCHAEOLOGY: Area of potential effect** for archaeology is the existing and proposed ROW, temporary and permanent easements. Agricultural practices do not constitute a ground disturbance.

**V. SURVEY NEEDED**

ARCHAEOLOGY	HISTORY
<input checked="" type="checkbox"/> Archaeological survey is needed [See Chapter 26-35-1 of FDM for procedure and # of exhibits]  <input type="checkbox"/> Archaeological survey is not needed - provide justification <input type="checkbox"/> SHPO records search conducted ___ (date). <input type="checkbox"/> Screening list ___ (date). <input type="checkbox"/> No potential to affect archaeological sites Describe project area and attach project plans	<input checked="" type="checkbox"/> Architecture/History survey is needed  <input type="checkbox"/> Architecture/History survey is not needed

**VI. SURVEY COMPLETED-Documentation required for submittal to TSS**

ARCHAEOLOGY	HISTORY
<input checked="" type="checkbox"/> Project maps attached [most recent design] <input checked="" type="checkbox"/> ASFR attached [NO archaeological sites(s) identified] <input type="checkbox"/> Report attached [NO potentially eligible site(s) in project area] <input type="checkbox"/> Report attached [potentially eligible site(s) avoided] <input type="checkbox"/> Report attached - cemetery documentation <input type="checkbox"/> Native American response letters & reports [Send four reports + # of copies for NA requests to district.]	<input checked="" type="checkbox"/> A/HSF attached [NO buildings/structures identified] <input type="checkbox"/> A/HSF attached [potentially eligible buildings/structures identified.]

**VII. EVALUATION COMPLETED-Documentation required for submittal to TSS**

<input type="checkbox"/> Report attached [no arch site(s) eligible for NRHP] <input type="checkbox"/> Report and DOE attached [arch site(s) eligible for NRHP] <input type="checkbox"/> Report and draft DOE attached [arch site(s) eligible for NRHP—avoided through project redesign]	<input type="checkbox"/> DOE attached [no buildings/structure(s) eligible for NRHP] <input type="checkbox"/> DOE attached [building/structure(s) eligible for NRHP]
---	--

**VIII. COMMITMENTS**

**IX. PROJECT REVIEW**

- No eligible properties in APE
- No effect on historic buildings and/or archaeological sites eligible for NRHP
- Eligible properties may be affected by project - go to Step 4 - Assess effects and begin consultation

Wandy Hottenstein  
 (BOA Project Manager)  
 1/16/24  
 (Date)  
Kristen Wolman  
 (Consultant Project Manager)  
 12/8/2023  
 (Date)

Barry Payne  
 (WisDOT Historic Preservation Officer)  
 25 February 2024  
 (Date)

DocuSigned by:  
Kimberly Coif  
 (State Historic Preservation Officer)  
 28 February 2024  
 (Date)

**APPENDIX 6 – GREENHOUSE GAS EMISSION CALCULATIONS**

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**MKE RWY 1R-19L Decomission and Removal Estimated Construction Emissions - Proposed Action Alternative**

<b>Major Construction Operations Tasks</b>	<b>Estimated Working Days (Days)</b>	<b>Estimated Equipment</b>	<b>Estimated Fuel Burn (gal/hr)</b>	<b>Hours per day (hr/day)</b>	<b>Estimated Diesel Fuel Consumed (gal)</b>	<b>MT CO2</b>	<b>MT CH4</b>	<b>MT N2O</b>
Excavation	53	4 Quads 1 Dozer 1 Excavator	36	10	19080	194.2344	0.0192708	0.0179352
Milling Asphalt	3	1 Mill 8 Quads	44	10	1320	13.4376	0.0013332	0.0012408
Remove Concrete	54	1 Dozer - Heavy 1 Excavator 5 Quads	44	10	23760	241.8768	0.0239976	0.0223344
Subbase Course	10	6 Quads 2 Dozer	40	10	4000	40.72	0.00404	0.00376
Base Course	12	6 Quads 2 Dozer	40	10	4800	48.864	0.004848	0.004512
Lean Concrete Pavement	10	15 Quads 1 Paver	72	10	7200	73.296	0.007272	0.006768
Concrete Pavement	10	15 Quads 1 Paver	72	10	7200	73.296	0.007272	0.006768
Asphalt Pavement	4	15 Quads 1 Paver	72	10	2880	29.3184	0.0029088	0.0027072
Topsoil Placement	40	5 Quads 2 Dozer	36	10	14400	146.592	0.014544	0.013536
<b>Totals</b>					<b>84640</b>	<b>861.635</b>	<b>0.085</b>	<b>0.080</b>

**MKE RWY 1R-19L Decomission and Removal Estimated Construction Emissions - Alternative B**

<b>Major Construction Operations Tasks</b>	<b>Estimated Working Days (Days)</b>	<b>Estimated Equipment</b>	<b>Estimated Fuel Burn (gal/hr)</b>	<b>Hours per day (hr/day)</b>	<b>Estimated Diesel Fuel Consumed (gal)</b>	<b>MT CO2</b>	<b>MT CH4</b>	<b>MT N2O</b>
Excavation	53	4 Quads 1 Dozer 1 Excavator	36	10	19080	194.2344	0.0192708	0.0179352
Milling Asphalt	3	1 Mill 8 Quads	44	10	1320	13.4376	0.0013332	0.0012408
Remove Concrete	54	1 Dozer - Heavy 1 Excavator 5 Quads	44	10	23760	241.8768	0.0239976	0.0223344
Subbase Course	10	6 Quads 2 Dozer	40	10	4000	40.72	0.00404	0.00376
Base Course	12	6 Quads 2 Dozer	40	10	4800	48.864	0.004848	0.004512
Lean Concrete Pavement	10	15 Quads 1 Paver	72	10	7200	73.296	0.007272	0.006768
Concrete Pavement	10	15 Quads 1 Paver	72	10	7200	73.296	0.007272	0.006768
Asphalt Pavement	4	15 Quads 1 Paver	72	10	2880	29.3184	0.0029088	0.0027072
Topsoil Placement	50	5 Quads 2 Dozer	36	10	18000	183.24	0.01818	0.01692
<b>Totals</b>					<b>88240</b>	<b>898.283</b>	<b>0.089</b>	<b>0.083</b>

**Estimated Construction Emissions Calculation Assumptions**

<b>Gallons of Diesel Consumed to CO2</b>
10180 grams of CO2 = 1 gallon of diesel
10.180 x 10 <sup>-3</sup> metric tons CO2 = 1 gallon of diesel
Source: <a href="https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references">https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references</a>

<b>CH4 &amp; N2O Emissions for Non-Road Vehicles</b>	
Diesel Equipment	CH4 = 1.01 g/gallon N2O = 0.94 g/gallon
Light Duty Trucks	CH4 = 0.0290 g/mile
Source: <a href="https://www.epa.gov/system/files/documents/2023-03/ghg_emission_factors_hub.pdf">https://www.epa.gov/system/files/documents/2023-03/ghg_emission_factors_hub.pdf</a>	

<b>Estimated Production Rates</b>	<b>Expected Production Range</b>	
Remove Concrete Pavement	410-2500 SY/Day	1,000 SY/Day, Typ.
Milling Asphalt (thick, 2 inches or more)	8000-20000 SY/Day	14,000 SY/Day, typ.
Excavation (Truck)	250-1,300 CY/Day	600 CY/Day, typ.
Base Course (Roadway)	350 - 1300 Ton/Day	700 Ton/Day, typ.
Breaker Run	730 - 2800 Ton/Day	1600 Ton/Day, typ.
Concrete Pavement	850-4000 SY/Day	2300 SY/Day, typ.
HMA Pavement	700-1800 Tons/Day	1300 Ton/Day, typ.
Topsoil Placement	120-700 CY/Day	280 CY/day
Source: <a href="https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cns/lt-rsrcs/tools/estimating/production-rate-table.pdf">https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cns/lt-rsrcs/tools/estimating/production-rate-table.pdf</a>		

<b>Equipment</b>	<b>Fuel Burn Per Hour</b>
Dozer/Scraper	6-8 gal/hour
Quad Axle Dump	4 gal/hour
Excavator	10-12 gal/hour
Articulated Dump	8 gal/hour
Heavy Dozer	12 gal/hour
Paver (conc or asphalt)	12 gal/hour

# MKE RUNWAY 1R-19L ENVIRONMENTAL ASSESSMENT

## ANTICIPATED CONSTRUCTION MATERIAL PRODUCTION EMISSIONS LCA PAVE TOOL CALCULATIONS AND ASSUMPTIONS

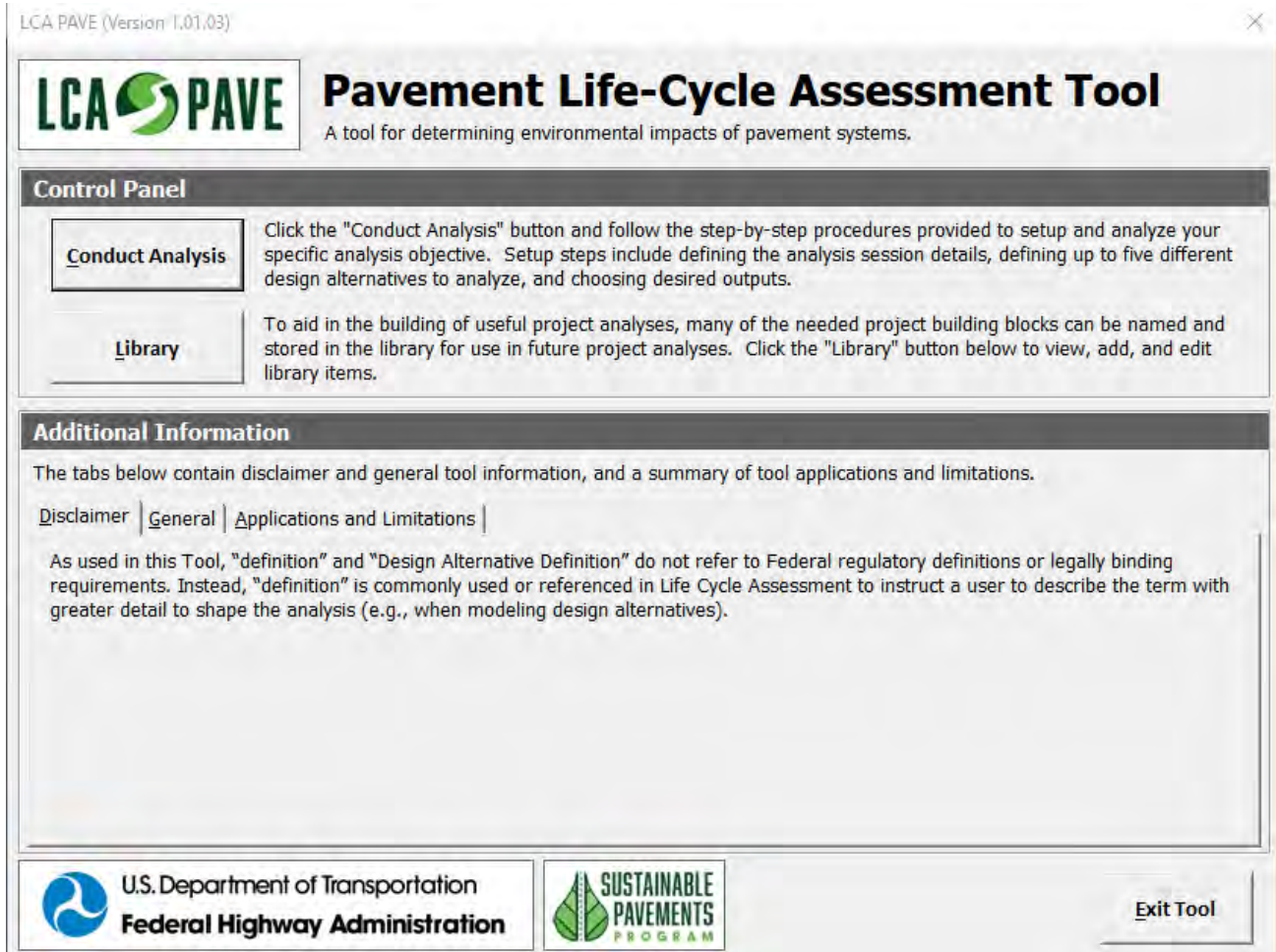


Figure 1. LCA Pavement Life-Cycle Assessment Tool Home Page<sup>1</sup>

<sup>1</sup> LCA Pave Tool was created by the U.S. Department of Transportation Federal Highway Administration (FHWA). The tool can be downloaded on the FHWA website: <https://www.fhwa.dot.gov/pavement/lcatool/>



## Analysis Session Details

Back

Next

Use the controls below to define the details of the current analysis session.

### Analysis Details

**Analysis Objective:** Compare Treatment Cycles or Pavement Design Life-Cycle Options

**Description:** Used to compare 1) pavement treatment sequences applied to an existing pavement structure, or 2) pavement design life-cycle options. Note: this analysis objective option requires the user to model a series of activities over a chosen analysis period.

### General Inputs

**Session Name:** RWY 1R-19L Decommissioning and Taxiway CC

**Route:** General Mitchell International Airport (MKE)

**Location:** Milwaukee, WI

**Project Limits:** Airport Boundary

**Analyzed By:** Kaitlyn Wehner

**Comments:** Comparison between two Alternatives for the location of Taxiway CC.

### Design Alternatives

**Number of Design Alternatives:** 2

Figure 2. Analysis Session Details

## Design Alternative Definition

Back

Next

Use the controls below to define up to five different Design Alternatives to compare in the analysis.

Selected Alternative:

### Alternative Definition

- [-] Alternative A - Convert and Rehabilitate
  - [-] Taxiway CC - Concrete Pavement
    - [-] 0: Initial Construction
      - ALT A - PCC (19")
      - ALT A Lean Concrete (6")
  - [-] Taxiway CC - Asphalt Shoulder
    - [-] 0: Initial Construction
      - ALT A - Asphalt Shoulder (6")

Move Up

Copy

Move Down

Delete

### Selection Details: 'Alternative'

Name:

Description:

Analysis Period:  yrs (Analysis period for this alternative)

Add New 'Pavement' to Current 'Alternative'

Figure 3. Alternative 1 Description

## Design Alternative Definition

Back

Next

Use the controls below to define up to five different Design Alternatives to compare in the analysis.

Selected Alternative: Alternative 1 Alternative 2

Alternative Definition

- Alternative A - Convert and Rehabilitate
  - Taxiway CC - Concrete Pavement
    - 0: Initial Construction
      - ALT A - PCC (19")
      - ALT A Lean Concrete (6")
  - Taxiway CC - Asphalt Shoulder
    - 0: Initial Construction
      - ALT A - Asphalt Shoulder (6")

Move Up Copy

Move Down Delete

Selection Details: 'Pavement'

Type: Mainline

Name: Taxiway CC - Concrete Pavement

Description: Approximately 204810 SF of Concrete Pavement to convert and rehabilitate Runway 1R-19L into Taxiway CC and rehabilite Taxiway W and Taxiway S.

Num. Lanes: 4

Length: 2730.8 ft

Width: 75 ft (total width of all lanes)

Lane Miles: 2.07 lane-miles

Area: 204,810 sf

Include this pavement's lane-miles and area in the functional unit calculations for this alternative.

Add New 'Project' to Current 'Pavement'

Figure 4. Alternative 1 Mainline Pavement Description

## Design Alternative Definition

Back

Next

Use the controls below to define up to five different Design Alternatives to compare in the analysis.

Selected Alternative: Alternative 1 Alternative 2

### Alternative Definition

- Alternative A - Convert and Rehabilitate
  - Taxiway CC - Concrete Pavement
    - 0: Initial Construction
      - ALT A - PCC (19")
      - ALT A Lean Concrete (6")
    - Taxiway CC - Asphalt Shoulder
      - 0: Initial Construction
        - ALT A - Asphalt Shoulder (6")

Move Up Copy

Move Down Delete

### Selection Details: 'Pavement'

Type: Shoulder

Name: Taxiway CC - Asphalt Shoulder

Description: Approximately 124690 SF of Asphalt Shoulder on Taxiway CC (30ft width)

Num. Lanes: 2

Length: 4156.33 ft

Width: 30 ft (total width of all lanes)

Lane Miles: 1.57 lane-miles

Area: 124,690 sf

Include this pavement's lane-miles and area in the functional unit calculations for this alternative.

Add New 'Project' to Current 'Pavement'

Figure 5. Alternative 1 Shoulder Pavement Description

## Design Alternative Definition

Back

Next

Use the controls below to define up to five different Design Alternatives to compare in the analysis.

Selected Alternative:

### Alternative Definition

- [-] Alternative B - Relocate and Construct
  - [-] Taxiway CC - Concrete
    - [-] 0: Initial Construction
      - ALT B - PCC (19")
      - ALT B Lean Concrete (6")
  - [-] Taxiway CC - Asphalt Shoulder
    - [-] 0: Initial Construction
      - ALT B - Asphalt Shoulder (6")

### Selection Details: 'Alternative'

Name:

Description:

Analysis Period:  yrs (Analysis period for this alternative)

Figure 6. Alternative 2 Description

## Design Alternative Definition

Back

Next

Use the controls below to define up to five different Design Alternatives to compare in the analysis.

Selected Alternative: Alternative 1 Alternative 2

Alternative Definition

- Alternative B - Relocate and Construct
  - Taxiway CC - Concrete
    - 0: Initial Construction
      - ALT B - PCC (19")
      - ALT B Lean Concrete (6")
  - Taxiway CC - Asphalt Shoulder
    - 0: Initial Construction
      - ALT B - Asphalt Shoulder (6")

Move Up Copy

Move Down Delete

Selection Details: 'Pavement'

Type: Mainline

Name: Taxiway CC - Concrete

Description: Approximately 205615 SF of Concrete Pavement and 121826 SF of Asphalt Shoulder to convert and rehabilitate Runway 1R-19L into Taxiway CC and rehabilitate Taxiway W and Taxiway S.

Num. Lanes: 4

Length: 2741.53 ft

Width: 75 ft (total width of all lanes)

Lane Miles: 2.08 lane-miles

Area: 205,615 sf

Include this pavement's lane-miles and area in the functional unit calculations for this alternative.

Add New 'Project' to Current 'Pavement'

Figure 7. Alternative 2 Mainline Pavement Description

## Design Alternative Definition

Back

Next

Use the controls below to define up to five different Design Alternatives to compare in the analysis.

Selected Alternative: Alternative 1 Alternative 2

### Alternative Definition

- Alternative B - Relocate and Construct
  - Taxiway CC - Concrete
    - 0: Initial Construction
      - ALT B - PCC (19")
      - ALT B Lean Concrete (6")
  - Taxiway CC - Asphalt Shoulder
    - 0: Initial Construction
      - ALT B - Asphalt Shoulder (6")

Move Up

Copy

Move Down

Delete

### Selection Details: 'Pavement'

Type: Shoulder

Name: Taxiway CC - Asphalt Shoulder

Description: Approximately 121,826 SF of Asphalt Shoulder (30ft width)

Num. Lanes: 2

Length: 4060.86 ft

Width: 30 ft (total width of all lanes)

Lane Miles: 1.54 lane-miles

Area: 121,826 sf

Include this pavement's lane-miles and area in the functional unit calculations for this alternative.

Add New 'Project' to Current 'Pavement'

Figure 8. Alternative 2 Shoulder Pavement Description

**Results**

Use the controls on this page to select impact indicators of interest and view related outputs.

[Back](#)[View  
Detailed  
Output](#)Setup: [Results Setup](#)Summary Results: [Overall Summary](#)[Tree Comparison](#)[By Category](#)

Output Results: Overall Summary

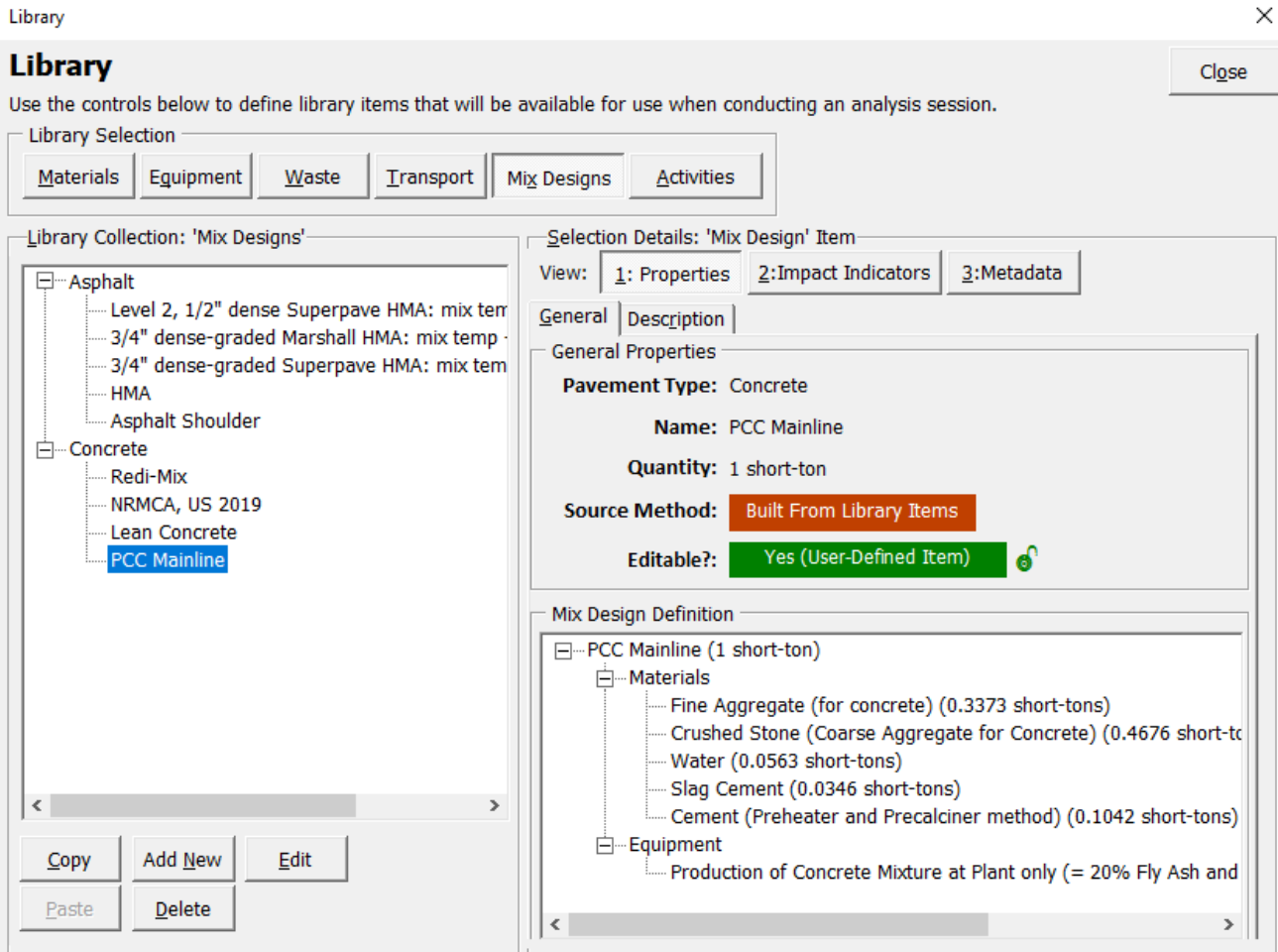
Functional Unit: Total (Entire Project)

[View Excel Table](#)

Impact Indicator	Alternative 1	Alternative 2	Units
Renew. Energy (Non Raw Matl)	4,912,346	4,808,913	MJ
Renew. Energy (Raw Matl)	9,750	9,788	MJ
Total Renew. Energy Use	4,922,096	4,818,701	MJ
Nonrenew. Energy (Non-Raw Matl)	27,904,232	27,954,999	MJ
Nonrenew. Energy (Raw Matl)	12,853	12,904	MJ
Total Nonrenew. Energy	27,917,085	27,967,903	MJ
Recycled Matl. Use	1,904	1,883	Short-tons
Disposed Non-Hazardous Waste	941	945	Short-tons
Disposed Hazardous Waste	0.2893	0.2905	Short-tons
Disposed Radio-Active Waste	0	0	Short-tons
Net Use of Fresh Water	949,847	953,651	Cubic meters
SCM Usage	846	849	Short-tons
Acidification	8,493	8,520	kg SO2 eq
Ecotoxicity	683	683	CTUeco/kg
Eutrophication	4,002	4,016	kg N eq
Fossil Fuel Depletion	1,130,381	1,134,817	MJ surplus
Global Warming	3,080,759	3,090,487	kg CO2 eq
Human Health - Cancer	4.61E-06	4.61E-06	CTU/kg
Human Health - NonCancer	9.01E-05	8.99E-05	CTU/kg
Human Health - Particulates	2.63	2.58	kg PM2.5 eq
Ozone Depletion	0.0864	0.0868	kg CFC-11 eq
Smog Formation	157,892	158,344	kg O3 eq
<b>Analysis Period:</b>	50 yrs	50 yrs	
<b>Total Lane-Miles:</b>	3.64 ln-mi	3.62 ln-mi	
<b>Total Area:</b>	329,500 sf	327,441 sf	

**Figure 9. Summary Results Page**





**Figure 10. Assumed PCC (Concrete) Pavement Mix Design<sup>2</sup>**

<sup>2</sup> Assumed PCC mix design determined through analyzing previous Wisconsin airport projects utilizing the FAA P-501 specification.

Library X

**Library** Close

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

Materials Equipment Waste Transport Mix Designs Activities

Library Collection: 'Mix Designs'

- Asphalt
  - Level 2, 1/2" dense Superpave HMA: mix tem
  - 3/4" dense-graded Marshall HMA: mix temp
  - 3/4" dense-graded Superpave HMA: mix tem
  - HMA
  - Asphalt Shoulder
- Concrete
  - Redi-Mix
  - NRMCA, US 2019
  - Lean Concrete
  - PCC Mainline**

Selection Details: 'Mix Design' Item

View: 1: Properties 2: Impact Indicators 3: Metadata

Life-Cycle Inventory Life-Cycle Impact Assessment

**Library Item:** PCC Mainline  
**Quantity:** 1 short-ton

Included?	Impact Indicator	Quantity	Units
Yes	Renew. Energy (Non Raw Matl)	12.76	MJ
Yes	Renew. Energy (Raw Matl)	0.3398	MJ
Yes	Total Renew. Energy Use	13.1	MJ
Yes	Nonrenew. Energy (Non-Raw Matl)	859	MJ
Yes	Nonrenew. Energy (Raw Matl)	0.449	MJ
Yes	Total Nonrenew. Energy	859	MJ
Yes	Recycled Matl. Use	0.0343	Short-tons
Yes	Disposed Non-Hazardous Waste	0.0328	Short-tons
Yes	Disposed Hazardous Waste	9.45E-06	Short-tons
No	Disposed Radio-Active Waste	No Data	Short-tons
Yes	Net Use of Fresh Water	24.98	Cubic meters
No	SCM Usage	No Data	Short-tons

Note: displayed impact indicator information are COMPUTED as the sum of all components of the as-built mix-design.

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**Figure 11. Assumed PCC (Concrete) Pavement Mix Design Impact Indicators for Life Cycle Inventory**

Library

**Library** Close

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

Materials Equipment Waste Transport Mix Designs Activities

Library Collection: 'Mix Designs'

- Asphalt
  - Level 2, 1/2" dense Superpave HMA: mix tem
  - 3/4" dense-graded Marshall HMA: mix temp
  - 3/4" dense-graded Superpave HMA: mix tem
  - HMA
  - Asphalt Shoulder
- Concrete
  - Redi-Mix
  - NRMCA, US 2019
  - Lean Concrete
  - PCC Mainline**

Selection Details: 'Mix Design' Item

View: 1: Properties 2: Impact Indicators 3: Metadata

Life-Cycle Inventory Life-Cycle Impact Assessment

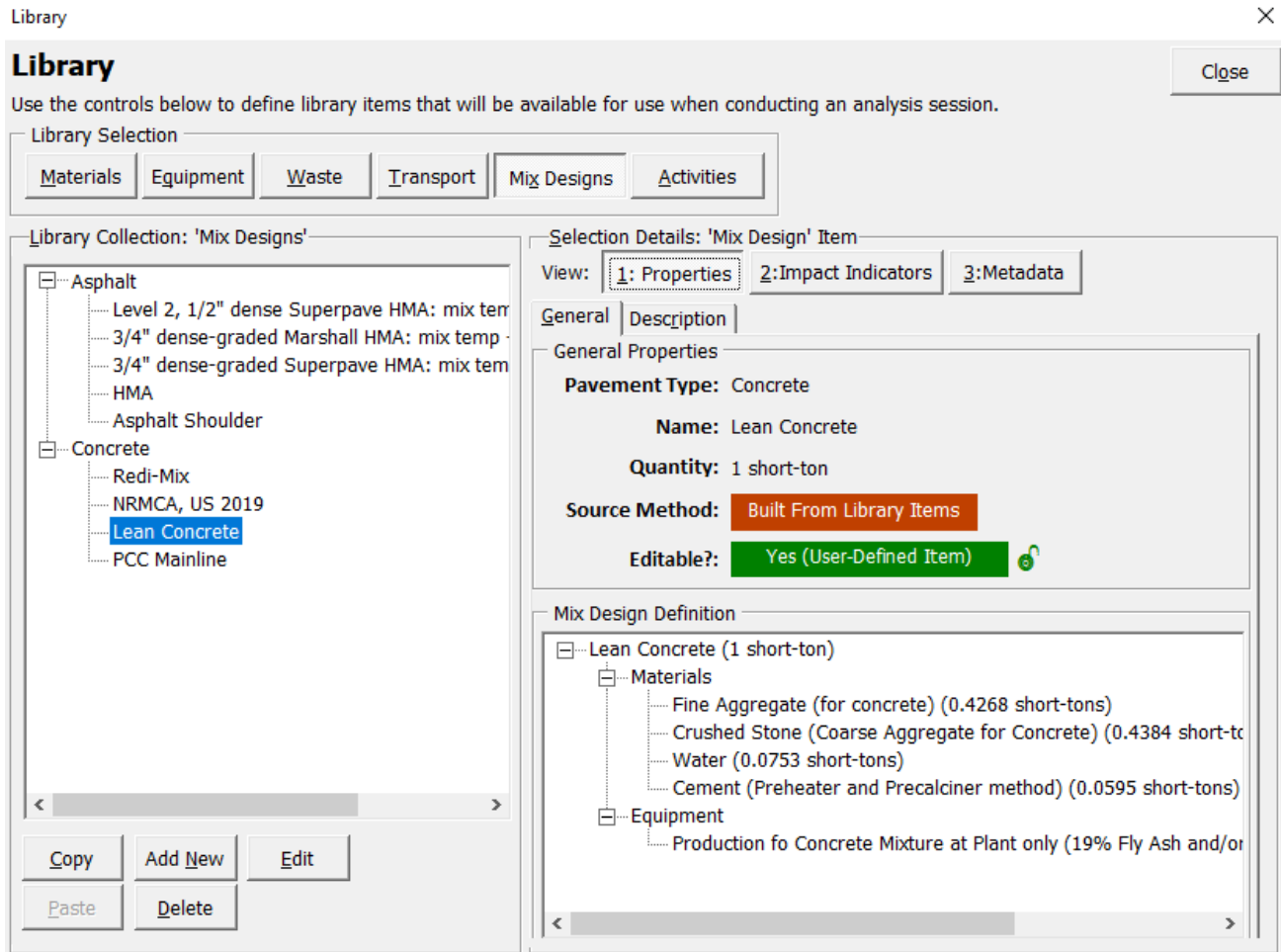
**Library Item:** PCC Mainline  
**Quantity:** 1 short-ton

Included?	Impact Indicator	Quantity	Units
Yes	Acidification	0.2885	kg SO2 eq
No	Ecotoxicity	No Data	CTUeco/kg
Yes	Eutrophication	0.1335	kg N eq
No	Fossil Fuel Depletion	No Data	MJ surplus
Yes	Global Warming	103	kg CO2 eq
No	Human Health - Cancer	No Data	CTU/kg
No	Human Health - NonCancer	No Data	CTU/kg
No	Human Health - Particulates	No Data	kg PM2.5 eq
Yes	Ozone Depletion	2.98E-06	kg CFC-11 eq
Yes	Smog Formation	5.21	kg O3 eq

Note: displayed impact indicator information are COMPUTED as the sum of all components of the as-built mix-design.

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**Figure 12. Assumed PCC (Concrete) Pavement Mix Design Impact Indicators for Life-Cycle Impact Assessment**



**Figure 13. Assumed Lean Concrete Pavement Mix Design<sup>3</sup>**

<sup>3</sup> Assumed lean concrete mix design determined through analyzing previous Wisconsin airport projects utilizing the FAA P-306 specification.

Library X

## Library

Close

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

Materials
Equipment
Waste
Transport
Mix Designs
Activities

Library Collection: 'Mix Designs'

Selection Details: 'Mix Design' Item

View: 1: Properties 2: Impact Indicators 3: Metadata

Life-Cycle Inventory | Life-Cycle Impact Assessment

**Library Item:** Lean Concrete  
**Quantity:** 1 short-ton

Included?	Impact Indicator	Quantity	Units
Yes	Renew. Energy (Non Raw Matl)	12.53	MJ
Yes	Renew. Energy (Raw Matl)	0.1972	MJ
Yes	Total Renew. Energy Use	12.72	MJ
Yes	Nonrenew. Energy (Non-Raw Matl)	640	MJ
Yes	Nonrenew. Energy (Raw Matl)	0.2564	MJ
Yes	Total Nonrenew. Energy	640	MJ
Yes	Recycled Matl. Use	0	Short-tons
Yes	Disposed Non-Hazardous Waste	0.019	Short-tons
Yes	Disposed Hazardous Waste	7.87E-06	Short-tons
No	Disposed Radio-Active Waste	No Data	Short-tons
Yes	Net Use of Fresh Water	46.24	Cubic meters
No	SCM Usage	No Data	Short-tons

Note: displayed impact indicator information are COMPUTED as the sum of all components of the as-built mix-design.

Asphalt

- Level 2, 1/2" dense Superpave HMA: mix terr
- 3/4" dense-graded Marshall HMA: mix temp
- 3/4" dense-graded Superpave HMA: mix tem
- HMA
- Asphalt Shoulder

Concrete

- Redi-Mix
- NRMCA, US 2019
- Lean Concrete**
- PCC Mainline

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**Figure 14. Assumed Lean Concrete Pavement Mix Design Impact Indicators for Life Cycle Inventory**

Library X

## Library

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

Materials Equipment Waste Transport Mix Designs Activities

Library Collection: 'Mix Designs'

- [-] Asphalt
  - Level 2, 1/2" dense Superpave HMA: mix tem
  - 3/4" dense-graded Marshall HMA: mix temp
  - 3/4" dense-graded Superpave HMA: mix tem
  - HMA
  - Asphalt Shoulder
- [-] Concrete
  - Redi-Mix
  - NRMCA, US 2019
  - Lean Concrete
  - PCC Mainline

Selection Details: 'Mix Design' Item

View: 1: Properties 2: Impact Indicators 3: Metadata

Life-Cycle Inventory Life-Cycle Impact Assessment

**Library Item:** Lean Concrete

**Quantity:** 1 short-ton

Included?	Impact Indicator	Quantity	Units
Yes	Acidification	0.1595	kg SO2 eq
No	Ecotoxicity	No Data	CTUeco/kg
Yes	Eutrophication	0.0895	kg N eq
No	Fossil Fuel Depletion	No Data	MJ surplus
Yes	Global Warming	65.51	kg CO2 eq
No	Human Health - Cancer	No Data	CTU/kg
No	Human Health - NonCancer	No Data	CTU/kg
No	Human Health - Particulates	No Data	kg PM2.5 eq
Yes	Ozone Depletion	1.68E-06	kg CFC-11 eq
Yes	Smog Formation	3.29	kg O3 eq

Note: displayed impact indicator information are COMPUTED as the sum of all components of the as-built mix-design.

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**Figure 15. Assumed Lean Concrete Pavement Mix Design Impact Indicators for Life-Cycle Impact Assessment**

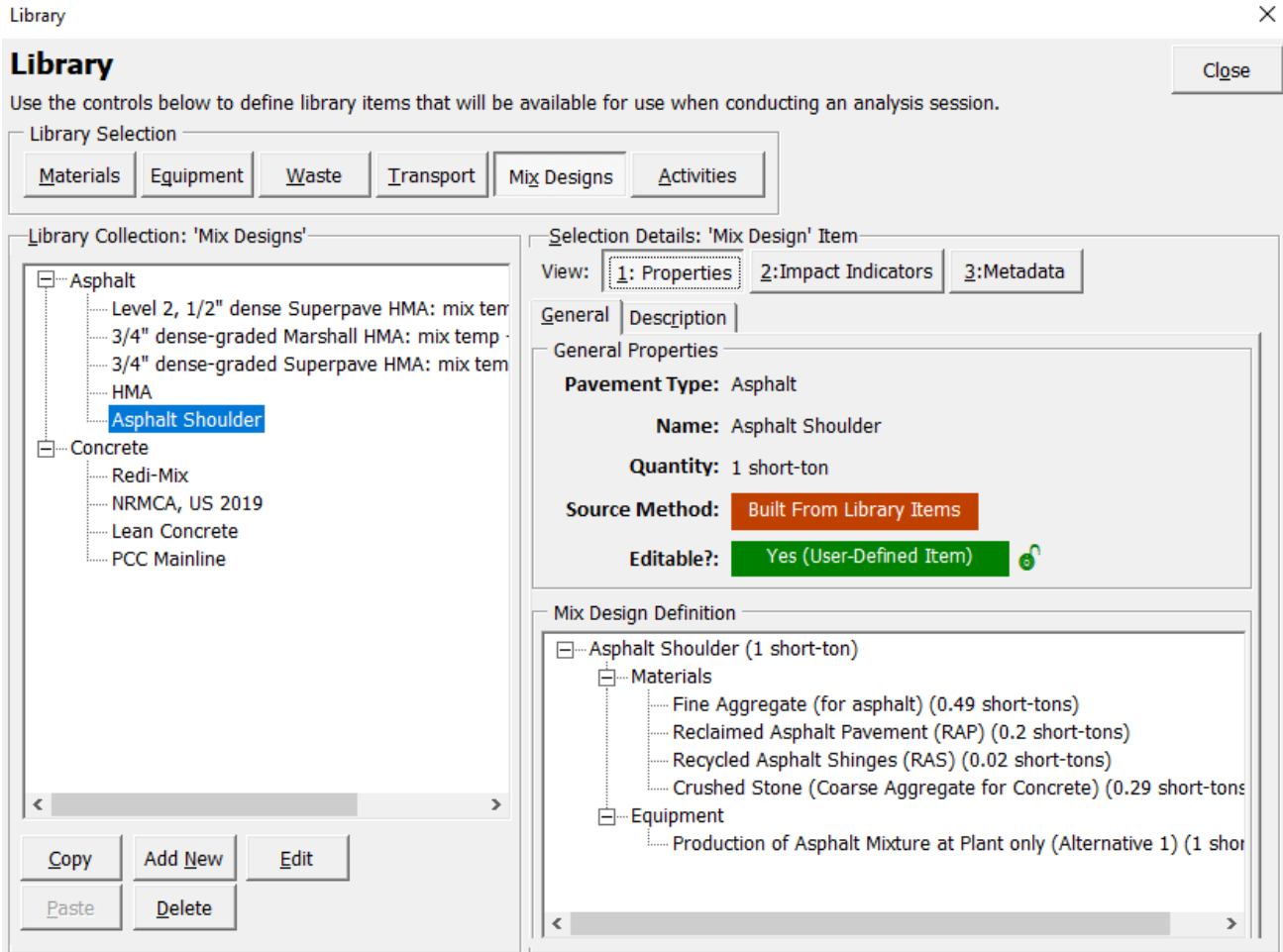


Figure 16. Assumed Asphalt Pavement Mix Design<sup>4</sup>

<sup>4</sup> Assumed asphalt mix design determined through analyzing previous Wisconsin airport projects utilizing the WisDOT Highway specification for 4MT 58-28H Asphaltic Surface.

Library X

**Library** Close

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

Materials Equipment Waste Transport **Mix Designs** Activities

Library Collection: 'Mix Designs'

- Asphalt
  - Level 2, 1/2" dense Superpave HMA: mix tem
  - 3/4" dense-graded Marshall HMA: mix temp
  - 3/4" dense-graded Superpave HMA: mix tem
  - HMA
  - Asphalt Shoulder**
- Concrete
  - Redi-Mix
  - NRMCA, US 2019
  - Lean Concrete
  - PCC Mainline

Selection Details: 'Mix Design' Item

View: 1: Properties 2: Impact Indicators 3: Metadata

Life-Cycle Inventory Life-Cycle Impact Assessment

**Library Item:** Asphalt Shoulder  
**Quantity:** 1 short-ton

Included?	Impact Indicator	Quantity	Units
Yes	Renew. Energy (Non Raw Matl)	930	MJ
Yes	Renew. Energy (Raw Matl)	0.0001	MJ
Yes	Total Renew. Energy Use	930	MJ
Yes	Nonrenew. Energy (Non-Raw Matl)	458	MJ
Yes	Nonrenew. Energy (Raw Matl)	0	MJ
Yes	Total Nonrenew. Energy	458	MJ
Yes	Recycled Matl. Use	0.22	Short-tons
No	Disposed Non-Hazardous Waste	No Data	Short-tons
No	Disposed Hazardous Waste	No Data	Short-tons
No	Disposed Radio-Active Waste	No Data	Short-tons
Yes	Net Use of Fresh Water	0.0646	Cubic meters
Yes	SCM Usage	0	Short-tons

Note: displayed impact indicator information are COMPUTED as the sum of all components of the as-built mix-design.

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**Figure 17. Assumed Asphalt Pavement Mix Design Impact Indicators for Life Cycle Inventory**



Library X

**Library** Close

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

Materials Equipment Waste Transport **Mix Designs** Activities

Library Collection: 'Mix Designs'

- [-] Asphalt
  - ..... Level 2, 1/2" dense Superpave HMA: mix tem
  - ..... 3/4" dense-graded Marshall HMA: mix temp
  - ..... 3/4" dense-graded Superpave HMA: mix tem
  - ..... HMA
  - Asphalt Shoulder**
- [-] Concrete
  - ..... Redi-Mix
  - ..... NRMCA, US 2019
  - ..... Lean Concrete
  - ..... PCC Mainline

Selection Details: 'Mix Design' Item

View: 1: Properties 2: Impact Indicators 3: Metadata

Life-Cycle Inventory Life-Cycle Impact Assessment

**Library Item:** Asphalt Shoulder  
**Quantity:** 1 short-ton

Included?	Impact Indicator	Quantity	Units
Yes	Acidification	0.0565	kg SO2 eq
No	Ecotoxicity	No Data	CTUeco/kg
Yes	Eutrophication	0.0172	kg N eq
No	Fossil Fuel Depletion	No Data	MJ surplus
Yes	Global Warming	19.35	kg CO2 eq
No	Human Health - Cancer	No Data	CTU/kg
No	Human Health - NonCancer	No Data	CTU/kg
No	Human Health - Particulates	No Data	kg PM2.5 eq
Yes	Ozone Depletion	2.47E-07	kg CFC-11 eq
Yes	Smog Formation	1.34	kg O3 eq

Note: displayed impact indicator information are COMPUTED as the sum of all components of the as-built mix-design.

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**Figure 16. Assumed Asphalt Pavement Mix Design Impact Indicators for Life-Cycle Impact Assessment**

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