

FINAL 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**

December 2, 2024

under contract with
MILWAUKEE COUNTY

EAXX-021-12-ARP-1726672411

The Proposed Action Includes the following:

- Decommissioning of Runway 1R/19L
- Conversion of Runway 1R/19L south of Taxiway W into a parallel taxiway including associated lighting and pavement rehabilitation.
- Decommissioning of Runway 13/31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of runway and taxiway pavement and electrical utilities

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.

Responsible FAA Official

3/14/2025

Date

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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

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

UNITED STATES FISH AND WILDLIFE SERVICE

APPENDIX 3 - [REDACTED] COMMUNITY REPORT

APPENDIX 4 - NOISE ANALYSIS

APPENDIX 5 - SECTION 106 APPROVAL

APPENDIX 6 - [REDACTED] EMISSION CALCULATIONS

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LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---------|--|
| AAC | Aircraft Approach Category |
| ADG | Airplane Design Group |
| AEAs | Agricultural Enterprise Areas |
| AFFF | Aqueous Film-Forming foam |
| AHI | Architecture History Inventory |
| Airport | General Mitchell International Airport |
| ALP | Airport Layout Plan |
| APE | Area of Potential Effects |
| ATC | Air Traffic Control |
| ATCT | Airport Traffic Control Tower |
| BOA | Wisconsin Department of Transportation - Bureau of Aeronautics |
| BMP | Best Management Practices |
| BRRTS | Bureau for Remediation and Redevelopment Tracking System |
| CAA | Clean Air Act |
| CBRA | Coastal Barriers Resource Act |
| CBRS | Coastal Barriers Resource System |
| CEP | Clean Energy Plan |
| CEQ | Council of Environmental Quality |
| CLEAN | Contaminated Lands Environmental Action Network |
| County | Milwaukee County |
| CWA | Clean Water Act |
| CY | Calendar Year |
| dB | Decibel |
| 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 |
| | |
| EPA | Environmental Protection Agency |
| ERIS | Environmental Risk Information Services |
| ERP | Environmental Repair Program |
| 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 |
| | |
| GIS | Geographic Information System |
| GPS | Global Positioning 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 |
| NM | Nautical Miles |
| NSA | Noise Study Area |
| NOI | Notice of Intent |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Registry of Historic Places |
| NRI | Nationwide Rivers Inventory |
| PAPI | Precision Approach Path Indicator |
| PCI | Pavement Condition Index |
| PFAS | Per-and Polyfluoroalkyl Substances |
| R&R | Remediation and Redevelopment |
| REILs | Runway End Identifier Lights |
| RNAV | Area Navigation |
| | |
| SDWA | Safe Drinking Water Act |
| SEWRPC | Southeastern Wisconsin Regional Planning Commission |
| SHPO | State Historic Preservation Office |
| SIDs | Standard Instrument Departure |
| 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 |
| WI ANG | Wisconsin Air National Guard |

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, Wisconsin¹. 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 improvements². In a petition dated 8/26/2022, the sponsor included the Environmental Assessment to evaluate the decommissioning and removal of Runway 1R/19L. And additional petition dated 3/28/2023 the sponsor included an Environmental Assessment to evaluate the decommissioning and removal of Runway 13/31.

The Airport is included in both the National Plan of Integrated Airport Systems³ and in the Wisconsin State Airport System Plan⁴, 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)⁵. 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 an Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI). The intent of this EA is to

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

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

³ National Plan on Integrated Airport Systems: https://www.faa.gov/airports/planning_capacity/npas/current

⁴ Wisconsin State Airport System Plan 2030: <https://wisconsin.dot.gov/Pages/projects/multimodal/sasp/air2030-chap.aspx>

⁵ 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 seven 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 purpose of the proposed project is to right size the airfield, improve airfield safety, remove obsolete and underutilized pavements, and minimize operation and maintenance costs. The Airport completed a Master Plan Update (MPU) in September of 2022⁶. The MPU established needs and goals for the future of the Airport⁷. 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, improving airfield safety, and optimizing capacity benefits in the context of future Operation and Maintenance costs and capital expenses⁸.

There are several needs that would be addressed as part of the proposed project. The first need is to address the rightsizing needs identified through the MPU 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. By establishing a three-runway system both Runway 13/31 and Runway 1R/19L would be decommissioned and removed. 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 runway⁹. Runway 13/31 is 5,537 feet long and 150 feet wide with numerous connecting taxiways. Runway 13/31 primarily services general aviation aircraft¹⁰. Additionally, the current MPU development plans and ALP display the removal of Runway 1R/19L and Runway 13/31 to facilitate future airfield development without the need to acquire additional property.

Additionally, the proposed project would reduce operations and maintenance costs associated with deteriorating and underutilized airfield pavements. Typical operations and maintenance costs

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

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

⁸ 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>

⁹ 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>

¹⁰ 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>

associated with airfield pavements include lighting repairs, pavement maintenance, foreign object debris (FOD) management, snow plowing, pavement marking maintenance, and pavement rehabilitation or reconstruction when required. Some of the existing pavements that are proposed for removal are deteriorating and would require reconstruction but are not eligible for federal funding to complete the projects. Without reconstruction, the pavement would continue to deteriorate and produce greater amounts of FOD that would pose as a safety hazard to aircraft operations.

Additional needs include maintaining airfield access from airfield facilities and optimizing airfield efficiency. The removal of Runway 1R/19L would eliminate western airfield access from the 128th WI Air National Guard (WI ANG) Unit ramp. There is a need to maintain airfield access for the WI ANG unit to ensure their mission can be completed safely and efficiently. To maintain access, the taxiway network would be modified to include a partial parallel taxiway that would connect the existing Taxiway W to Taxiway S.

Another need for any airfield development project is to improve safety. The proposed project would address the need of removing non-standard taxiway intersections to improve airfield safety. Per FAA design standards multiple intersecting taxiways with acute angles have a greater potential for pilot confusion¹¹. Additionally, taxiways that enter a runway at other than right angle¹² or connect an apron directly to a runway¹³ can increase the risk of runway incursion.

The Airport is proposing to decommission and remove Runway 1R/19L, decommission and remove Runway 13/31, and modify the supporting taxiway network. Taxiway network modifications include the conversion or construction of Taxiway CC and the removal of Taxiway G, Taxiway U, and partial removal of Taxiway N. The goal of the proposed project is to meet the purpose and need defined in this section.

¹¹ FAA Advisory Circular 150/5300-13B (Chapter 4.8.1.3): https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf

¹² FAA Advisory Circular 150/5300-13B (Appendix J5.5): https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf

¹³ FAA Advisory Circular 150/5300-13B (Chapter 4.3.5): https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf

1.3 Document Actions

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 5050.4B¹⁴ and FAA Order 1050.1F¹⁵, 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.

Additionally, FAA Order 7400.2P¹⁶ outlines procedures for handling airspace matters including flight procedures. The proposed improvements at the Airport would include changes to flight procedures and the decommissioning of FAA Navigational Aids (NAVAIDs). The proposed action would require FAA coordination to comply with FAA Order 7400.2P.

1.4 Other Actions

The Ten-Year Airport Improvement Program identifies several potential improvements to the Airport¹⁷. Potential and ongoing airfield improvements identified for design and construction in the near future include¹⁸:

- Rehabilitate Bullseye (Runway 1L-19R and Runway 7R-25L Intersection) (estimated 2025 construction)
- Taxiway A Connector Rehabilitation and Removal (2024 and 2025 construction)
- North Apron Rehabilitation (estimated 2025 construction)
- Taxiway F Rehabilitation (estimated 2025 construction)
- Taxiway Y Rehabilitation (estimated 2035 construction)
- Taxiway M High-Speed Exit Reconstruction (estimated 2031 construction)
- South Airfield Rehabilitation (estimated 2030-2031 construction)

¹⁴ 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

¹⁵ 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

¹⁶ FAA Order 7400.2P, Procedures for Handling Airspace Matters, U.S. Department of Transportation, Federal Aviation Administration, April 20, 2023: https://www.faa.gov/documentLibrary/media/Order/7400.2P_Basic_dtd_4-20-23--COPY_FINAL.pdf

¹⁷ 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.

¹⁸ The list includes airfield-only projects listed in the most recent Airport CIP for 2023-2034.

- GRE Ramp Rehabilitation (estimated 2035 construction)
- South Ramp Taxiway Strengthening & South Cargo Development (estimated 2025/2026 construction)
- Fuel Farm Roadway Reconstruction (estimated 2028 construction)

Locally, Milwaukee County is planning projects, two of which are near the airport, including¹⁹:

- W. Rawson Avenue (CTH BB) Reconstruction from S. 13th Street to S. Howell Avenue (2025)
- S 76th 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 Airport²⁰.

- 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.
- I-41/I-94 Mitchell Interchange Resurfacing
 - The project will resurface the I-41/43/94/894 interstate highway between Rawson Ave, Howard Avenue, and 35th Street.

Flight procedures would be updated as a result of the proposed action. Additionally, there are potential changes to the airspace procedures, but they are not yet ripe for development. Flight procedures updates may include new or amended procedures, cancelled procedures, and changes to Standard Instrument Departure (SIDs) procedures. Future flight procedure updates will be coordinated with the FAA Flight Procedures Team by the Airport.

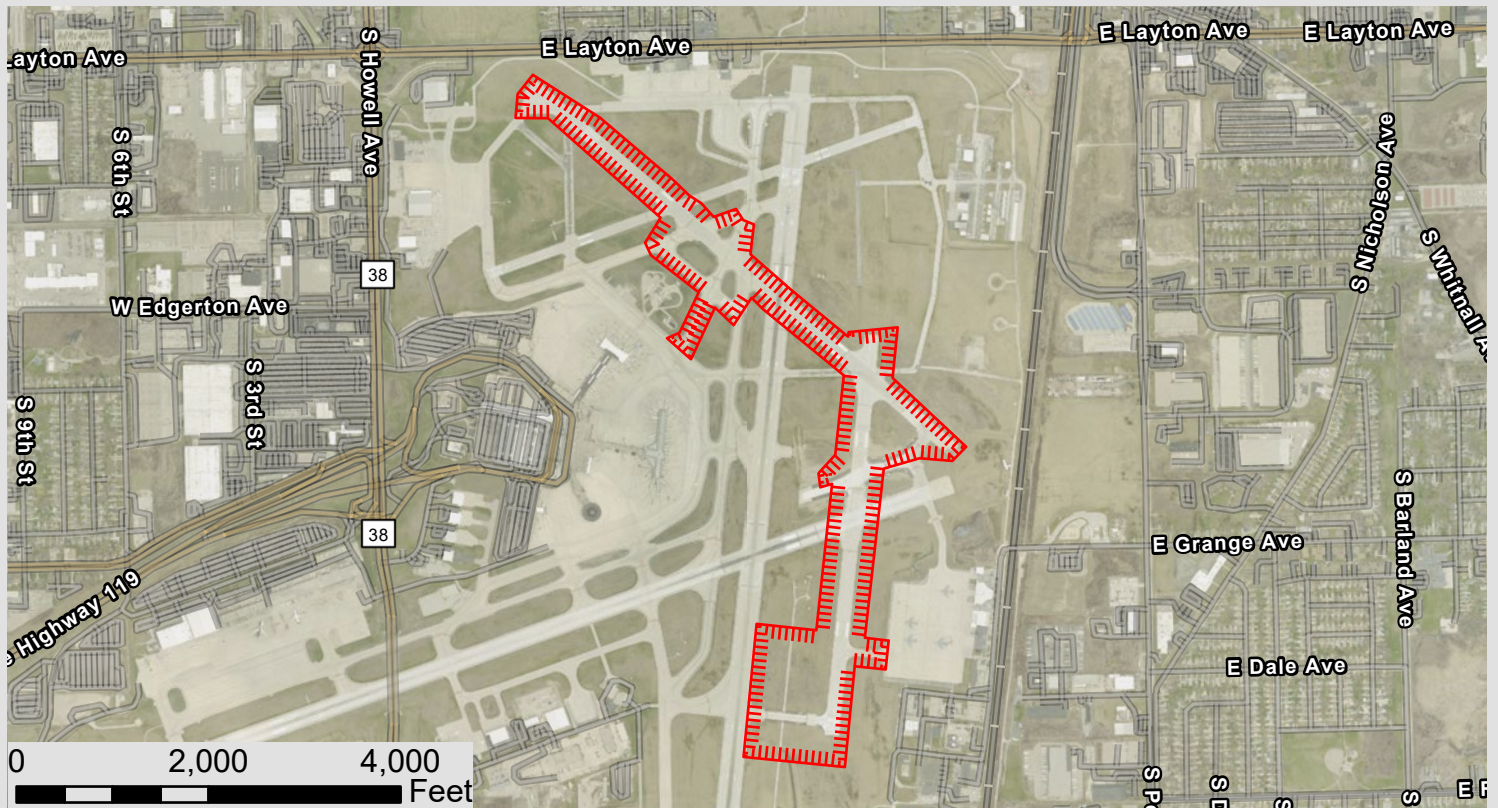
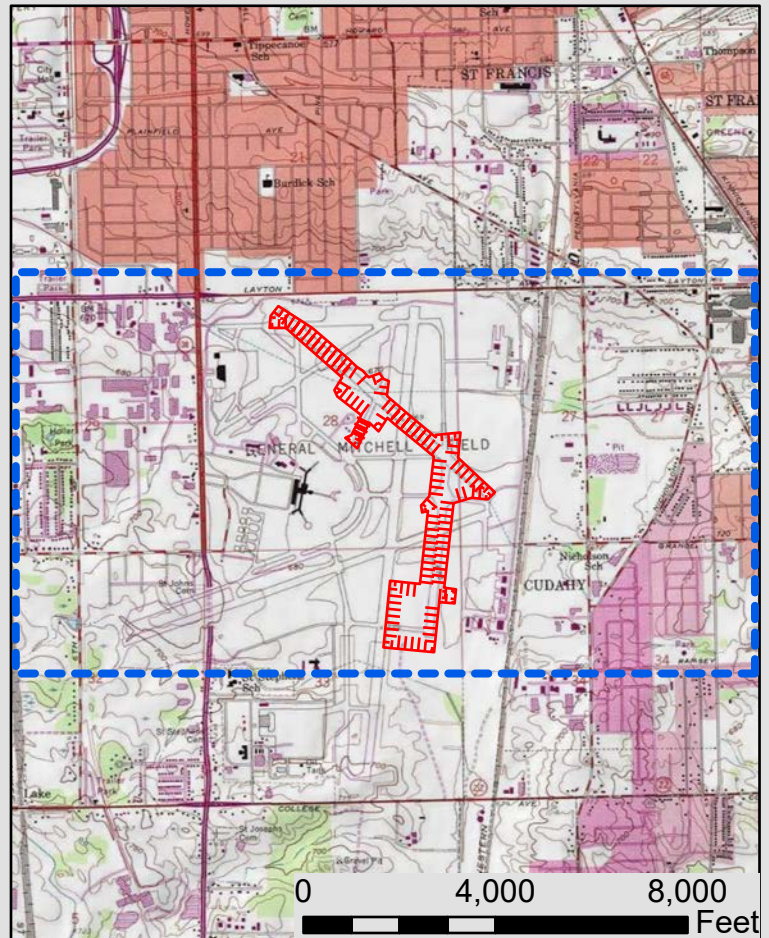
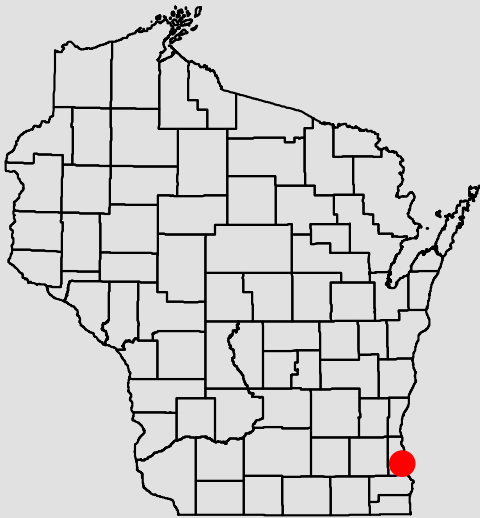
1.5 Anticipated Time Frame

The decommissioning and removal of Runway 1R/19L is anticipated to begin in 2027 with completion in 2028. It is anticipated that Runway 13/31 decommissioning and removal would begin in 2027 or 2028 with completion in 2029. The anticipated time frames for completion have been identified assuming funding is available.

¹⁹ Milwaukee County, Department of Transportation: <https://county.milwaukee.gov/EN/Department-of-Transportation/Transportation-Services/Public-Involvement-Meetings>

²⁰ Southeast Transportation Region: <https://wisconsindot.gov/Pages/projects/by-region/se/default.aspx>

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL LOCATION MAP

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

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

Date: 6/20/2024

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

FIGURE NO.
1-1

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 NEPA²¹. FAA requirements of EAs for the analysis of alternatives are provided in FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions²² and FAA Order 1050.1F, Environmental Impacts: Policies and Procedures²³. 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 currently 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 the decommissioning and removal of Runway 1R/19L, decommissioning and removal of Runway 13/31, and modification of the supporting taxiway network. Taxiway network modifications include the conversion or construction of Taxiway CC and the removal of Taxiway G, Taxiway U, and partial removal of Taxiway N.

Currently, 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 designations²⁴. Additionally, Runway 1R/19L is close in proximity to the 128th WI ANG Unit. The unit currently operates KC-135 aircraft

²¹ 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))

²² 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

²³ 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

²⁴ 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>

but due to the proximity to the runway surfaces, parking locations of aircraft are restricted due to tail heights²⁵.

Runway 13/31 primarily services general aviation traffic up to Aircraft Approach Category (AAC) B and Airplane Design Group (ADG) II designation²⁶. Additionally, per the current Airport Master Record (FAA Form 5010-1) remarks, Runway 13/31 is closed to jet aircraft unless permission is granted from the airport manager or tower²⁷.

A pavement inspection was completed in 2023 for the whole airfield. Pavement Condition Index (PCI) values ranging from 16-50 (very poor to fair) were identified for Runway 1R/19L and PCI values ranging from 33-89 (very poor to good) were identified for Runway 13/31. **Figure 2-1** shows an overview of the PCI values and their location on the runways. Areas with PCI values of 0 – 40 are typically mitigated through a reconstruction. The majority of Runway 1R/19L consists of pavement areas with PCI values that indicate the need for reconstruction. Thus, to maintain Runway 1R/19L at full operating capabilities, the runway would require reconstruction.

The 128th WI ANG Unit Ramp is located directly east of Runway 1R/19L. Currently, there are two taxiways that connect the 128th WI ANG Unit ramp to the rest of the airfield. **Figure 2-2** provides a graphic of the existing runway, taxiway, and apron layout and identifies the ANG Unit ramp and access taxiways. 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. The potential removal of Runway 1R/19L would eliminate western aircraft access from the ANG Unit Ramp. To maintain the need for western airfield access for the WI ANG Unit Ramp, the taxiway network would require modification to include a partial parallel taxiway that would connect the existing Taxiway W to Taxiway S allowing access to Taxiway R and Runway 1L/19R. The proposed parallel taxiway (Taxiway CC) would connect the existing Taxiway W to Taxiway S maintaining westerly access to Taxiway R and Runway 1L/19R allowing the unit to ensure their mission can be completed safely and efficiently. The construction of Taxiway CC would also eliminate the direct access taxiway connecting the WI ANG Unit ramp to Runway 1R/19L limiting the potential for runway incursions and improving safety.

The Runway 13/31 supporting taxiway network is proposed to be modified to enhance aircraft circulation and improve airfield safety. The modifications include the removal of Taxiway G, Taxiway U, and Taxiway N between Runway 13/31 and Taxiway M. **Figure 2-3** provides a graphic representation of the existing runway, taxiway, and apron layout and identifies the taxiways proposed for removal. Currently the intersection of Taxiway G and Taxiway E (to remain) can be classified as non-standard. Per FAA design standards multiple intersecting taxiways with acute angles has a

²⁵ 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>

²⁶ 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>

²⁷ FAA 5010 Document, dated 3/11/2024: <https://adip.faa.gov/agis/public/#!/simpleAirportMap/MKE>

greater potential for pilot confusion²⁸. Additionally, Taxiway G enters Runway 13/31 at other than right angle, which increases the risk of runway incursion²⁹. Both runway incursions and pilot confusion on taxiways pose safety risks and enhancing airfield geometry has the potential to improve safety.

Occasionally, aircraft using Runway 7R/25L aircraft are re-sequenced using Runway 13/31, Taxiway N, and Runway 1R/19L. Through airport internal coordination with ATC, the need for additional pavement for re-sequencing aircraft was determined to be not needed.

The proposed action of decommissioning Runway 1R/19L and decommissioning Runway 13/31 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 feedback³⁰.

The proposed action of decommissioning Runway 1R/19L and decommissioning Runway 13/31 would change flight paths for the Airport. A noise analysis was completed to quantify the noise impacts associated with the decommissioning of both runways as operations would shift to the other three runways. This EA will evaluate the impacts of the decommissioning and removal of Runway 1R/19L, decommissioning and removal of Runway 13/31, and modification of the supporting taxiway network. **Table 2-1** provides a summary of the alternatives evaluated. **Figure 2-4** provides a graphic representation of the location of the proposed action on airport property.

2.2 No Action Alternative

Runway 1R/19L, Runway 13/31, and supporting taxiways 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 require increased future operation and maintenance costs and does not provide for safety improvements relating to the removal of a non-standard runway-taxiway intersection.

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.

²⁸ FAA Advisory Circular 150/5300-13B (Chapter 4.8.1.3): https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf

²⁹ FAA Advisory Circular 150/5300-13B (Appendix J5.5): https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf

³⁰ 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>

Table 2-1. Proposed Project Alternative Summary

| Alternative | Remove and Decommission Runway 1R/19L | Remove and Decommission Runway 13/31 | Partial Parallel Taxiway CC | Taxiway G, Taxiway U, and Taxiway N Removal |
|---------------------------------|--|---|--|--|
| No Action Alternative | No | No | No | No |
| Alternative A (Proposed Action) | Yes | Yes | Yes - Convert Runway 1R/19L pavement south of Taxiway W into Taxiway CC. Taxiway CC would connect Taxiway W and Taxiway S. Or, construct Taxiway CC west of existing Runway 1R/19L pavement. Taxiway CC would connect Taxiway W and Taxiway S. | Yes |
| Alternative B | Yes | No | Yes | No |
| Alternative C | No | Yes | No | Yes |

2.3 Proposed Action - Decommission and Remove Two Runways and modify the supporting taxiway network.

The proposed action would decommission and remove Runway 1R/19L, decommissioning and remove Runway 13/31, and modify the supporting taxiway network. Taxiway network modifications include the conversion or construction of Taxiway CC and the removal of Taxiway G, Taxiway U, and partial removal of Taxiway N. **Figure 2-5** and **Figure 2-6** provides a graphic representation of the proposed action.

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

- **Flight Procedure Modifications** – Due to the decommissioning of both Runway 1R/19L and Runway 13/31 flight procedures associated with the runways would be removed. Currently both Runway 1R/19L and Runway 13/31 have Area Navigation (RNAV) Global Positioning System (GPS) approach procedures that would be cancelled. Additional updates may include

new or amended procedures and changes to Standard Instrument Departure (SIDs) procedures. There is a potential for airspace procedure changes due to the decommissioning of the runways but are not anticipated to be developed concurrently with the proposed action.

- **Pavement Removal** – 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.
 - Runway 1R/19L currently consists of concrete and asphalt pavements varying in depths up to 16” below existing surface³¹. Approximately 53,000 SY of concrete or asphalt pavement would be removed north of Taxiway W.
 - Runway 13/31 currently consists of concrete and asphalt pavements varying in depths up to 19” below the existing surface³². Preliminary planning estimates 93,500 SY of Runway 13/31 concrete and asphalt pavement would be removed.
 - Taxiway G, Taxiway U, and the Taxiway N connector surrounding Runway 13/31 currently consists of concrete and asphalt pavements varying in depths. Preliminary planning estimates approximately 33,400 SY of asphalt or concrete pavement would be removed.
- **Intersection Adjustments** – Runway 1R/19L, Runway 13/31, Taxiway G, Taxiway U, and Taxiway N intersect various taxiways and runways. Depending on funding considerations, any adjacent concrete pavement at intersections may remain in place as a concrete shoulder or removed and replaced to align with the standard asphalt paved shoulders. Additionally, Taxiway M intersects Runway 1R/19L. 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.
- **Partial Parallel Taxiway Construction**
 - **Conversion to Taxiway CC** - The proposed action may convert Runway 1R/19L between Taxiway W and Taxiway S to the proposed partial parallel taxiway (Taxiway CC). The existing Runway 1R/19L, Taxiway W, and Taxiway S pavement structure (approximately 33,000 SY of pavement) would be used for the converted taxiway (see **Figure 2-5**). Portions of the pavement may require reconstruction or strengthening to ensure adequate support for aircraft taxiing. Taxiway CC would be

³¹ Wisconsin 2021 IDEA Airport Pavement Management System: <https://idea.appliedpavement.com/hosting/wisconsin/airport-details/airport-details.html>

³² Wisconsin 2021 IDEA Airport Pavement Management System: <https://idea.appliedpavement.com/hosting/wisconsin/airport-details/airport-details.html>

- 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.
- Construction of Taxiway CC West of Runway 1R/19L – The proposed action may construct a partial parallel taxiway (Taxiway CC) west of the Runway 1R/19L (see **Figure 2-6**). 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. 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. The construction of Taxiway CC west of Runway 1R/19L would also include an additional pavement removal on Runway 1R/19L of approximately 20,000 SY of asphalt or concrete pavement.
 - Navigational Aids (NAVAIDs) and Airfield Lighting Removal – Runway 1R/19L has Medium Intensity Runway Lights (MIRLs), guidance signage, and FAA owned Runway End Identifier Lights (REILs) for Runway 1R. Runway 13/31 has Medium Intensity Runway Lights (MIRLs), guidance signage, and airport-owned REILs for Runway 13 and Runway 31. Additionally, Runway 13 and Runway 31 both have FAA owned Precision Approach Path Indicators (PAPIs). Taxiway G, Taxiway U, Taxiway N, Taxiway S and Taxiway W all have taxiway edge lighting. Runway lights, taxiway lights, guidance signs, REILs, PAPIs, and other associated electrical infrastructure would be removed. The associated wiring, handholes, bases, and duct banks may be removed or abandoned. The removal of FAA owned NAVAIDS (REILs and PAPIs) would require additional FAA coordination for removal.
 - Airfield Lighting Replacement and Adjustments - Guidance signs associated with Runway 1R/19L, Runway 13/31, and taxiways along adjoining runways and taxiways would be removed or adjusted. New taxiway lighting would be installed along the proposed Taxiway CC, Taxiway S, and Taxiway W. Additionally, adjoining taxiway and runway lighting may need to be adjusted to comply with FAA standards. Additionally, due to the decommissioning and removal of Runway 1R/19L, Runway 1L/19R would require new or adjusted signage.
 - Airfield Pavement Markings - Due to the Runway 1R/19L, Runway 13/31, and taxiway removals pavement markings would need to be removed and repainted to meet FAA standards including hold lines, centerlines, and lead-in lines. Additionally, due to the decommissioning and removal of Runway 1R/19L, Runway 1L/19R would require remarking.
 - Drainage Removals and Realignments – The proposed action is not anticipated to alter existing drainage on the airfield as the proposed project intends to remove pavement, topsoil, and restore to turf. Though not anticipated, minor underdrain or culvert adjustments or replacements may be needed to facilitate the removals or ensure proper airfield drainage. Additionally, Taxiway CC may be constructed with underdrain that would be connected to the existing underdrain and airport drainage network.

- Temporary Construction Tasks
 - 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 or existing airfield pavement. **Figure 2-7** 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, Runway 13/31 removal, and taxiway modifications the Airport would operate using the remaining runways and taxiways. In the future, the Airport may optimize the taxiway network by crossing or utilizing portions of the removed runway and taxiways. 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, decommissioning and removal of Runway 13/31, and taxiway network modifications meets the purpose of the proposed project. The proposed action also meets the needs of allowing for on-Airport expansion without the need for land acquisition, reducing operation and maintenance expenses associated with deteriorating pavements, maintaining airfield access, and improving airfield safety.

2.4 Alternative B – Decommission and Remove One Runway, Runway 1R/19L

Alternative B consists of decommissioning and removing only Runway 1R/19L and partial parallel taxiway construction.

If only Runway 1R/19L would be decommissioned and removed, design components may include the following. Descriptions for each design component would be similar to that described in Section 2.3. **Figure 2-8** and **Figure 2-9** provides a graphic representation of the Alternative B action detail map if only Runway 1R/19L would be decommissioned and removed with partial parallel taxiway construction.

- Flight Procedure Modifications
- Pavement Removal
- Intersection Adjustments
- Partial Parallel Taxiway Construction
- NAVAID Removals
- Airfield Lighting and Signage Removals
- Airfield Lighting Replacement and Adjustments
- Airfield Pavement Marking Adjustments
- Drainage Removals and Realignments

- Temporary Construction Tasks
 - Construction Haul Roads and Staging Areas
 - Construction Excess Material Sites

The decommissioning and removal of only Runway 1R/19L would improve airfield safety, reduce operations and maintenance costs, and maintain airfield access. However, it does not meet the purpose and need as described in Section 1.2 of rightsizing the airfield by not establishing an optimized three-runway system.

2.5 Alternative C – Decommission and Remove One Runway, Runway 13/31

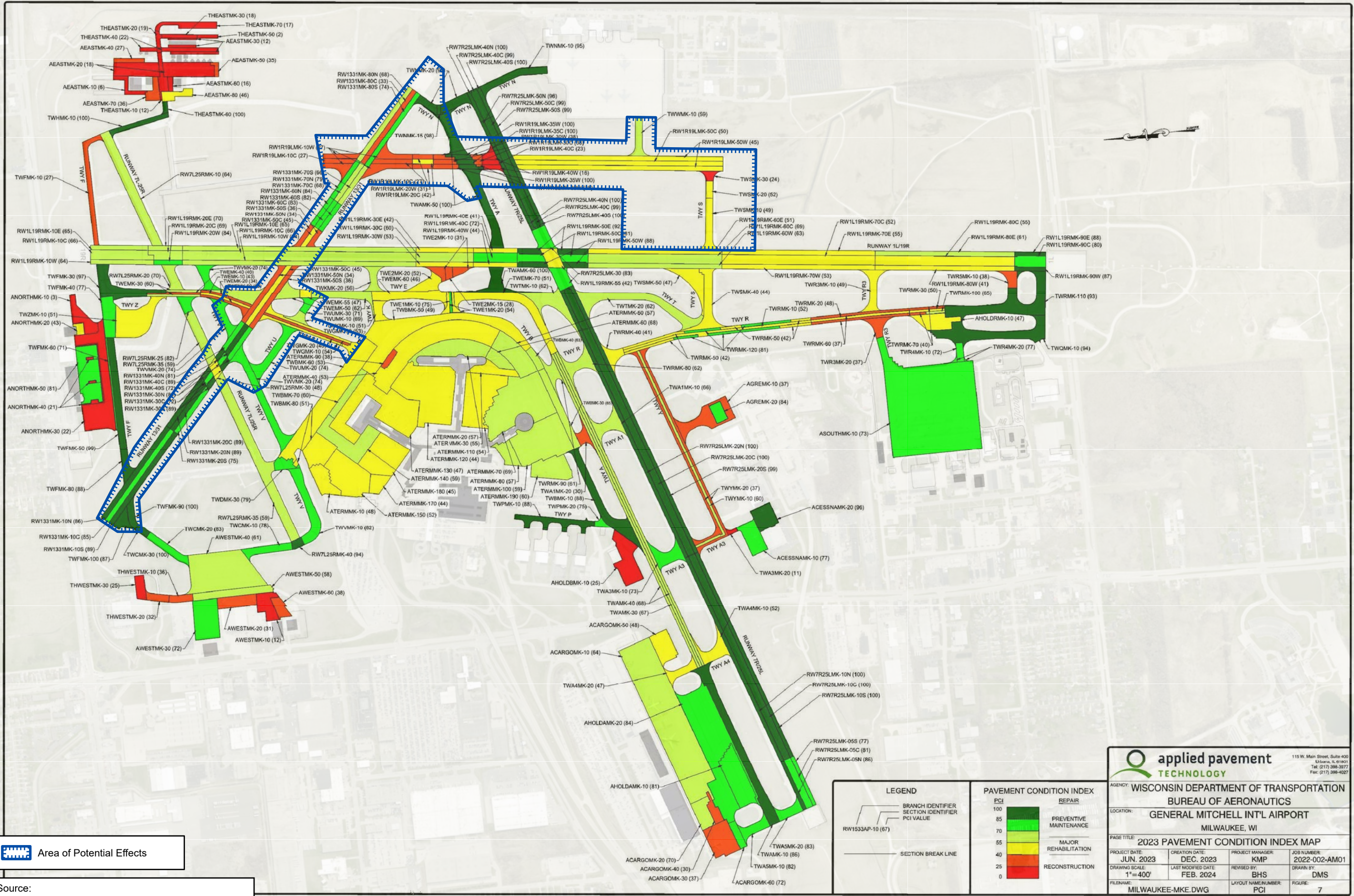
Alternative C consists of decommissioning and removing only Runway 13/31 and taxiway network modification.

If only Runway 13/31 would be decommissioned and removed, design components may include the following. Descriptions for each design component would be similar to that described in Section 2.3.

Figure 2-10 provides a graphic representation of the Alternative C action detail map if only Runway 13/31 would be decommissioned and removed with taxiway network modification.

- Flight Procedure Modifications
- Pavement Removal
- Intersection Adjustments
- NAVAID Removals
- Airfield Lighting and Signage Removals
- Airfield Lighting Replacement and Adjustments
- Airfield Pavement Marking Adjustments
- Drainage Removals and Realignment
- Temporary Construction Tasks
 - Construction Haul Roads and Staging Areas
 - Construction Excess Material Sites

The decommissioning and removal of only Runway 13/31 would improve airfield safety, reduce operations and maintenance costs, and maintain airfield access. However, it does not meet the purpose and need as described in Section 1.2 of rightsizing the airfield by not establishing an optimized three-runway system.



Area of Potential Effects

Source:
2023 General Mitchell International Airport PCI Map



Project Manager: KMW
Project Engineer: KMW
Drawn By: KMW
Checked By: KMW
Date: 6/20/2024

MKE RUNWAY 13-31 REMOVAL 2023 PAVEMENT CONDITION INDEX (PCI) MAP

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

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www.westwoodps.com



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Oshkosh, WI 54901
Tel: (920) 398-3977
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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 | |

SCALE: N/A
PROJECT NO. R3001844.01
FIGURE NO. 2-1

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24081

AIRPORT DIAGRAM

AL-262 (FAA)

GENERAL MILWAUKEE



Taxiway Removals



Area of Potential Effects

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

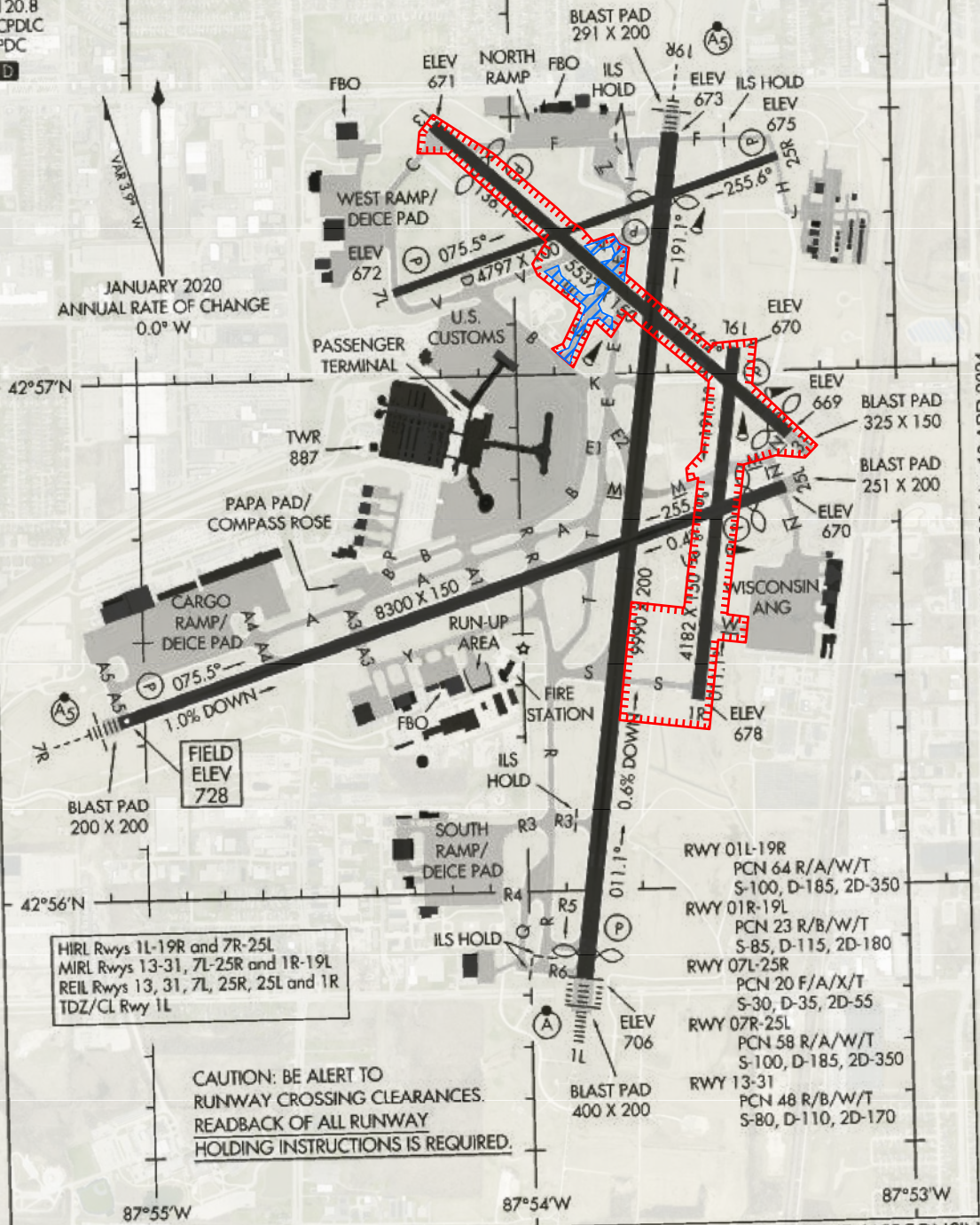


JANUARY 2020
ANNUAL RATE OF CHANGE
0.0° W

ASDE-X in use. Operate tra
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



AIRPORT DIAGRAM

MILWAUKEE, WISCONSIN
GENERAL MITCHELL INTL (MKE)

0 2,000 4,000
Feet

Data Source:
FAA (March/April 2024)

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL TAXIWAY REMOVAL LOCATION MAP

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

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

Date: 6/25/2024

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

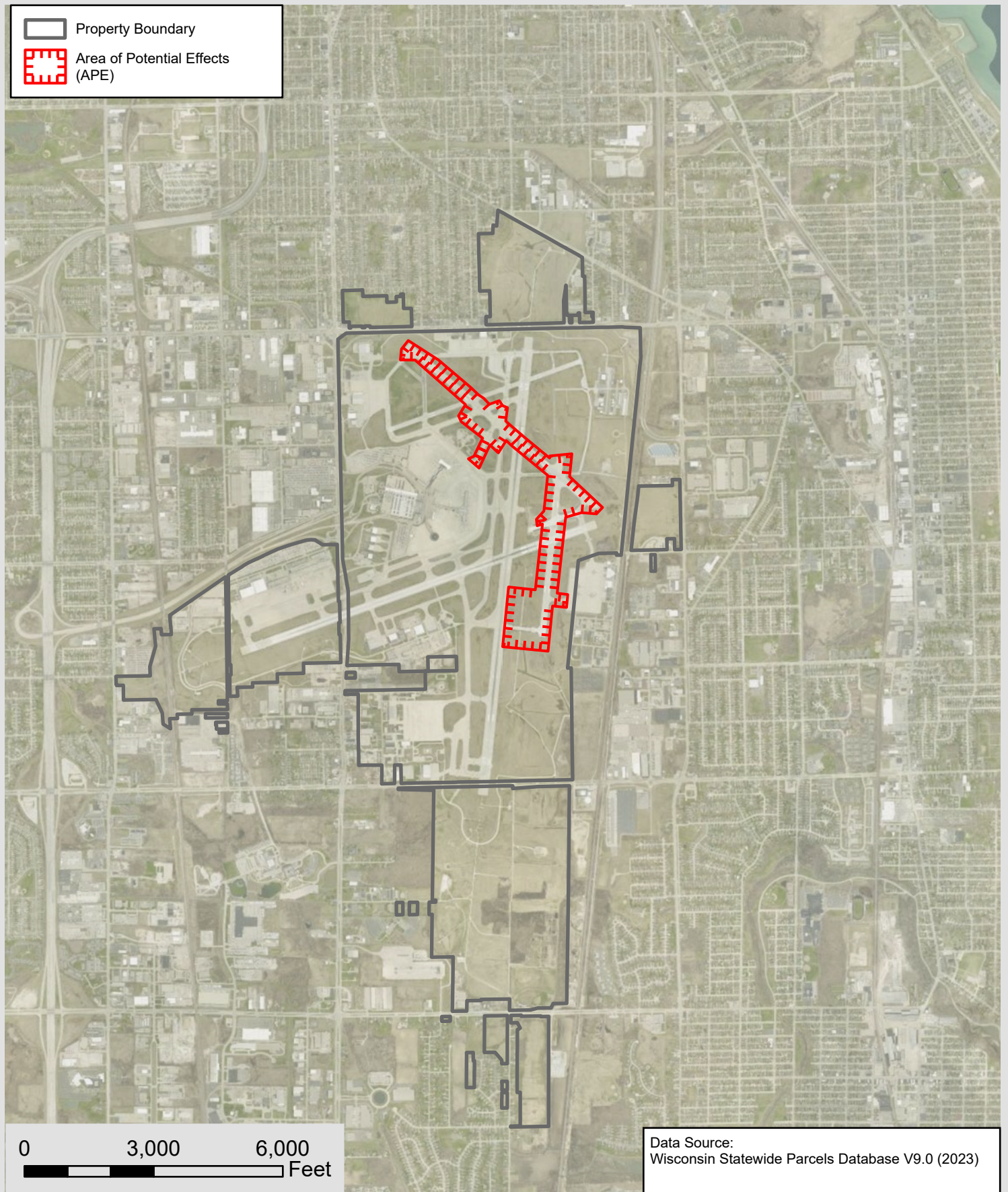
FIGURE NO.
2-3



Property Boundary



Area of Potential Effects
(APE)



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

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL AIRPORT PROPERTY MAP

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

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

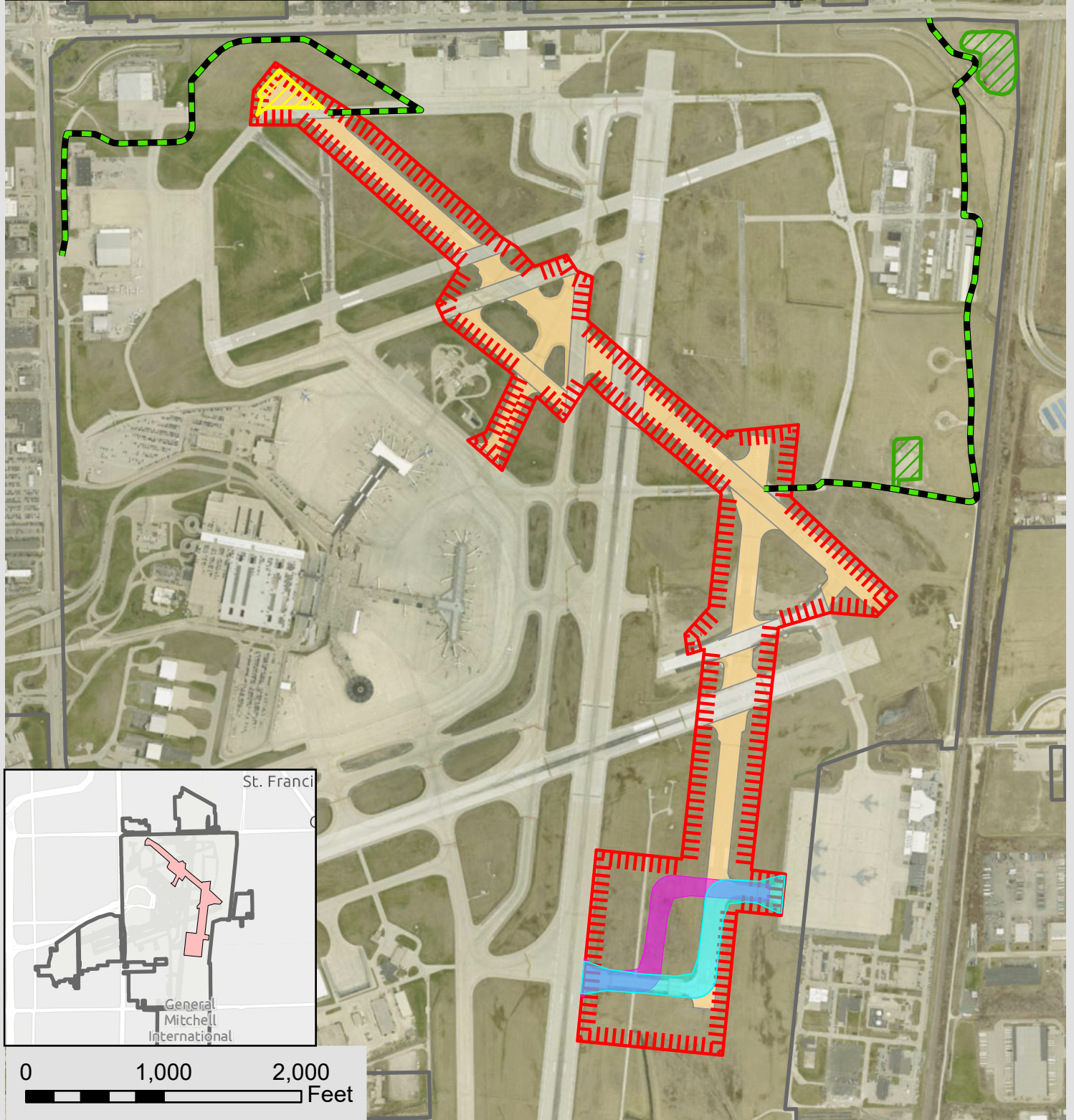
Date: 6/25/2024

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

FIGURE NO.
2-4

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- Property Boundary
- Area of Potential Effects (APE)
- Potential Haul Route (Existing Paved/Gravel Access Road)
- Potential Staging Area (Existing Airport Construction Staging Areas)
- Potential Staging Area (Existing Airfield Pavement)
- Pavement Removal
- Relocated Parallel Taxiway CC
- Converted Parallel Taxiway



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MKE RUNWAY 1R-19L AND 13-31 REMOVAL PROPOSED ACTION LOCATION

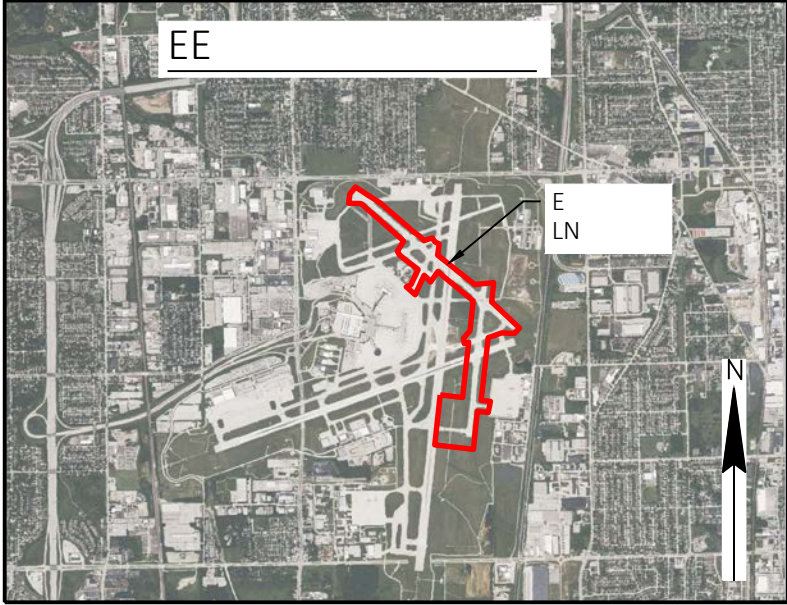
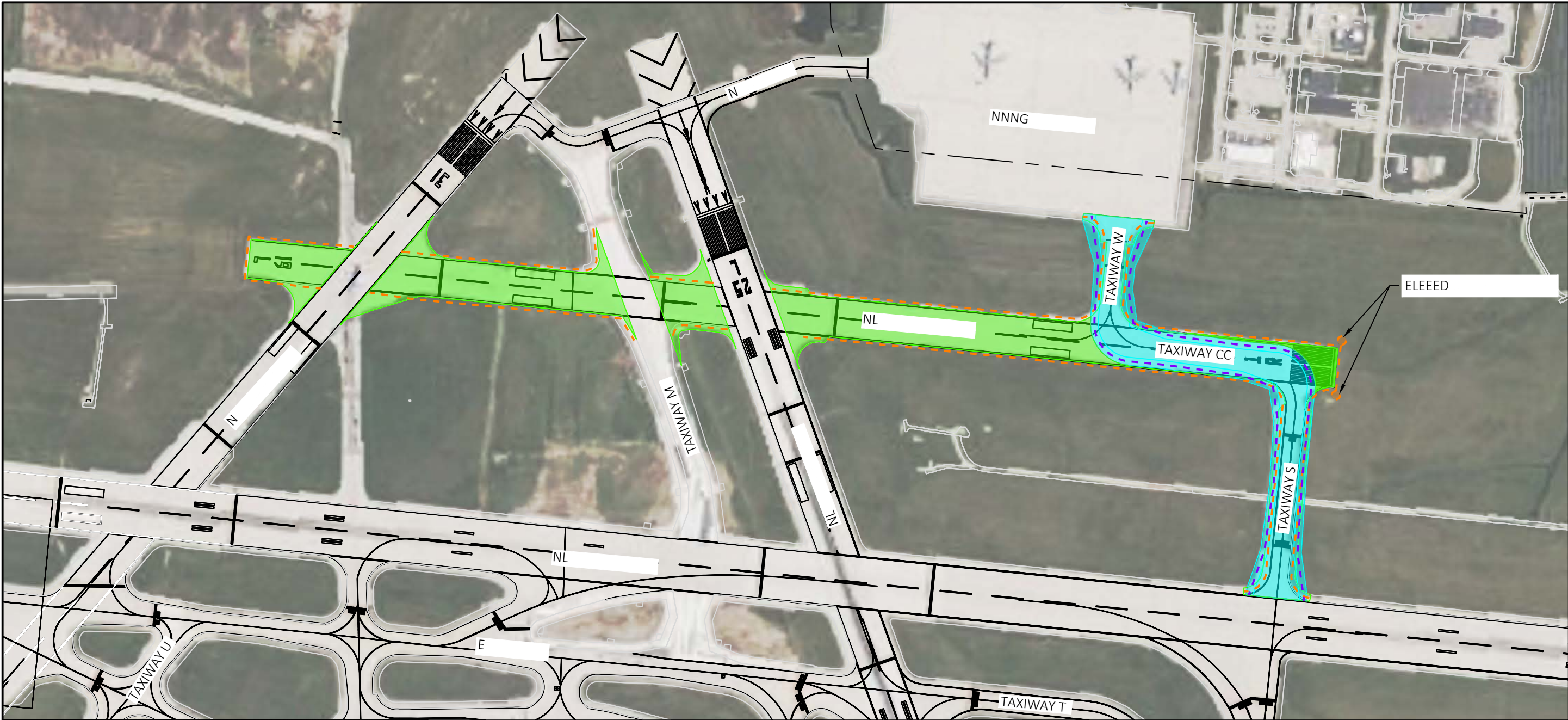
GENERAL MITCHELL INTERNATIONAL AIRPORT
 CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 6/26/2024

SCALE:
 1 in = 1,000 ft
 PROJECT NO.
R3001844.00
 FIGURE NO.
2-7

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LEGEND

| | |
|--|---------------------------------------|
| | ANTICIPATED PAVEMENT REMOVAL |
| | TAXIWAY CONVERSION AND REHABILITATION |
| | AIRFIELD LIGHTING/NAVAID REMOVALS |
| | NEW AIRFIELD LIGHTING |

NOTE:

1. ELNLLENGINEEDNE
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LGDNGNLGNLDELEL
2. NNNDL
- 2.1. GDNGNDGNDNDNELNN
- 2.2. ELDGNGEELDENNDNE
NLLN
- 2.3. EENNGDENNN

PROJECT NO: R3001844.00

DRAWN BY: KMW

DATE: 06/26/2024

FIGURE 2-8

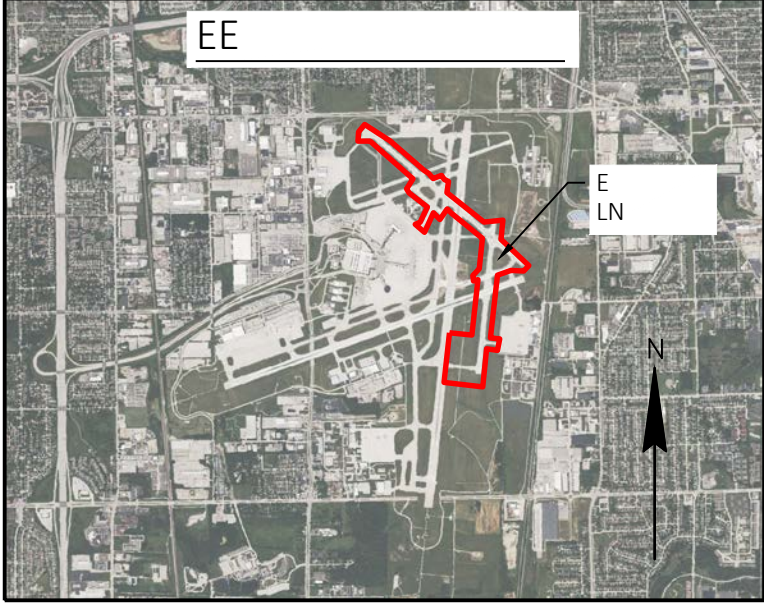
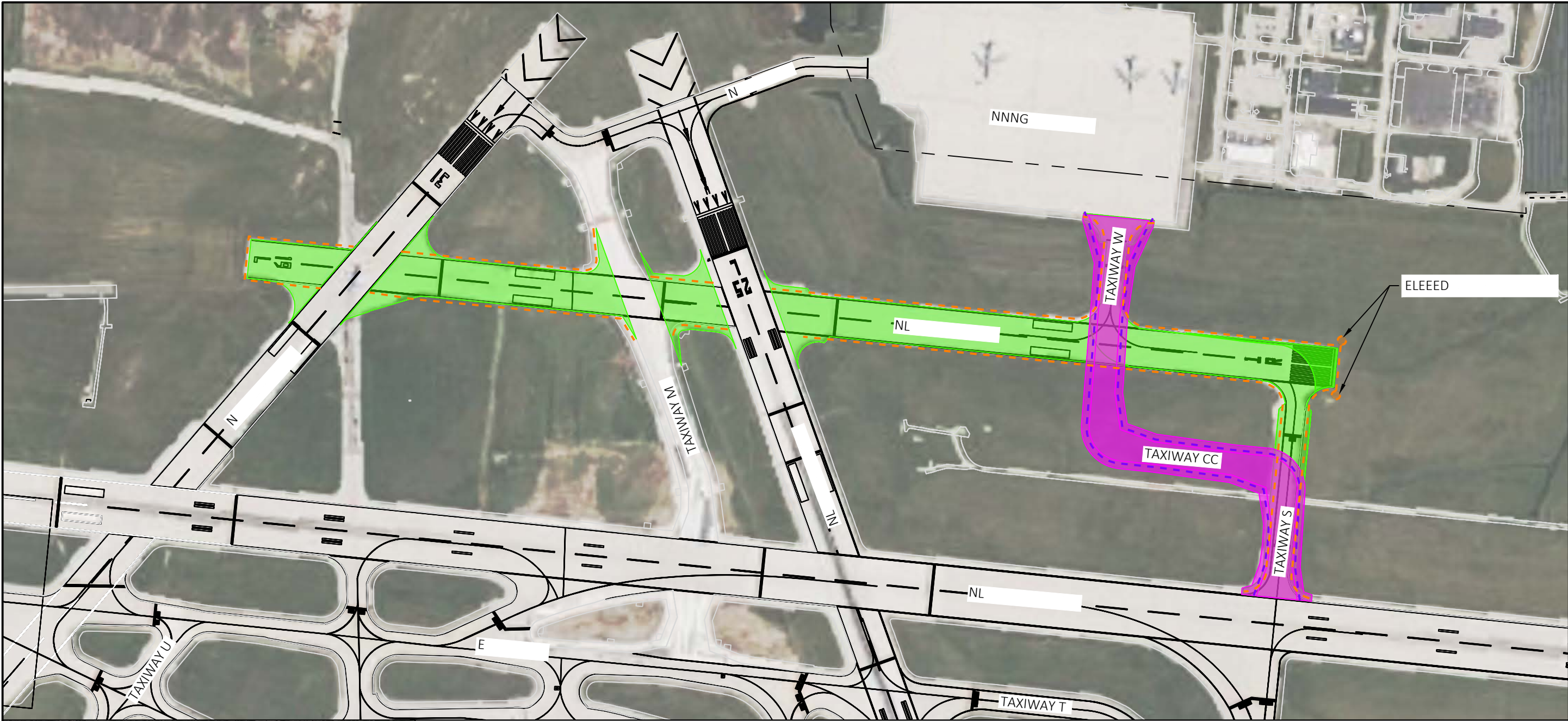
MKE RUNWAY 1R-19L AND 13-31 REMOVAL
RUNWAY 1R/19L REMOVAL
WITH TAXIWAY CONVERSION

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

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

FILE NAME : N:\3001844.00\EAS\3. RWY 1R_19L\CAD\RWY1R-19L_PRELIMINARY AV ENGINEERING - PERFORMED ALTERNATIVE DELINEATIONS : 6/26/2024 4:19 PM

PLOT BY : KAITLYN WEHNER



LEGEND

| | |
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| | PAVEMENT REMOVAL |
| | TAXIWAY RELOCATION AND CONSTRUCTION |
| | AIRFIELD LIGHTING/NAVAID REMOVALS |
| | NEW AIRFIELD LIGHTING |

NOTE:
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2.3. EENNGDENNN

PROJECT NO: R3001844.00

DRAWN BY: KMW

DATE: 06/26/2024

FIGURE 2-9

MKE RUNWAY 1R-19L AND 13-31 REMOVAL

RUNWAY 1R/19L REMOVAL

WITH TAXIWAY RELOCATION

GENERAL MITCHELL INTERNATIONAL AIRPORT

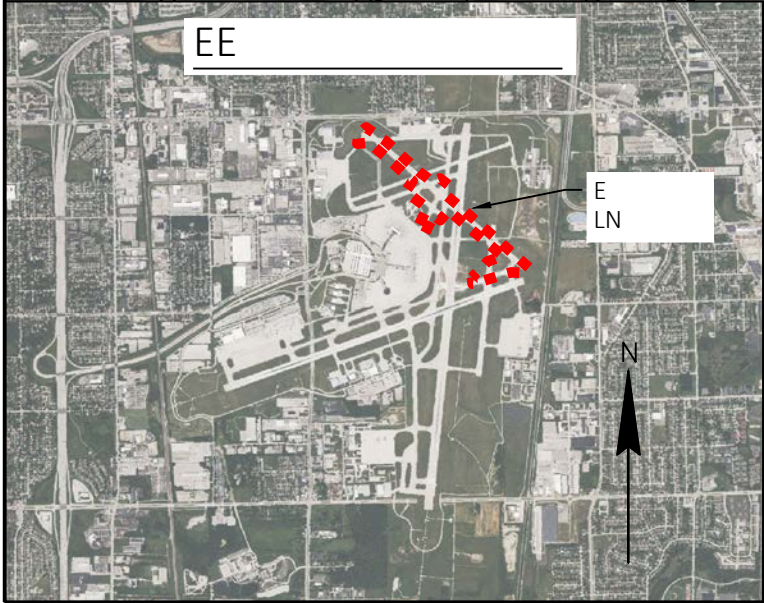
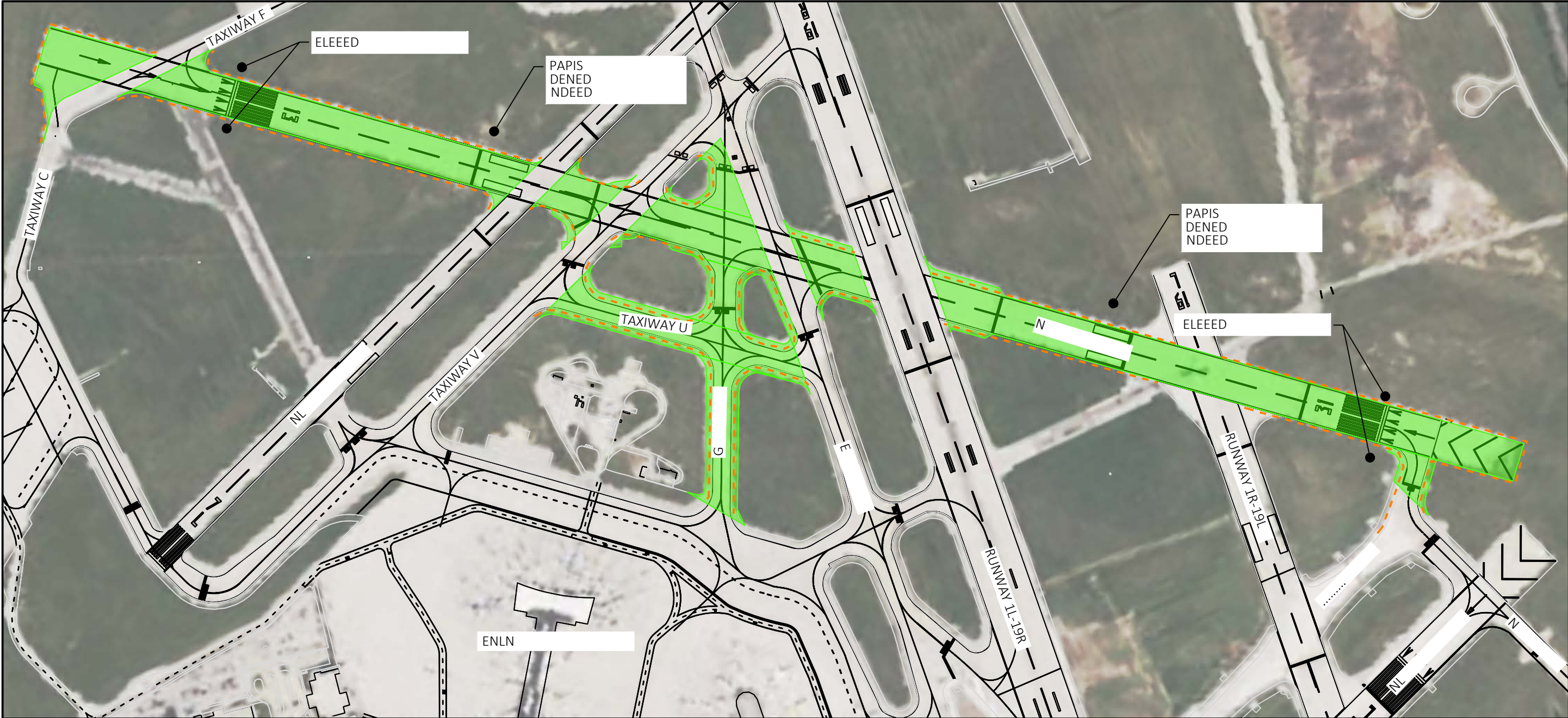
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FAX: (920) 830-6100

FILE NAME : N:\3001844.00\EAS\3. RWY 1R_19L\CAD\RWY1R-19L_PRELIMINARY AV ENGINEERING - PERFORMED ALTERNATIVE

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PLOT BY : KAITLYN WEHNER



LEGEND

| | |
|--|---|
| | ANTICIPATED PAVEMENT REMOVAL |
| | AIRFIELD LIGHTING REMOVALS OR ADJUSTMENTS |

- NE
1. ELNLLENGEEEDNE
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2.3. EENNGDENNN
2.4. NEENEENDENNN

PROJECT NO: R3001844.01

DRAWN BY: KMW

DATE: 06/26/2024

FIGURE 2-10

MKE RUNWAY 1R-19L AND 13-31 REMOVAL
RUNWAY 13/31 REMOVAL
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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FILE NAME : N:\3001844.00\EAS\3. RWY 1R_19L\CAD\RWY 13-31\PERFERRED ALTERNATIVE FIGURES.DWG

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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" ³³. Specifically, the proposed project is located in Sections 27, 28, & 33 of Township 6 North, Range 22 East, City of Milwaukee, Milwaukee County, Wisconsin ³⁴. **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 ³⁵. The Airport is named in honor of Brigadier General William "Billy" Mitchell who was a Milwaukee native and military aviation pioneer ³⁶.

3.2 Proposed Project Location

The proposed project site would be located on approximately 136 acres of Airport land. The proposed project site would be located around and on pavement and in grassy areas around Runway 1R/19L, Runway 13/31, and Taxiways G, U, M, N, S, and 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 proposed action, potential staging areas, 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.

³³ FAA Airport Data and Information Portal: <https://adip.faa.gov/agis/public/#/simpleAirportMap/MKE>

³⁴ WDNR Open Data, PLSS Quarter Sections: <https://data-wi-dnr.opendata.arcgis.com/maps/plss-quarter-sections>

³⁵ MKE Airport History: <https://www.mitchellairport.com/airport-information/history#Aviation-History>

³⁶ MKE Airport History: <https://www.mitchellairport.com/airport-information/history#General-Mitchell>

Table 3-1. Runway Characteristics³⁷

| 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 |
| 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 | | | | | | | | | | |

As a result of the proposed project, Runway 1R/19L and Runway 13/31 would 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 following the proposed action.

³⁷ 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 | | Decommissioned | |
| Width (ft) | 200 | | | | 100 | | 150 | | | |
| Pavement Strength (PCN) | 64/R/A/W/T | | | | 20/F/A/X/T | | 58/R/A/W/T | | | |
| Navigational Aids | ALSF-2, TDZ/CL LIGHTS, GS, LOC, RVR,DME | MALSR, GS, LOC, RVR, DME | | | REIL | REIL | GS, LOC, DME | REIL, LOC, DME | | |
| Visual Aids | PAPI | PAPI | | | PAPI | PAPI | PAPI | PAPI | | |
| Lighting | HIRL | | | | MIRL | | HIRL | | | |
| Approach Minimums | 1/2 mile | 1/2 mile | | | 1 mile | 1 mile | 1/2 mile | 1 mile | | |
| Critical Aircraft | D/V/600 | | | | B/II/5000 | | D/V/5000 | | | |
| Approach RPZ Area (Acres) | 78.9 | 78.9 | | | 13.8 | 13.8 | 78.9 | 29.5 | | |

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.

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.

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

Table 3-3. Project Area Taxiway Characteristics

| Taxiway Designation | Taxiway Design Group | Taxiway Width (ft) | Taxiway Shoulder (ft) |
|---------------------|----------------------|--------------------|-----------------------|
| C | 5 | 75 | N/A |
| E | 5 | 82 | 30 |
| F | 5 | 75 | N/A |
| G | 3 | 75 | 20 |
| M | 5 | 75 | 30 |
| N | 5 | 75 | 30 |
| S | 5 | 75 | 30 |
| U | 5 | 75 | 30 |
| V | 5 | 75 | 30 |
| W | 5 | 75 | N/A |

Table 3-4. Taxiway Characteristics After Proposed Action³⁸

| Taxiway Designation | Taxiway Design Group | Taxiway Width (ft) | Taxiway Shoulder (ft) |
|---------------------|----------------------|--------------------|-----------------------|
| C | 5 | 75 | 20 |
| CC | 5 | 75 | 30 |
| E | 5 | 75 | 30 |
| F | 5 | 75 | 20 |
| G | Removed | | |
| M | 5 | 75 | 30 |
| N | 5 | 75 | 30 |
| S | 5 | 75 | 30 |
| U | Removed | | |
| V | 5 | 75 | 30 |
| W | 5 | 75 | 30 |

3.4 Air Quality

Milwaukee County is designated as in a non-attainment zone for 8-hour ozone (moderate) and maintenance area for PM_{2.5} per the Clean Air Act's National Ambient Air Quality Standards (NAAQS)³⁹. The NAAQS are health standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), 8-hour ozone(O₃), particulate matter (PM_{2.5}, PM₁₀, and PM_{10-2.5}), and sulfur dioxide

³⁸ Taxiway N would remain south of Runway 25L and connecting Taxiway M to Runway 25L.

³⁹ County-Level Multi-Pollutant Information: <https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information>.

(SO₂). **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 pollutants⁴⁰.

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 ₃ |
| Milwaukee - College Ave. NR | 55-079-0056 | Milwaukee | 1550 W. College Ave. | PM _{2.5} , PM ₁₀ , PM _{10-2.5} , NO ₂ , CO |
| Milwaukee Sixteenth St. Health Center | 55-079-0010 | Milwaukee | 1377 S. 16th St. | O ₃ , PM _{2.5} , PM ₁₀ |
| Milwaukee UWM U Park | 55-079-0068 | Milwaukee | 4372 N. Humboldt Blvd. | O ₃ , SO ₂ , NO ₂ |

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.

The proposed project is located in the Milwaukee Forested Moraines Land Type Association (LTA)⁴¹ of the Southern Lake Michigan Coastal ecological landscape⁴². 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 till⁴³. **Figure 3-6** displays the ecological landscapes and land type association in relation to the proposed project area.

⁴⁰ Wisconsin WDNR 2024 Air Monitoring Network Plan:
<https://dnr.wisconsin.gov/sites/default/files/topic/AirQuality/Final2024AnnualNetworkPlan.pdf>

⁴¹ WDNR Open Data, Land Type Associations: <https://data-wi-dnr.opendata.arcgis.com/datasets/wi-dnr::land-type-associations/about>

⁴² WDNR Southern Lake Michigan Coastal:
<https://dnr.wisconsin.gov/topic/lands/EcologicalLandscapes/SouthernLakeMichigan>

⁴³ WDNR Open Data, Land Type Associations: <https://data-wi-dnr.opendata.arcgis.com/datasets/wi-dnr::land-type-associations/about>

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%).⁴⁴

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.⁴⁵ The federal list for endangered, threatened, or candidate species includes the following: Tricolored Bat, Monarch Butterfly, and Western Regal Fritillary. For all these species, there are no critical habitats found in or near the project area. USFWS IPaC letters can be found under USFWS Coordination included in **Appendix 2**.

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 habitats that could be impacted by the project. The results of the NHI review were included in the WDNR Initial Review Letters for each proposed runway decommissioning is 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

⁴⁴ 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>

⁴⁵ U.S. Fish and Wildlife Service, IPaC tool: <https://ipac.ecosphere.fws.gov>

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 inches⁴⁶.

[REDACTED] 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.

[REDACTED] Carbon dioxide is produced through the burning of fossil fuels, biological materials, chemical reactions, or solid waste⁴⁷. Transportation accounts for 35% and electricity counts for 31% of the total United States (U.S.) carbon dioxide emissions⁴⁹.

In 2018, the Airport published a Sustainability Management Plan⁵⁰. 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 and Runway 13/31 have runway lights that consume electricity when illuminated.

The Wisconsin Clean Energy Plan (CEP) was developed to “protect the planet from the impacts of greenhouse gas emissions and maximize the benefits of moving to a clean energy economy.”⁵¹ One of the objectives identified in the plan is to “maximize energy efficiency by strengthening energy efficiency standards and programs to reduce energy waste, create jobs, and save consumers money on energy costs.” As previously mentioned, both Runway 1R/19L and Runway 13/31 have runway lights that consume electricity when illuminated. Through removal of both runways, electricity consumption and costs would be decreased, aligning with the objectives of the Wisconsin CEP.

⁴⁶ National Weather Service: <https://www.weather.gov/wrh/Climate?wfo=mkx>

⁴⁷ FAA 1050.1F, Chapter 3: https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/3-climate.pdf

⁴⁹ Environmental Protection Agency (EPA), Carbon Dioxide Emissions: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#carbon-dioxide>

⁵⁰ Milwaukee County’s General Mitchell International Airport Sustainability Management Plan: https://www.mitchellairport.com/application/files/1815/2909/4575/MKE_SMP_Final_Report.pdf

⁵¹ Wisconsin Clean Energy Plan Progress Report: <https://osce.wi.gov/PublishingImages/Pages/Forms/EditForm/Clean%20Energy%20Plan%202023%20Progress%20Report.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 areas⁵². 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)⁵³. **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)⁵⁴. The proposed project area is not located within or adjacent to a CBRS⁵⁵.

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 public park to the project area is the Mitchell Airport Park located north of College Avenue approximately 0.5 miles from the northernmost point of the proposed project area. The Mitchell Airport Park is located within airport property. In 2022 a review for compliance with FAA regulations was completed, an agreement was reached allowing the playground to remain in its present location⁵⁶.

⁵²“DNR Shares Results from Summer 2022 Milwaukee Heat Mapping Campaign”: <https://dnr.wisconsin.gov/newsroom/release/66256>

⁵³ Wisconsin Department of Administration, Wisconsin Coastal Management Program: https://doa.wi.gov/DIR/Coastal_County-Map.pdf

⁵⁴ USFWS Coastal Barrier Resource Act: <https://www.fws.gov/program/coastal-barrier-resources-act>

⁵⁵USFWS Coastal Barrier Resources System Mapper: <https://fwsprimary.wim.usgs.gov/CBRSMapper-v2/>

⁵⁶ Milwaukee County Parks: <https://www.mkecountyparks.org/mitchell-airport-park-playground-replacement>

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 Area⁵⁷.

3.10 Hazardous Materials, Solid Waste, and Pollution Prevention

A Phase I Environmental Site Assessment (ESA) was prepared for Runway 1R/19L⁵⁸ and Runway 13/31⁵⁹ proposed project areas. The Phase I ESA for each runway 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.

An environmental records review was conducted for each Phase I ESA. 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, all listings but one appeared to be related to releases across the airport property and not the

⁵⁷ Wisconsin Department of Agriculture, Trade, and Consumer Protection: <https://datcpgis.wi.gov/maps/?viewer=fpp>

⁵⁸ Phase I Environmental Site Assessment, Milwaukee Mitchell International Airport – Runway 1R/19L, prepared by Westwood Professional Services, Inc., dated March 11, 2024. A copy of the Phase I ESA can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>

⁵⁹ Phase I Environmental Site Assessment, Milwaukee Mitchell International Airport – Runway 13-31, prepared by Westwood Professional Services, Inc., dated March 26, 2024. A copy of the Phase I ESA can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>

proposed project area. Reviewed listings include, underground storage tanks, hazardous material (petroleum products) spills, leaking underground storage tanks, environmental repair sites and more.

The Runway 13/31 Phase I ESA identified one listing to be within the project area. This listing is a closed Environmental Report Program (ERP) site titled BRRTS#02-41-558334 Shell Pipeline at Gen Mitchell Intl. Airport and was identified to have continuing obligations. The site is located within the intersection of Taxiway E and Taxiway U. The proposed project is anticipated to remove pavement within and around the footprint of the site. **Figure 3-12** details the footprint of the closed BRRTS site in relation to the proposed project area. The continuing obligations and required actions identified include:

1. Residual Groundwater Contamination: If a well were to be installed, WDNR coordination needs to occur.
2. Residual Soil Contamination: Soil contamination remains in the east end of the remediation excavation if soils in the area are excavated in the future sampling and analysis should be conducted.
3. Structural Impediments: If the structural impediment is removed, additional investigation may need to be conducted. Through analysis of the continuing obligation letter, the structural impediment was identified as Runway 1L/19R and safety area.

The results of the Runway 1R/19L Phase I ESA and Runway 13/31 Phase I ESA did not identify any other sites within the proposed project area that 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 reports.

Other potential sources of hazardous materials are per- and polyfluoroalkyl substances (PFAS). PFAS molecules have a chain of linked carbon and fluorine atoms. Because of the strong carbon-fluorine bond, these group of chemicals do not breakdown easily in the environment. PFAS were first used in the 1940's and have been, and continued to be, used in wide variety of products including water/stain-resistant fabrics, personal care products, cleaning products, food containers, carpeting, paints, and fire-fighting foams. A potential source of PFAS at the Airport is associated with the historic use and storage of aqueous film forming foam (AFFF) used in training, emergency responses, and fire suppression systems.

Currently, there is an ongoing investigation for PFAS at the Airport under BRRTS#02-41-584547 General Mitchell International Airport PFAS. As a part of the ongoing investigation, samples were collected from seven areas around the Airport. Locations include (1) cargo ramp adjacent State Highway 119, (2) far west area near the approach of Runway 7R, (3) west pad/west ramp area near the intersection of S. Howell Avenue and E. Layton Avenue, (4) southeast area north of College Avenue and east of Runway 1L, (5) Bailey's Pond north of the 128th WI ANG Base, (6) burn pit and former fire training area located north east of the Runway 19L approach, and (7) Airport Fire Department and Maintenance areas. **Figure 3-13** provides the approximate study areas in relation to the proposed project area. The sample areas were determined based on known or suspected past use,

storage, or releases of AFFF that contained PFAS⁶⁰. The investigation focused on the civilian airport operations. The 128th and former 440th military bases were investigated separately. The investigation included groundwater and soil sampling and PFAS analysis. No additional investigation activities were recommended for the far west, southeast area, cargo ramp, and Bailey's Pond areas. Sampling of the west pad/west ramp, burn pit, and Fire Department and Maintenance Areas identified potential sources of PFAS contamination and were recommended for continued investigation. The areas identified as potential sources of PFAS contamination are not located within the proposed project area.

The proposed project area has not been investigated or identified as an area of focus for the PFAS site investigation at this time. Although PFAS has not been identified in the proposed project areas, PFAS contamination has been detected in adjacent areas and at several locations throughout the Airport.

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 whether 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.

A 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 emails were sent on December 8, 2023. One response was received from the Forest County Potawatomi Historic Preservation Office was received on December 11, 2023. The response offered a finding of No Historic Properties affected of significance to the Forest County Potawatomi Community but requested to remain as a consulting party for the project. Copies of tribal correspondence is included in **Appendix 2**.

Preliminary coordination letters were 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 coordination letters were

⁶⁰ WDNR BRRS #02-41-584547 General Mitchell International Airport PFAS – Site Investigation Report, Section 8. Conclusion and Recommendations: <https://apps.dnr.wi.gov/botw/GetActivityDetail.do?detailSeqNo=584547>

sent on November 11, 2023 and no response was received. Copies of historical society correspondence is included in **Appendix 2**.

The architecture history and archeological investigations were submitted to the State Historic Preservation Officer (SHPO). The SHPO concurred on February 28, 2024 that there are no properties listed in or eligible for the NRHP are within the APE for the proposed project. A copy of the SHPO concurrence is included in **Appendix 5**.

3.12 Land Use

Airport property encompasses approximately 2,270 acres located in the east-central portion of Milwaukee County. **Figure 3-14** 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.⁶¹

The majority of the proposed action location is within Airport property and 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)⁶², 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 Providers⁶³

| 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 |

⁶¹ Southeastern Wisconsin Regional Planning Commission Interactive Web Mapping Application: <https://www.sewrpc.org/SEWRPC/DataResources/Regional-Land-Information/Regional-Mapping.htm>

⁶² Southeastern Wisconsin Regional Planning Commission VISION 2050: https://www.sewrpc.org/SEWRPC/VISION_2050/2050RegLandUseTranspPlan.htm

⁶³ Master Plan Update, Section 2.8 (Utilities): <https://www.mkeupdate.com/application/files/8116/6372/6841/MPU-Section2-Inventory-Final-2022-09-20.pdf>

The proposed project is anticipated to recycle the existing asphalt and concrete pavement as millings or aggregate. 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. The use of mineral sources such as sand, aggregate, bentonite, and cement are expected to be limited and new pits are not anticipated.

3.14 Noise

A Noise Technical Report was prepared for this EA to assess potential noise impacts⁶⁴. The noise assessment evaluated impacts associated with the proposed action of decommissioning and removing both Runway 1R/19L and Runway 13/31 (proposed action) 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, CY2029 and CY2034. The CY2023 existing condition data was scaled for the CY2029 and CY2034 analysis. It was assumed that due to the minimal usage of the runways, the distribution of day/night split for aircraft operations would remain the same from the existing conditions. The proposed action is anticipated to not cause an increase in airport operations. 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.

To capture the effects of aircraft noise, a noise study area (NSA) was established for the proposed action. The NSA was developed to encompass the estimated DNL 65 decibel (dB) noise contour. The NSA is located approximately 2 nautical miles (NM) east, 2.8 NM west, 2.3 NM north, and 2.4 NM south of the airport. Existing land use surrounding the project area is primarily airport property, agricultural use, some residential uses, manufacturing and production, and industrial land uses.

The noise technical report is included in **Appendix 4** and includes discussion on the regulatory setting, existing conditions, methodology, assumptions, and analysis.

3.15 Socioeconomics, [REDACTED] 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)

⁶⁴ Noise Technical Report prepared by Harris Miller Miller & Hansen, Inc. See Appendix 4.

decreased by 0.87%⁶⁵. **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 | 2000⁶⁶ | 2010⁶⁷ | 2020⁶⁸ |
|-------------------------|--------------------------|--------------------------|--------------------------|
| 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 |

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁵ Calculated by Westwood with population data obtained from the U.S. Census Bureau as shown in Table 3-7.

⁶⁶ U.S. Census Bureau, 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-2-51, Wisconsin Washington, DC, 2003

⁶⁷ U.S. Census Bureau, 2010 P1 Data Table: <https://data.census.gov/profile>

⁶⁸ U.S. Census Bureau, 2020 P1 Data Table : <https://data.census.gov/profile>

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| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

[REDACTED]

⁷¹ U.S. Census Bureau, Demographic Profile (DP1) Data Table, Vintage 2020: <https://data.census.gov/profile>

⁷² U.S. Census Bureau, Demographic Profile (DP1) Data Table, Vintage 2020: <https://data.census.gov/profile>

⁷³ U.S. Census Bureau, American Community Survey: <https://www.census.gov/programs-surveys/acs>

Table 3-12 Population in Labor Force, 2022⁷⁴

| | 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% |

⁷⁴ U.S. Census Bureau, American Community Survey (DP03) Data Table, Vintage 2022: <https://data.census.gov/profile>

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% |

Table 3-14 Per Capita Income Change⁷⁷

| | 2010 | 2015 | 2022 |
|-------------------------|-------------|-------------|-------------|
| 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 FAA owned 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 night⁷⁸.

⁷⁷ U.S. Census Bureau, American Community Survey (DP03) Data Table, Vintage 2010, 2015, & 2022: <https://data.census.gov/profile>

⁷⁸ FAA, Runway End Identifier Lights: https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/reil

The existing Runway 13/31, Taxiway G, Taxiway U, and Taxiway N includes runway and taxiway lighting. Runway 13/31 also includes the NAVAIDs of REILs and FAA owned PAPIs. A PAPI system consists of four light boxes arranged perpendicular to the runway and provide visual approach slope information to landing aircraft.⁷⁹

3.17 Water Resources

3.17.1 Wetlands

A wetland delineation was performed on September 11, 2023 at the proposed project location⁸⁰. The delineation identified wetlands on the southern end of the project area. . **Figure 3-16** shows the delineated wetlands within the proposed project area. **Figure 3-17** shows wetlands included on the Wisconsin Wetland Inventory maps provided by the WDNR⁸¹.

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 elevation occurs near the approach end of Runway 7R. **Figure 3-18** 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 Kinnickinnic 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

⁷⁹ FAA, Precision Approach Path Indicator, https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/papi

⁸⁰ A Wetland Delineation Report was prepared by Quest Civil Engineers, LLC, dated September 11, 2023. A copy of the Wetland Delineation Report can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>

⁸¹ Wisconsin Wetland Inventory: <https://dnr.wisconsin.gov/topic/Wetlands/inventory.html>

miles before entering Lake Michigan⁸². **Figure 3-19** 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 3-20** 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 hazard⁸³.

3.17.4 Surface Water

The WDNR surface water viewer shows the Wilson Park Creek within the project area. The WDNR initial concurrence letter indicated that Wilson Park Creek is located in an enclosed underground culvert pipes that run along and cross Runway 13/31 flowing southwest to northeast⁸⁴. **Figure 3-21** 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 initial concurrence letter further indicated that Wilson Park Creek is classified as a cool warm headway stream and an impacted waterway for acute aquatic toxicity⁸⁵.

The basin boundary is located approximately at the southern end of Runway 1R/19L and runs east/west through the airport property⁸⁶. Specifically, the majority of the project area is located within Kinnickinnic River Watershed (MI01)⁸⁷ which flows to Lake Michigan. South of the southern end of Runway 1R/19L is the boundary of the Oak Creek Watershed (SE05)⁸⁸ which flows to Lake Michigan. **Figure 3-22** shows watershed boundaries.

3.17.5 Groundwater

⁸² 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>

⁸³ FEMA Flood Mapping Center: <https://msc.fema.gov/portal/home>

⁸⁴ WDNR Surface Water Data Viewer: <https://dnrmaps.wi.gov/H5/?Viewer=SWDV>

⁸⁵ WDNR Initial Review Letter (1/10/2024), See Attachment 2.

⁸⁶ WDNR Wisconsin Basins and Watersheds: <https://dnr.wisconsin.gov/topic/Watersheds/basins>

⁸⁷ WDNR Watershed Details, Kinnickinnic River: <https://apps.dnr.wi.gov/Water/watershedDetail.aspx?code=MI01&Name=Kinnickinnic%20River>

⁸⁸ WDNR Watershed Details, Oak Creek: <https://apps.dnr.wi.gov/Water/watershedDetail.aspx?code=SE05&Name=Oak%20Creek>

Monitoring wells were recently installed at various locations around airport property as part 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 depths 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 depths were recorded between 3.32 ft and 10.44ft below ground surface. Groundwater flow direction in this area was determined to be northeast. **Figure 3-23** displays the area where wells were installed and groundwater flow.

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 its service area” and “no reasonable available alternative drinking water sources should the aquifer become contaminated”⁸⁹. The EPA’s interactive mapping tool of SSAs was accessed, there are no identified SSAs in the State of Wisconsin and Northern Illinois⁹⁰.

3.17.6 Wild and Scenic Rivers

The State of Wisconsin is home to two rivers in the National Wild and Scenic Rivers System⁹¹. 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 Formation⁹². Bedrock is expected to be greater than 100 feet from the land surface⁹³.

⁸⁹ EPA Sole Source Aquifer Program Overview: https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#What_Is_SSA

⁹⁰ EPA Interactive Map of Sole Source Aquifers: <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

⁹¹ National Wild and Scenic Rivers System: <https://www.rivers.gov/>

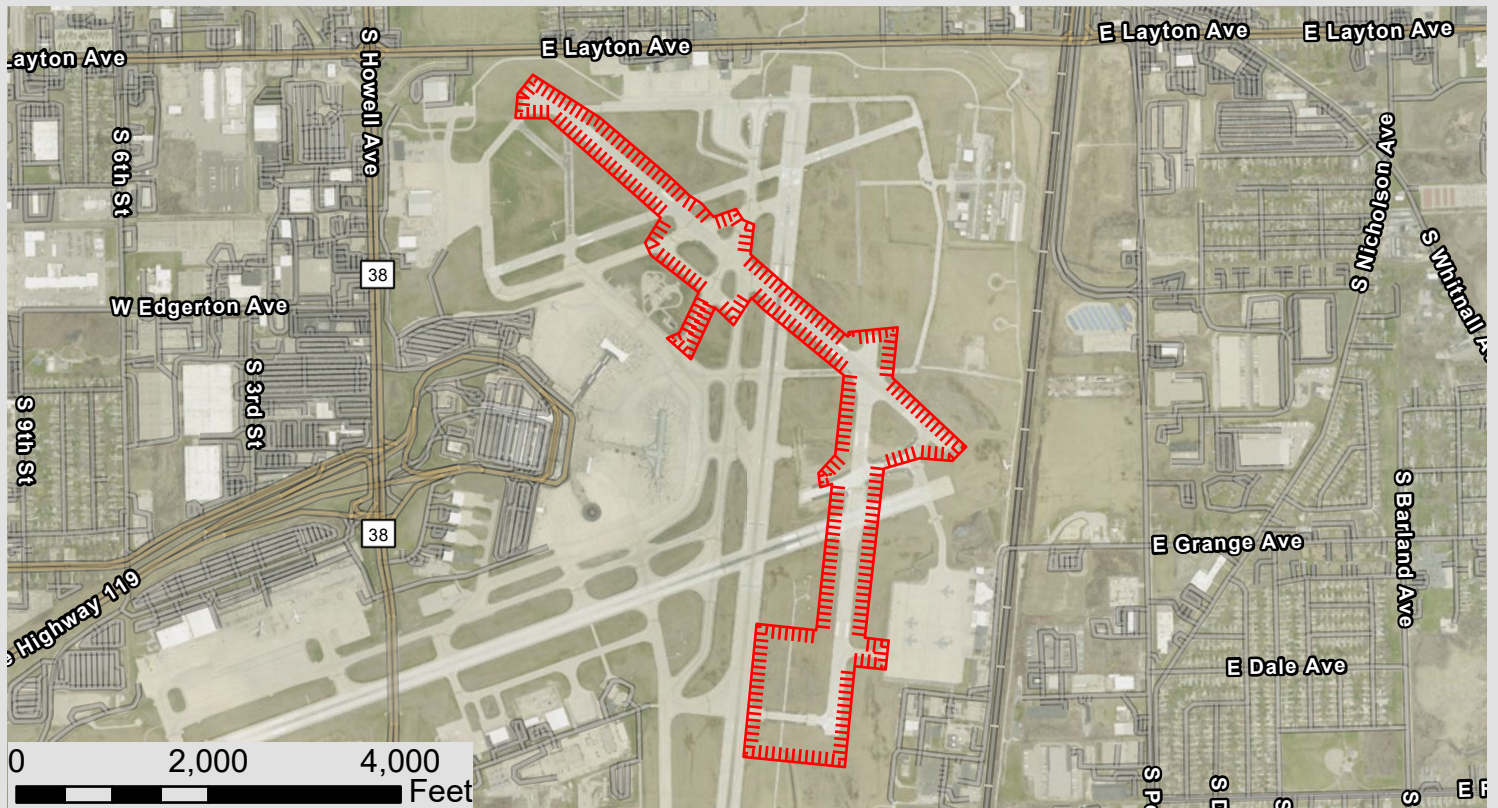
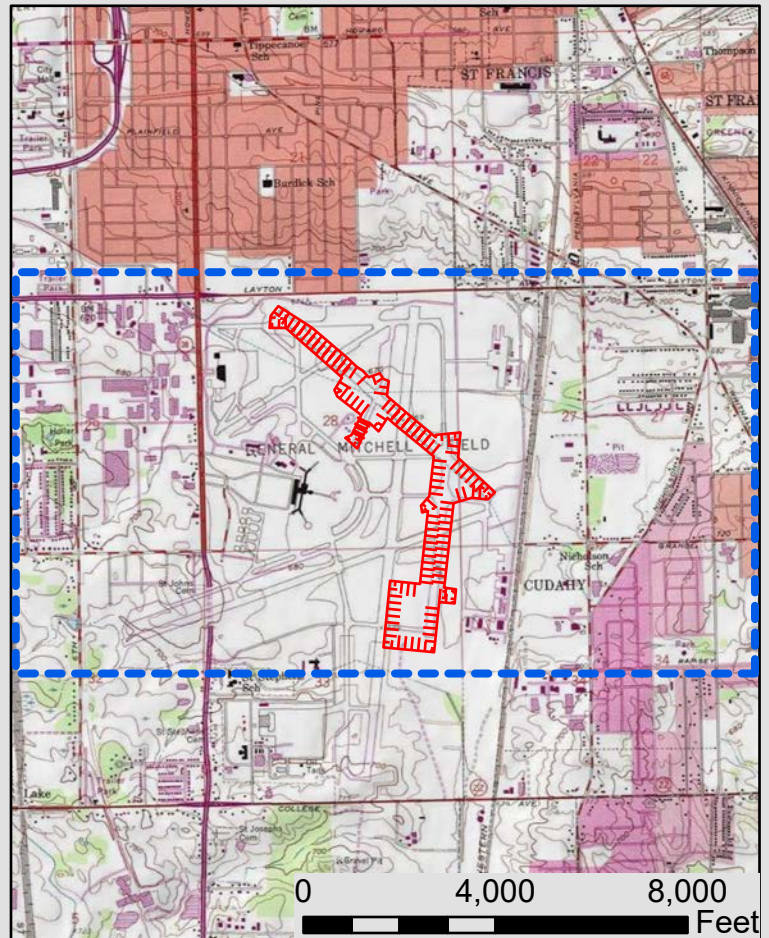
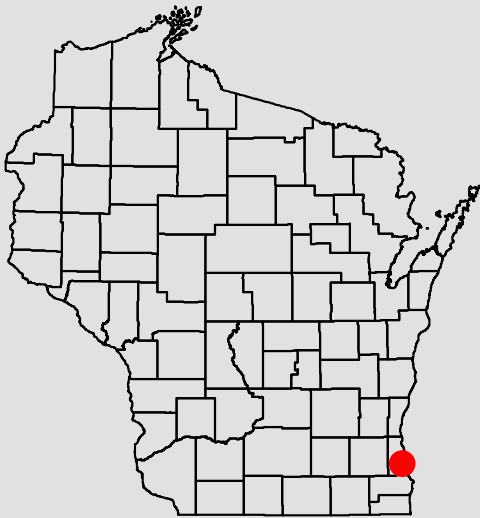
⁹² Wisconsin Geological and Natural History Society, Preliminary Bedrock Geologic Map of Milwaukee County: <https://wgnhs.wisc.edu/catalog/publication/000847/resource/wofr200414a>

⁹³ WDNR Ecological Landscapes of Wisconsin, Depth to Bedrock Map: https://p.widencdn.net/fsronj/Map_S14_Bedrock_Depth

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey was accessed on June 27, 2024⁹⁴. Soils at the Airport are primarily classified as Clayey Land. The proposed project area is located in soils primarily classified as Clayey Land. **Figure 3-24** 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.

⁹⁴ USDA Natural Resources Conservation Service, Web Soil Survey: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
A copy of the NRCS Soil Report can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>



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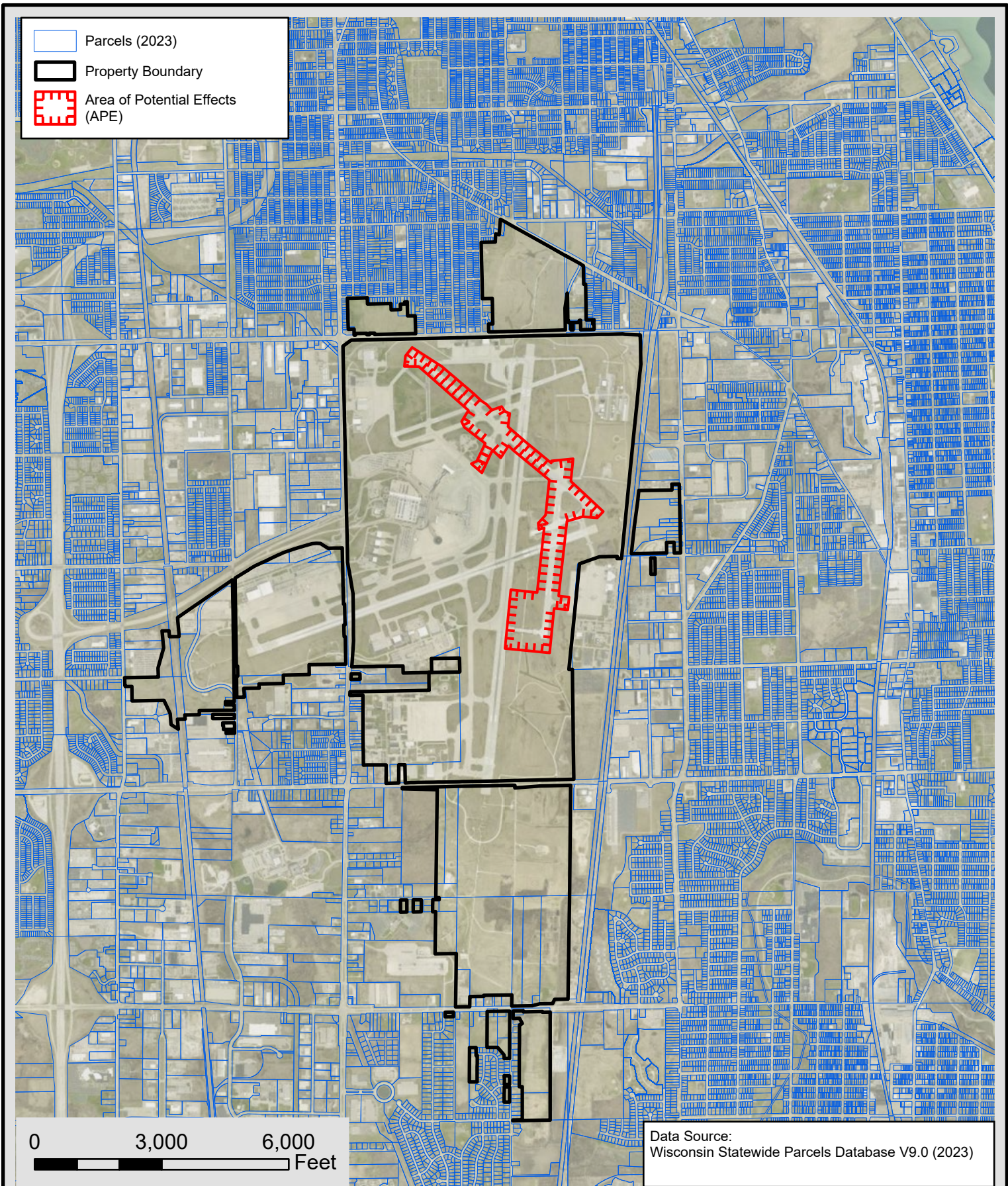
MKE RUNWAY 1R-19L AND 13-31 REMOVAL LOCATION MAP

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

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

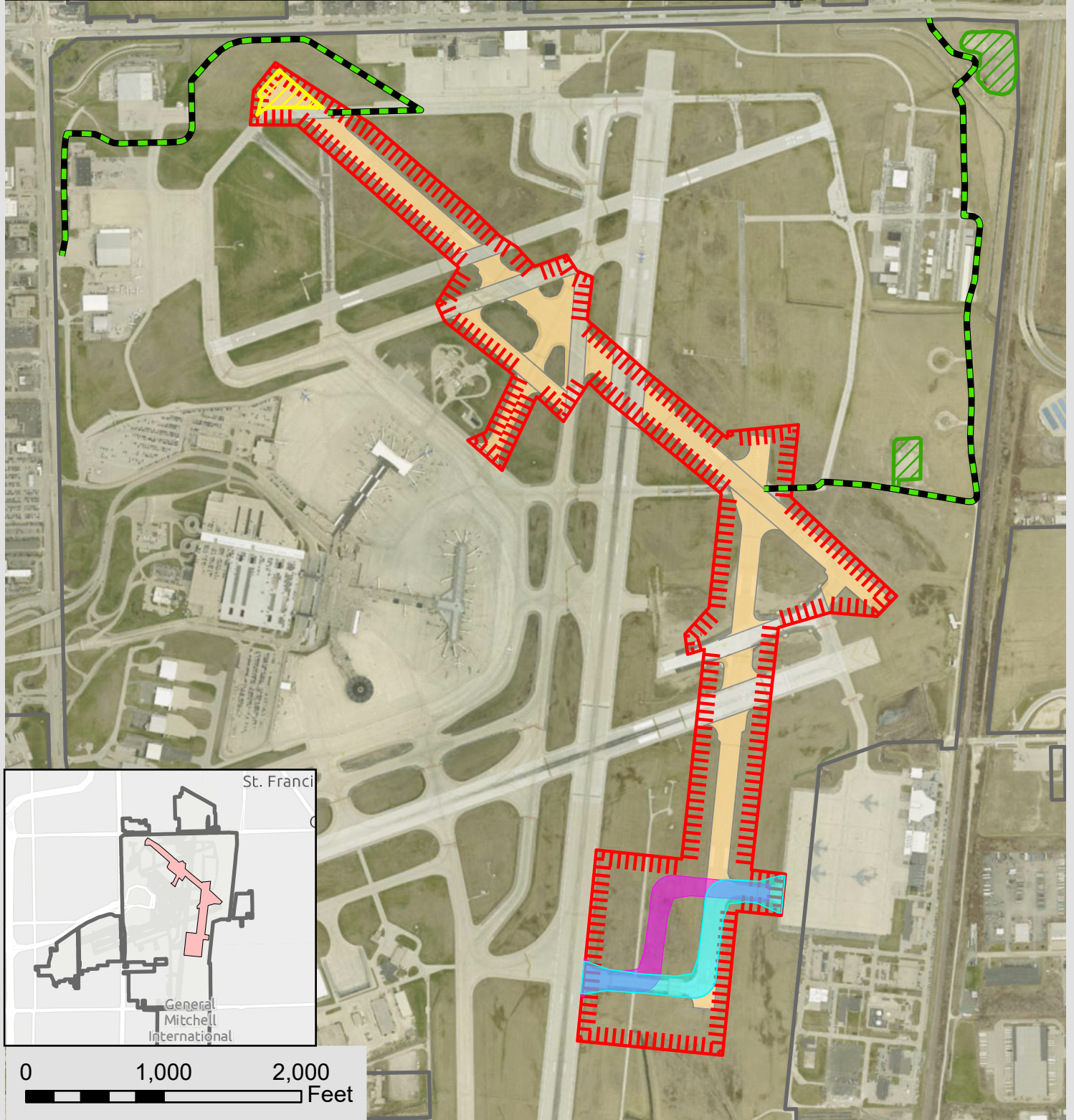
Date: 6/26/2024

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



| | | | | |
|---|---|---|--|--|
|  <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> |  | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL AIRPORT AND SURROUNDING PROPERTY MAP</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> <p>Date: 6/26/2024</p> | <p>SCALE: 1 in = 3,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 3-2</p> |
|---|---|---|--|--|

- Property Boundary
- Area of Potential Effects (APE)
- Potential Haul Route (Existing Paved/Gravel Access Road)
- Potential Staging Area (Existing Airport Construction Staging Areas)
- Potential Staging Area (Existing Airfield Pavement)
- Pavement Removal
- Relocated Parallel Taxiway CC
- Converted Parallel Taxiway



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MKE RUNWAY 1R-19L AND 13-31 REMOVAL PROPOSED ACTION LOCATION

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

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

Date: 6/26/2024

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

24081

AIRPORT DIAGRAM

AL-262 (FAA)

GENERAL MILWAUKEE



Area of Potential Effects

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

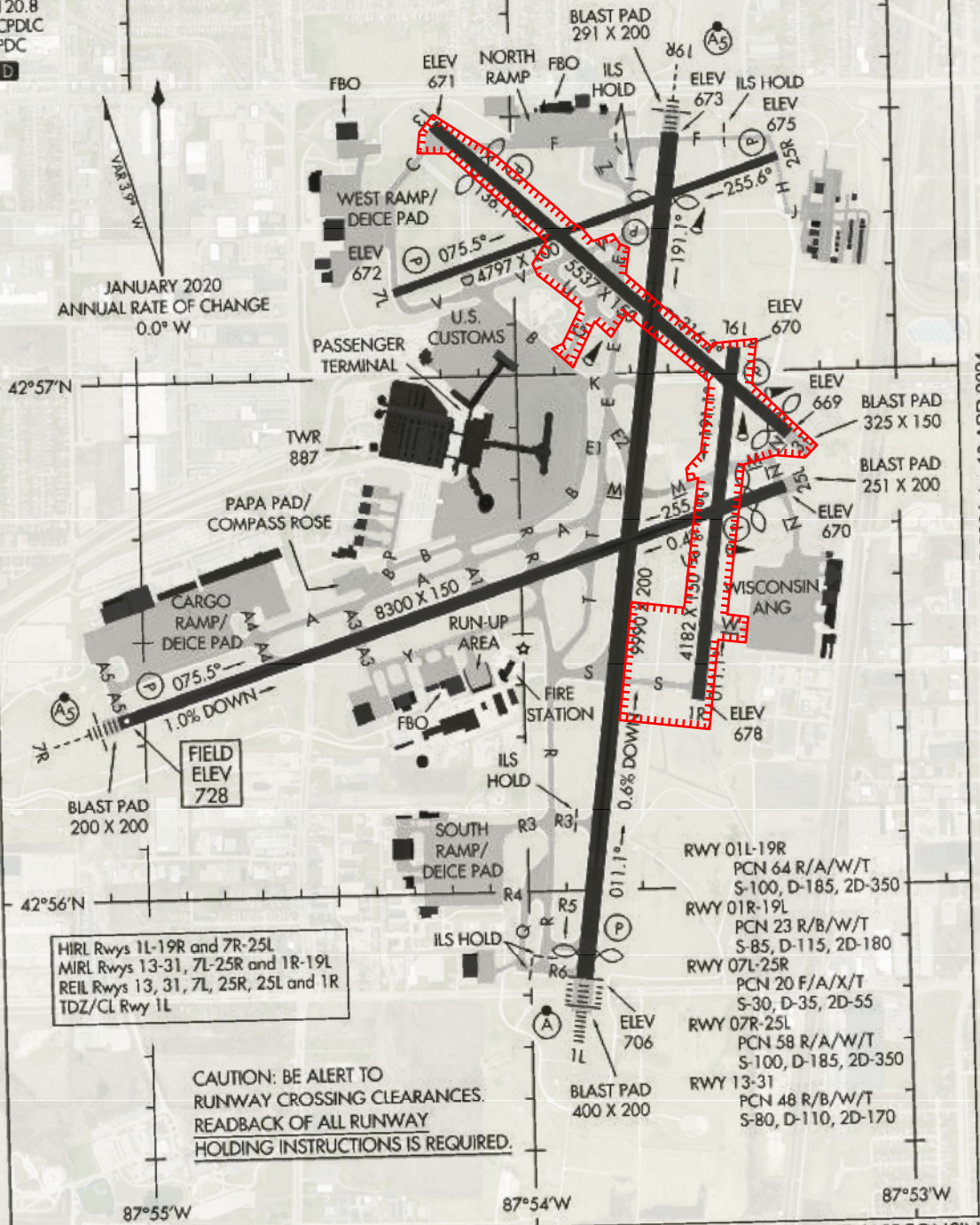


JANUARY 2020
ANNUAL RATE OF CHANGE
0.0° W

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)

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**MKE RUNWAY 1R-19L AND 13-31 REMOVAL
AIRPORT DIAGRAM MAP**

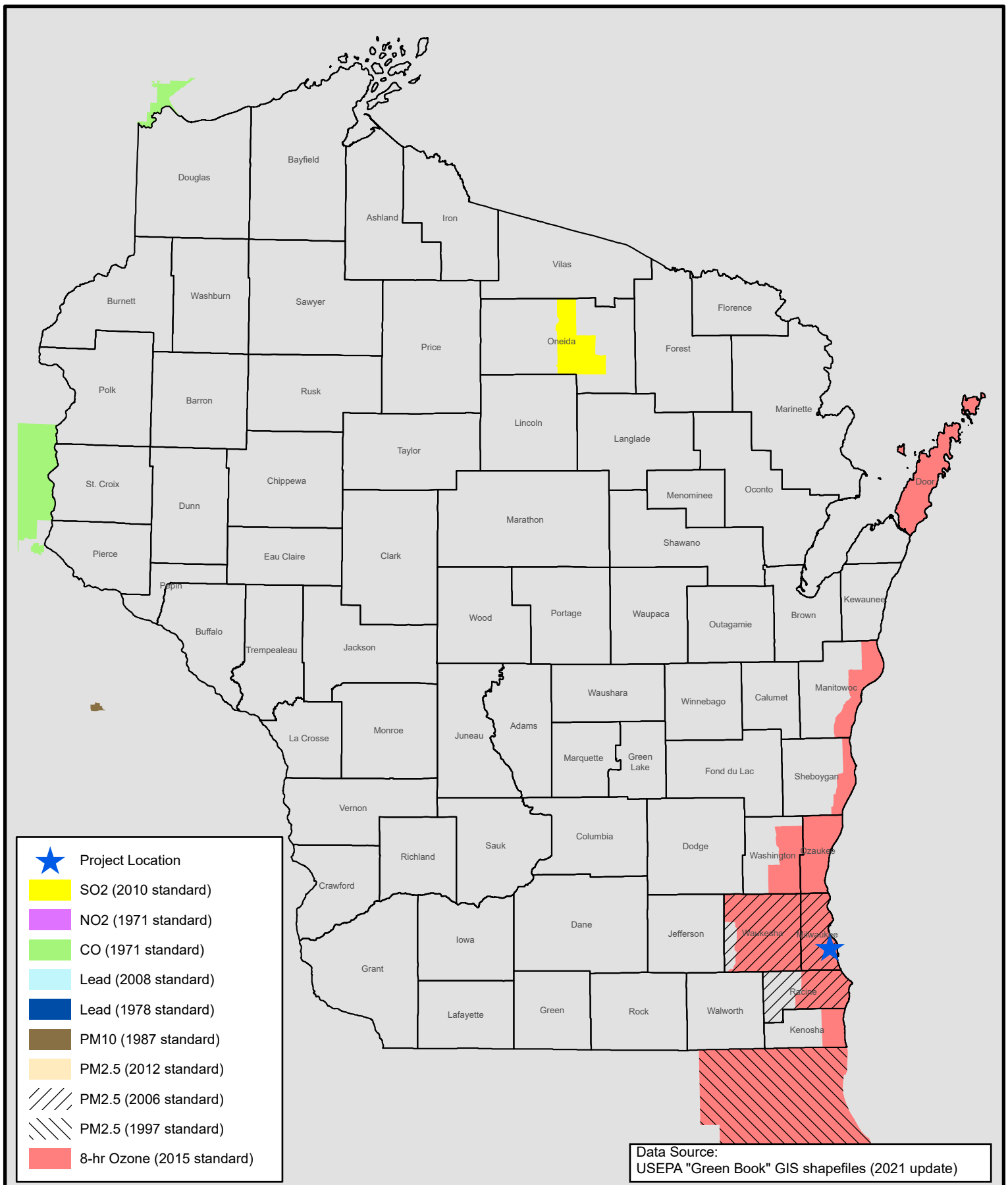
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 6/26/2024

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

FIGURE NO.
3-4

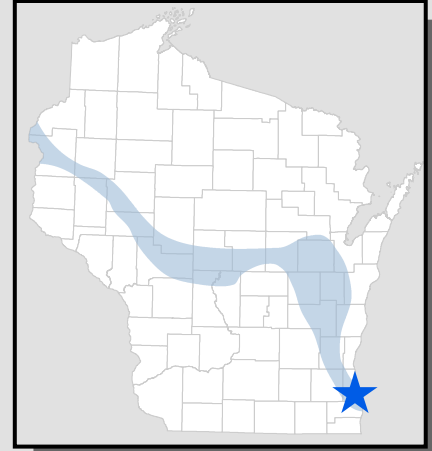


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|  <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> |  | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL</p> <p>NAAQS NONATTAINMENT AREAS</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> <p>Date: 6/26/2024</p> | <p>SCALE: 1 in = 208,333 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 3-5</p> |
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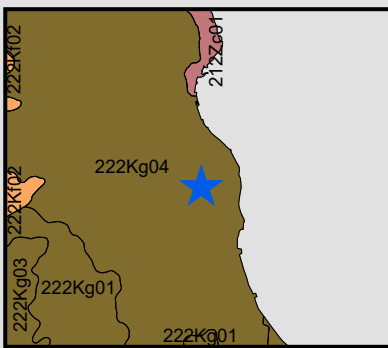


Project Location

Tension Zone (Curtis 1959)



Landtype Associations (LTAs)



222Kg04 - Milwaukee Forested Moraines

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

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL ECOLOGICAL LANDSCAPES

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

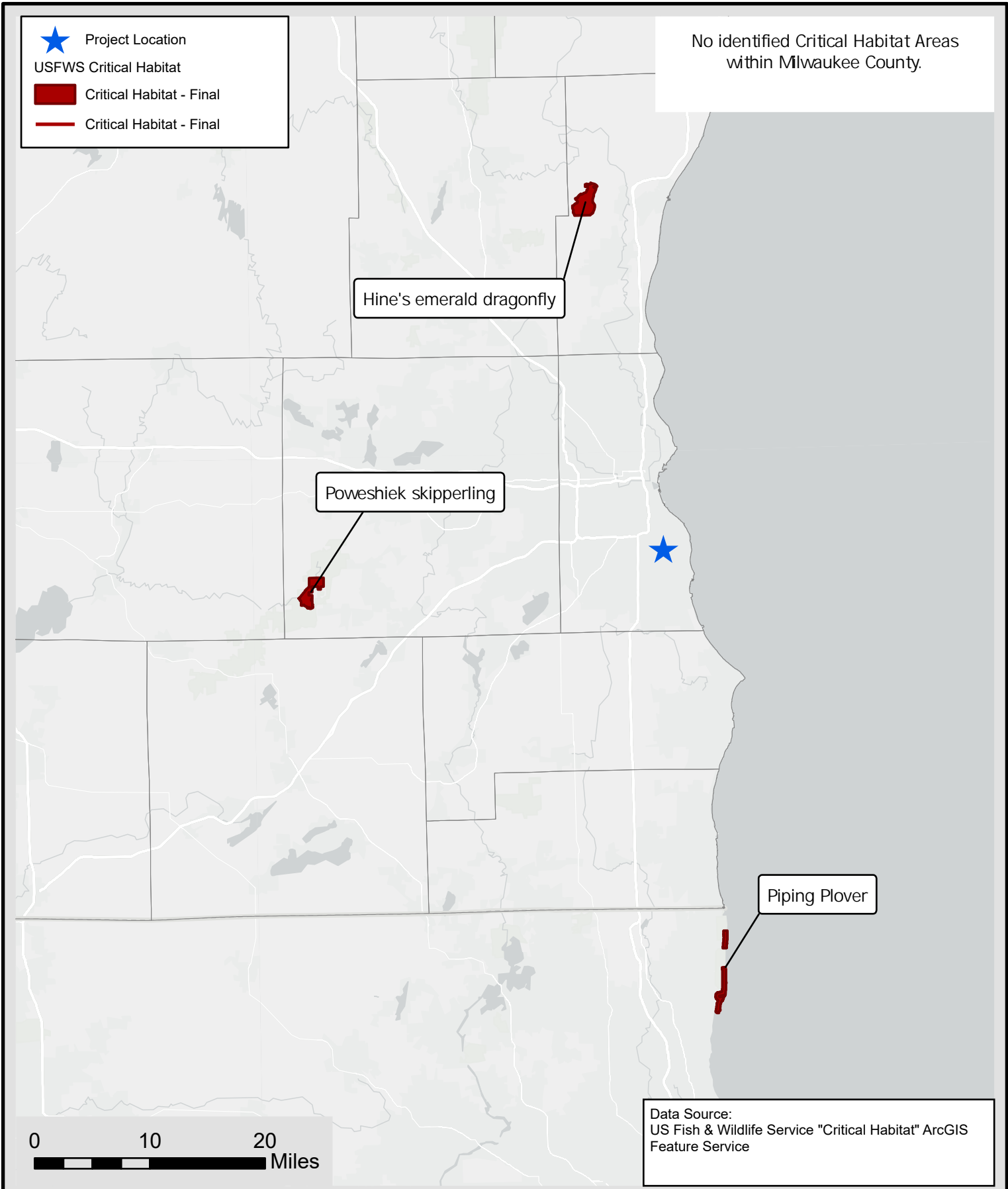
Project Manager:
Project Engineer:
Drawn By: JCW
Checked By:

Date: 6/26/2024

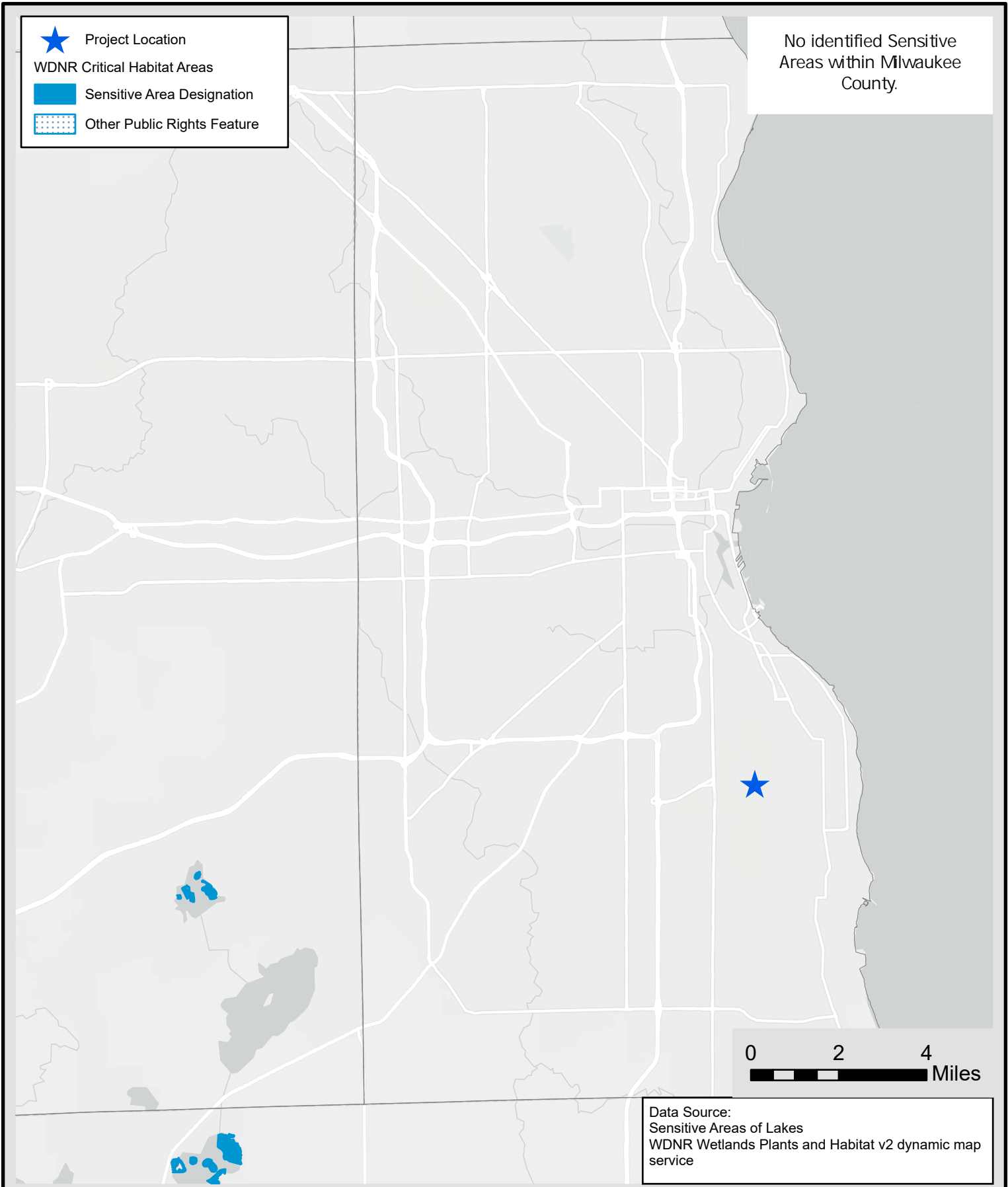
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PROJECT NO.
R3001844.00

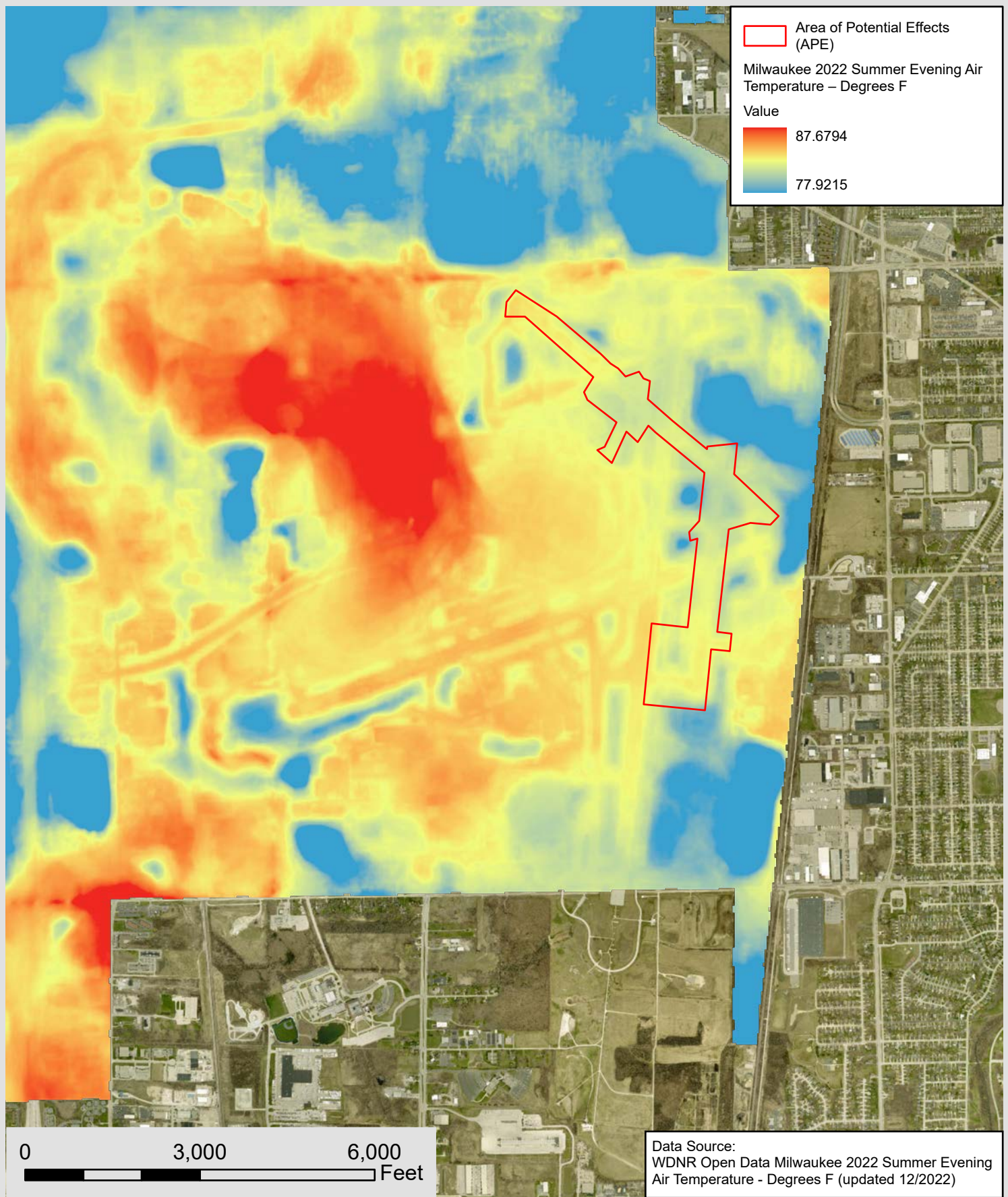
FIGURE NO.
3-6



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|--|---|--|--------------------------|-------------------|--------------------|
| <div>Westwood</div> <div>1 Systems Drive Appleton, WI 54914</div> <div>(920) 735-6900 www.westwoodps.com</div> |  | MKE RUNWAY 1R-19L AND 13-31 REMOVAL | | Project Manager: | SCALE: |
| | | USFWS CRITICAL HABITAT AREAS | | Project Engineer: | 1 in =58,208 ft |
| | | | | Drawn By: JCW | PROJECT NO. |
| | | GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN | | Checked By: | R3001844.00 |
| | | Date: 6/26/2024 | FIGURE NO. 3-7 | | |



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|---|---|--|------------|-------------------|--------------------|
| <div><div>Westwood</div><div>1 Systems Drive Appleton, WI 54914</div><div>(920) 735-6900 www.westwoodps.com</div></div> |  | MKE RUNWAY 1R-19L AND 13-31 REMOVAL | | Project Manager: | SCALE: |
| | | WDNR CRITICAL HABITAT AREAS | | Project Engineer: | 1 in =15,259 ft |
| | | GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN | | Drawn By: JCW | PROJECT NO. |
| | | | | Checked By: | R3001844.00 |
| | | | | Date: 6/26/2024 | FIGURE NO. |
| | | | 3-8 | | |



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**MKE RUNWAY 1R-19L AND 13-31 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: 6/26/2024

SCALE:
1 in = 2,223 ft
PROJECT NO.
R3001844.00
FIGURE NO.
3-9

Counties

Coastal Counties



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

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Appleton, WI 54914 www.westwoodps.com



**MKE RUNWAY 1R-19L AND 13-31 REMOVAL
WISCONSIN COASTAL COUNTIES**

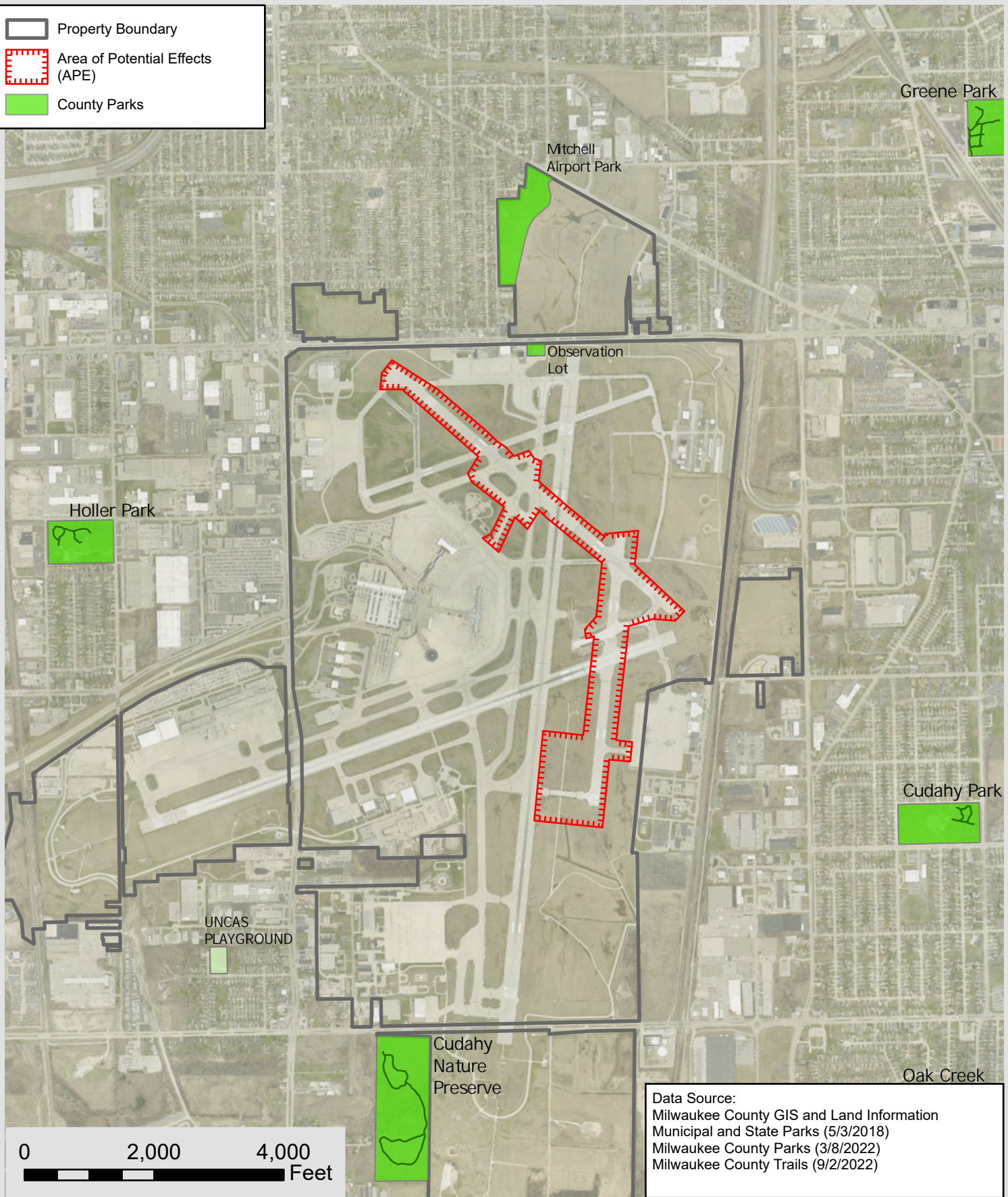
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 6/26/2024

SCALE:
N/A
PROJECT NO.
R3001844.00
FIGURE NO.
3-10

- Property Boundary
- Area of Potential Effects (APE)
- County Parks





































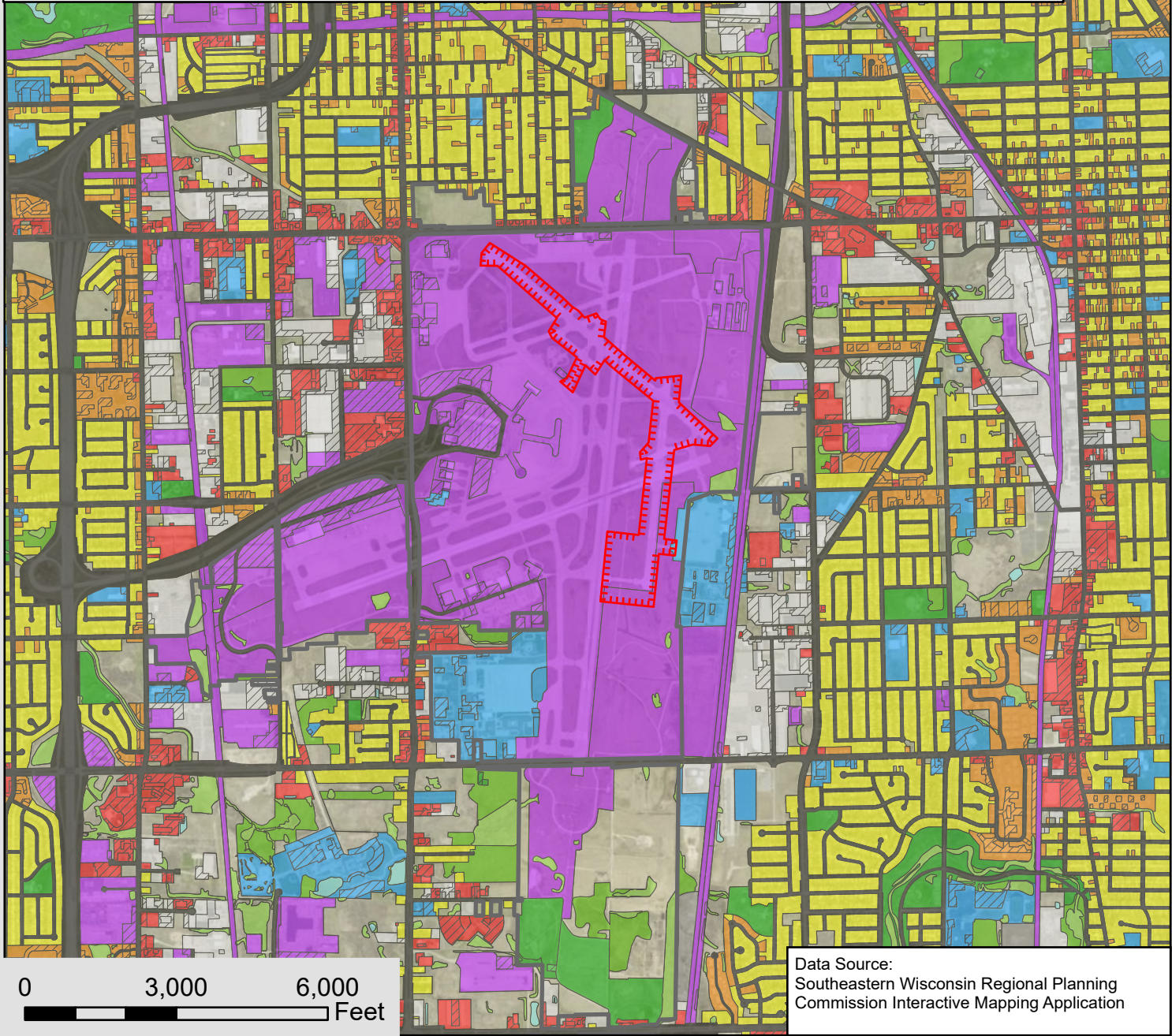
Data Source:
 Milwaukee County GIS and Land Information
 Municipal and State Parks (5/3/2018)
 Milwaukee County Parks (3/8/2022)
 Milwaukee County Trails (9/2/2022)

| | | | | |
|---|---|---|--|--|
|  <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> |  | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL PARKS AND TRAILS MAP</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> <p>Date: 6/26/2024</p> | <p>SCALE: 1 in =2,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 3-11</p> |
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|  Area of Potential Effects (APE) |  Industrial: Land Under Development |  Transportation: Off-Street Parking: Transportation-Related |  Government & Institutional |
|  Property Boundary |  Transportation: Motor Vehicle-Related |  Transportation: Off-Street Parking: Communication & Utilities-Related |  Recreational |
|  Residential: Single-Family |  Transportation: Motor Vehicle-Related |  Transportation: Off-Street Parking: Government & Institution-Related |  Agricultural |
|  Residential: Multi-Family |  Transportation: Off-Street Parking: Multiple Land Use-Related |  Transportation: Off-Street Parking: Recreation-Related |  Open Lands: Wetlands |
|  Residential: Mobile Homes |  Transportation: Off-Street Parking: Residential-Related |  Transportation: Rail-Related |  Open Lands: Unused Lands: Urban |
|  Residential: Land Under Development |  Transportation: Off-Street Parking: Retail Sales & Service-Related |  Transportation: Air-Related |  Open Lands: Unused Lands: Rural |
|  Commercial: Retail Sales & Service |  Transportation: Off-Street Parking: Industrial-Related |  Transportation: Air-Related: Land Under Development |  Open Lands: Land Fills & Dumps |
|  Industrial: Manufacturing | |  Communication & Utilities |  Open Lands: Woodlands |
|  Industrial: Wholesaling & Storage | | |  Open Lands: Surface Water |
|  Industrial: Extractive | | | |



Data Source:
Southeastern Wisconsin Regional Planning
Commission Interactive Mapping Application

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL EXISTING LAND USE MAP

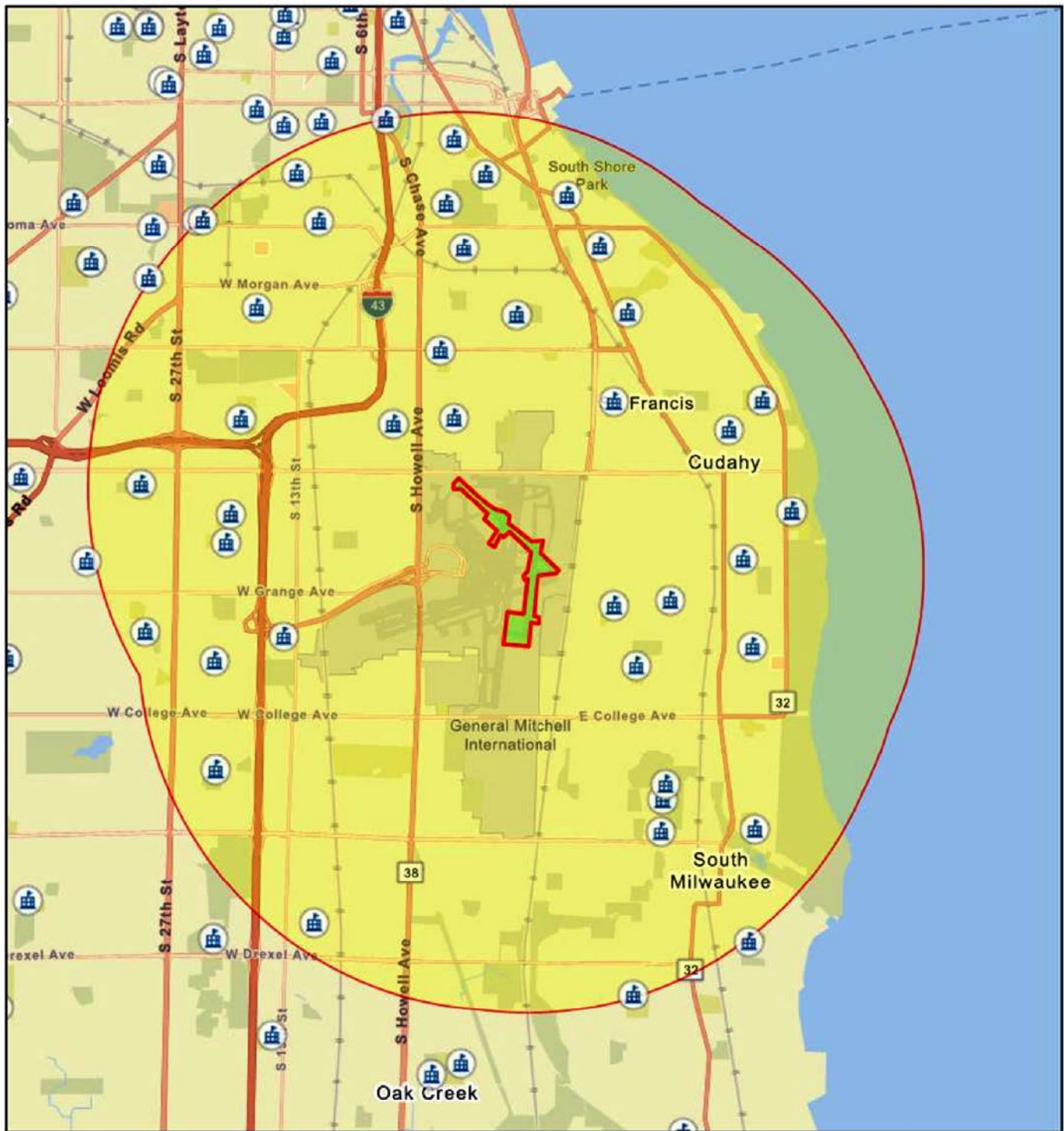
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 11/5/2024

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

FIGURE NO.
3-14



6/26/2024

-  Schools
-  MKE Runway Decommissioning

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 AND 13-31 REMOVAL 3-MILE PROJECT RADIUS SCHOOL LOCATIONS

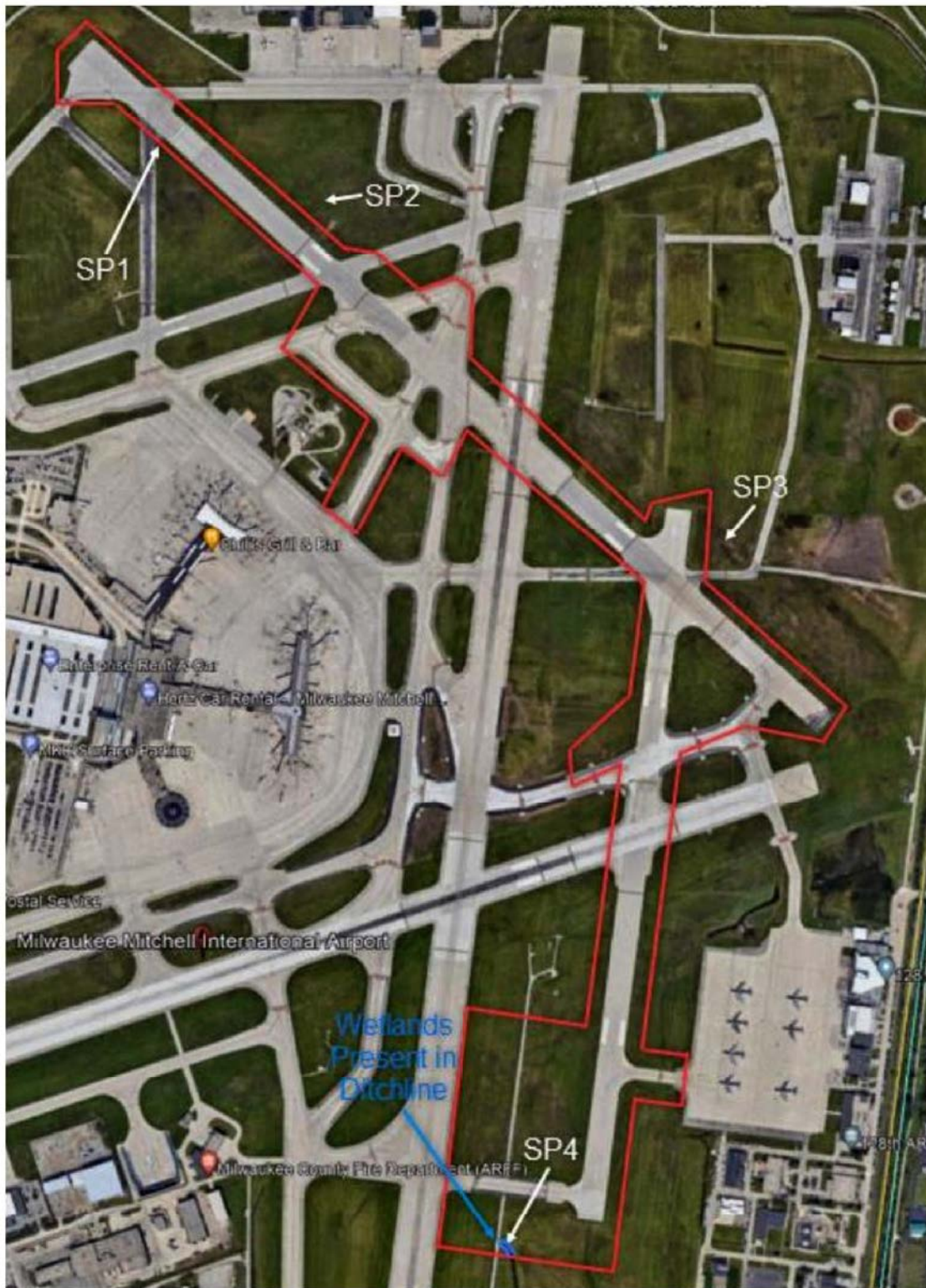
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 11/5/2024

SCALE:
N/A
PROJECT NO.
R3001844.00

FIGURE NO.
3-15



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

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL WETLAND DELINEATION MAP

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

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

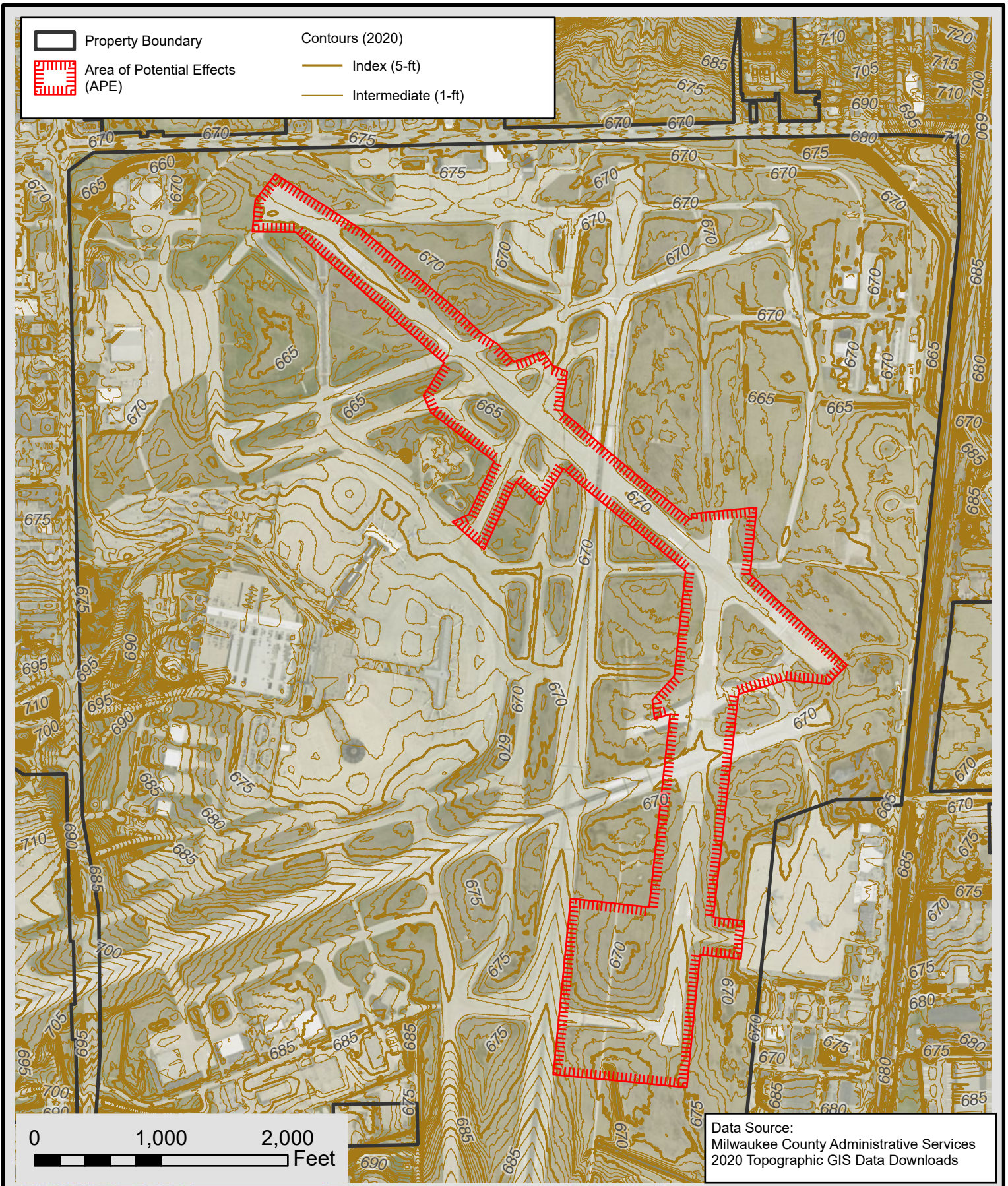
Date: 11/5/2024

SCALE:
1 in = 437 ft
PROJECT NO.
R3001844.01

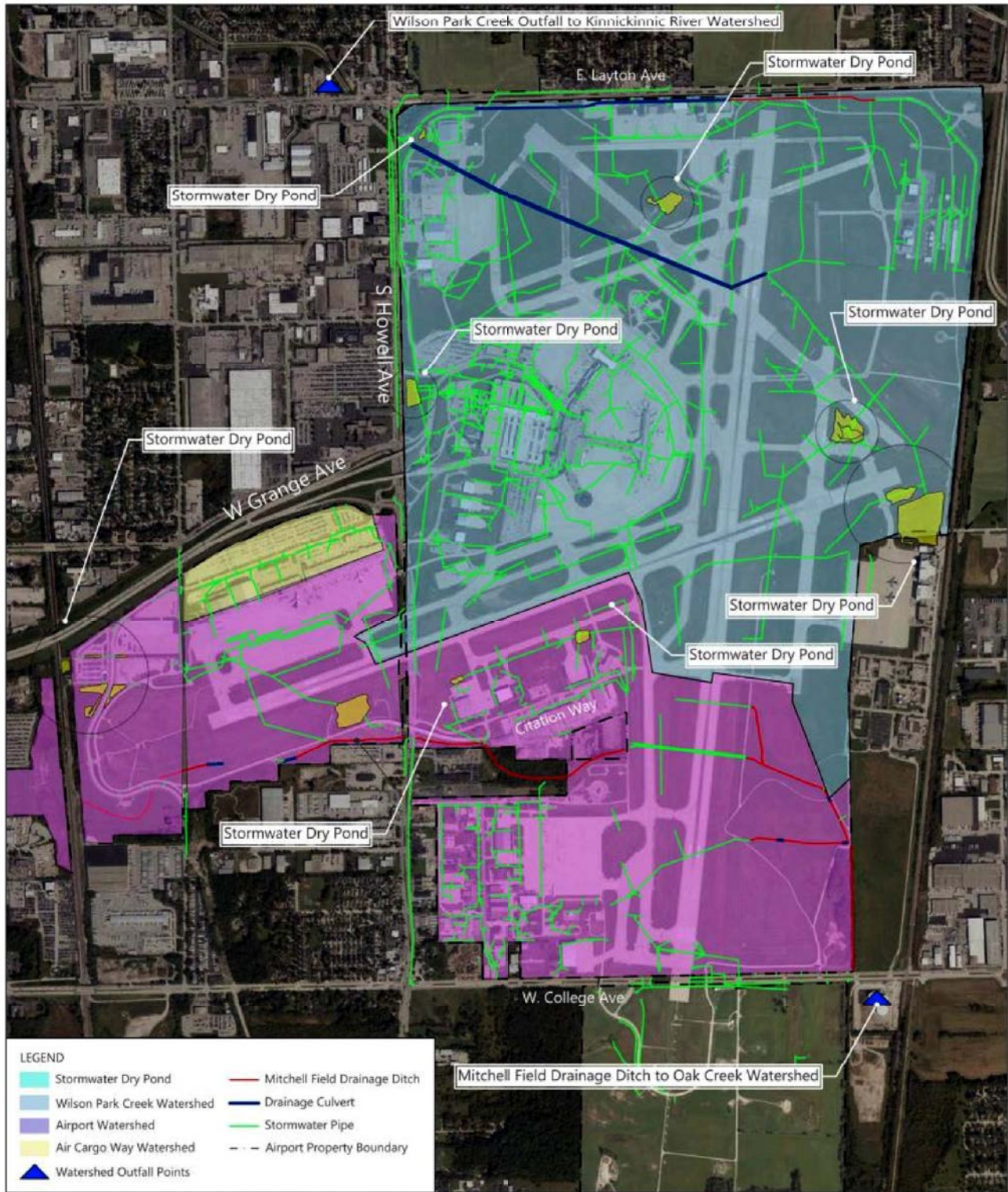
FIGURE NO.
3-16



N:\3001844.00\GIS\CombinedProjects\EnvAssessmentMaps_Combined.aprx [Wetland Map]
Printed: kmwehner 11/5/2024 10:03 AM



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|---|--|--|---|---|
| <p>Westwood</p> <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> | | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL</p> <p>TOPOGRAPHIC MAP</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager:</p> <p>Project Engineer:</p> <p>Drawn By: JCW</p> <p>Checked By:</p> <p>Date: 11/5/2024</p> | <p>SCALE: 1 in = 1,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 3-18</p> |
|---|--|--|---|---|



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



Drawing: P:\Project-Chicago\MKE\MKE Master Plan Update\Master Plan Project 201803 - Inventory of Existing Conditions\3.23 - Working Paper and Issues Identification\M_H Inventory Exhibits\MKE Inventory Exhibits_CAD\EXHIBIT 2-45 Storm Sewer and Drainage.dwg/Layout: Exhibit 2-45 Plotted: Sep 23, 2019, 01:52PM

Master Plan Update

Data 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 AND 13-31 REMOVAL
STORM SEWER AND AIRPORT
DRAINAGE UTILITIES MAP**

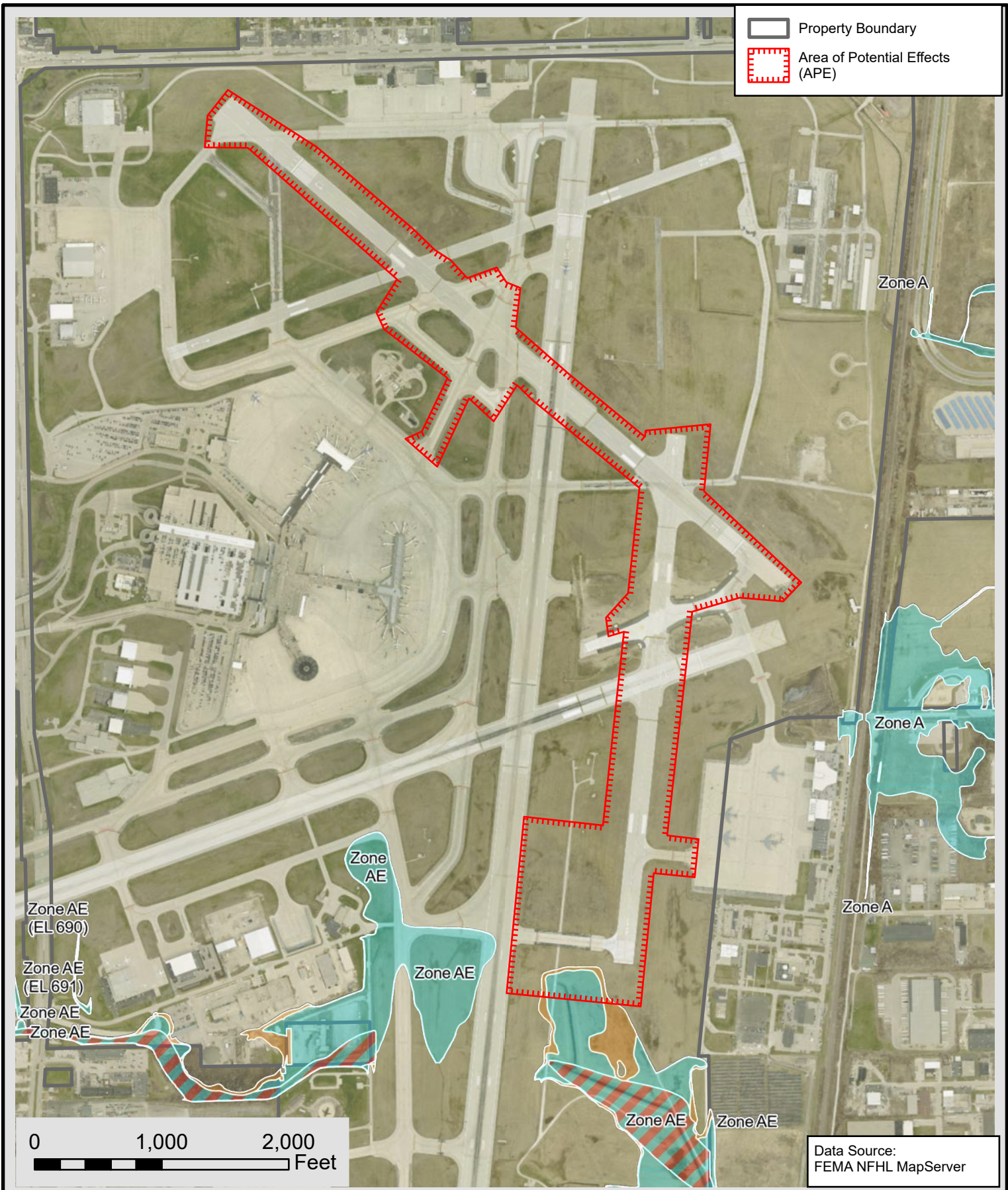
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

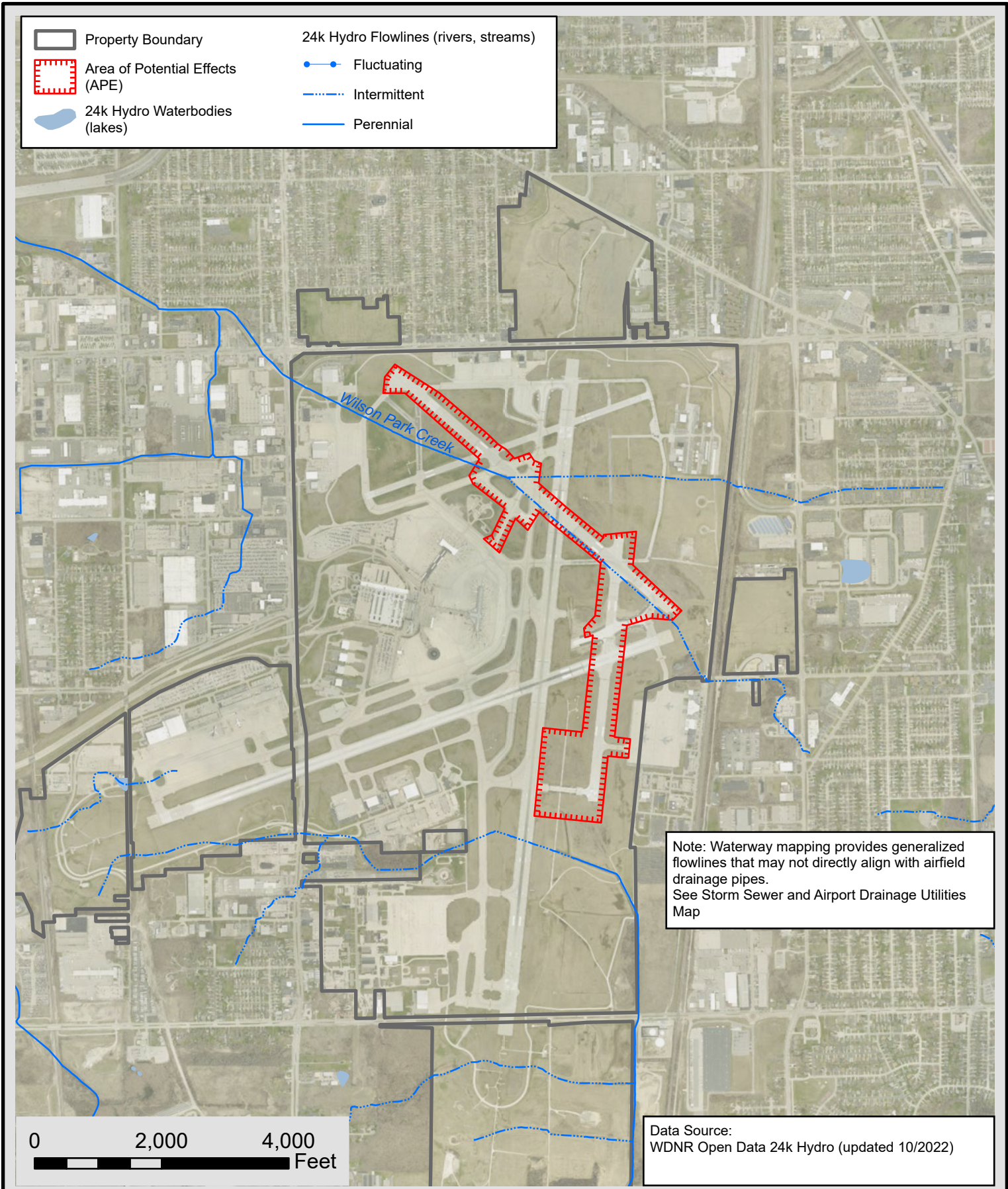
Date: 11/5/2024

SCALE:
1 in = 417 ft
PROJECT NO.
R3001844.01

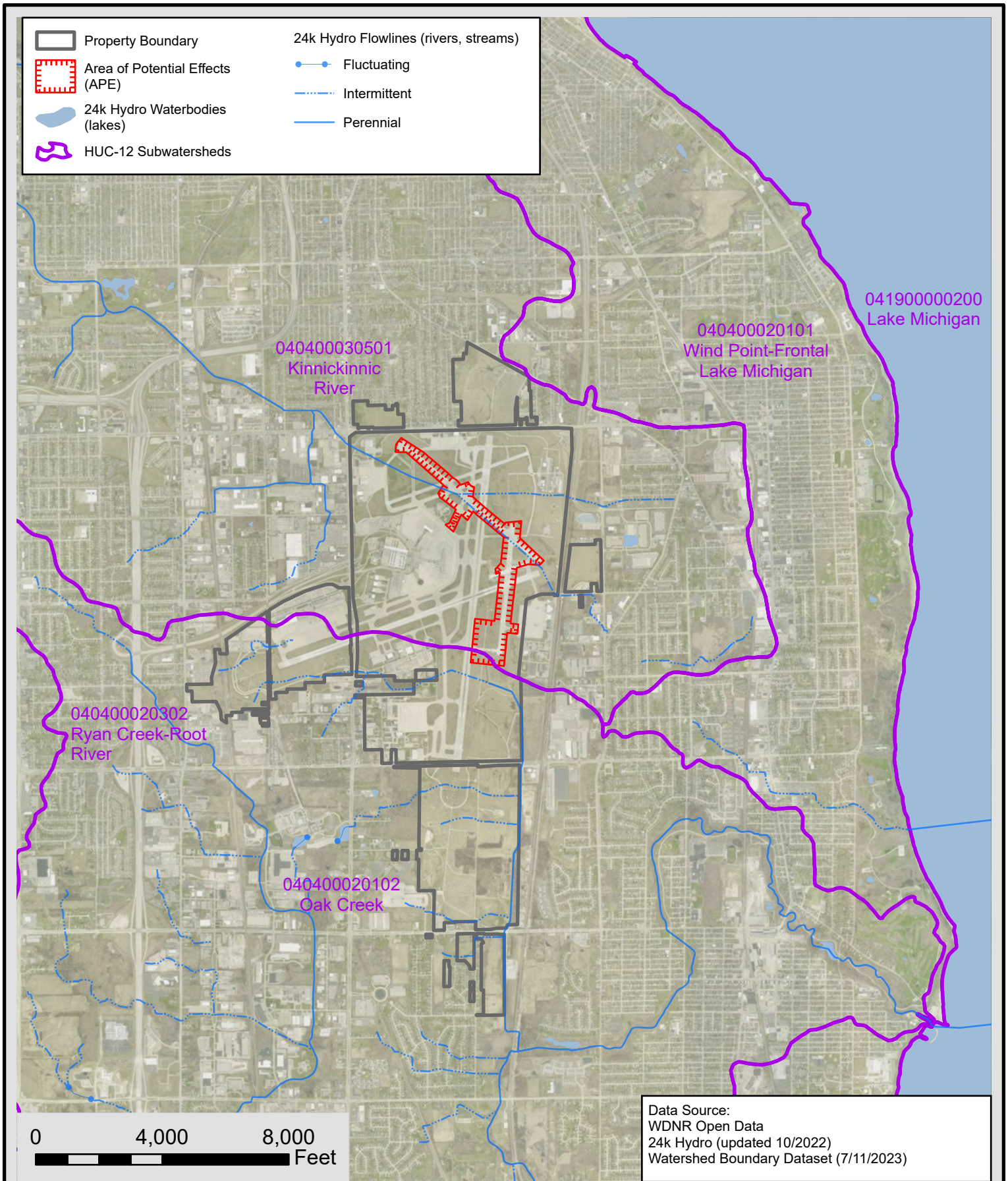
FIGURE NO.
3-19



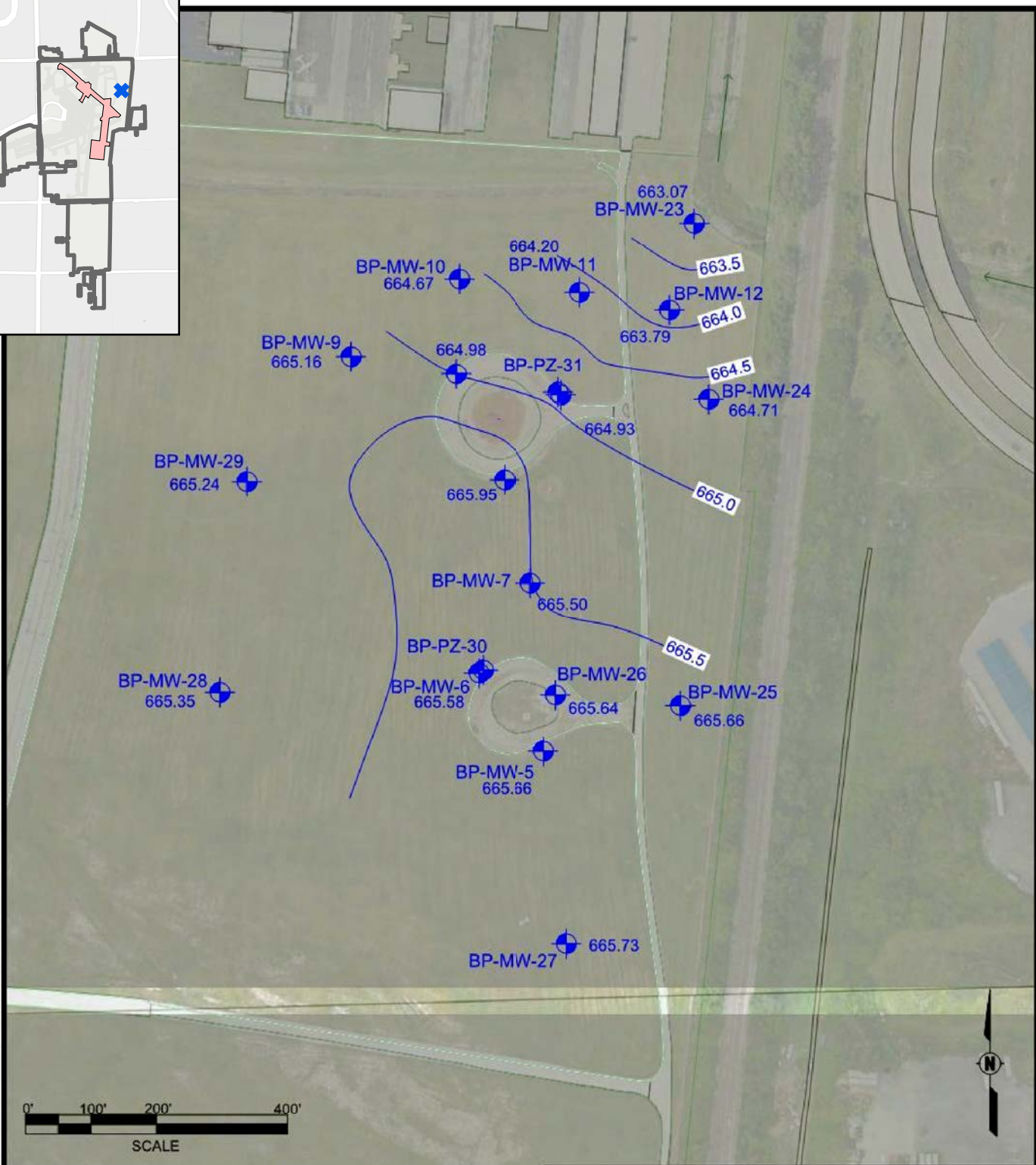
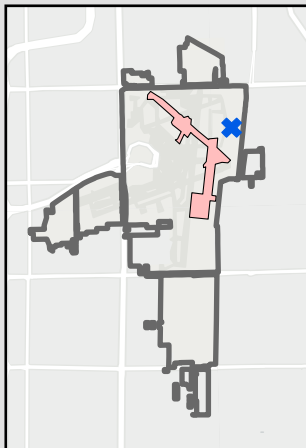
| | | | | |
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| <p>Westwood</p> <p>1 Systems Drive (920) 735-6900 Appleton, WI 54914 www.westwoodps.com</p> | | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL FLOODPLAIN MAP</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> | <p>SCALE: 1 in = 1,000 ft PROJECT NO. R3001844.00 FIGURE NO. 3-20</p> |
| <p>N:\3001844.00\GIS_CombinedProjects\EnvAssessmentMaps_Combined.aprx [Floodplain Map] Printed: kmwehner 12/2/2024 9:29 AM</p> | | | | |



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|---|--|---|--|---|
| <p>Westwood</p> <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> | | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL WATERWAY MAP (24K HYDRO)</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> <p>Date: 11/5/2024</p> | <p>SCALE: 1 in = 2,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 3-21</p> |
|---|--|---|--|---|



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|---|---|--|---|---|
|  <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> |  | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL WATERSHED MAP</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> | <p>SCALE: 1 in = 4,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 3-22</p> |
|---|---|--|---|---|



File: P:\60620401\9000_CAD\GIS\910_CAD\MKE PFAS GUIA R4.dwg; USER: SCHOLZ, CAROLYN; PLOTTED September 7, 2021 - 12:41 PM

Legend:

- Monitoring Well
- Surface Water Sample Location
- Surface/Groundwater Flow Direction

Notes: Aerial image from Google Earth Pro, image dated 8/1/2019

AECOM
1555 RiverCenter Dr
Milwaukee, WI
414.944.6080

AECOM

MKE PFAS Investigation
5300 S Howell Ave
Milwaukee, WI

Burn Pit Groundwater Contour
November 2020

Project Number:
60620401

Drawn By:
JSM

Date:
8/27/2021

Figure No. 14

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MKE RUNWAY 1R-19L AND 13-31 REMOVAL GROUNDWATER MAP

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

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

Date: 11/5/2024

SCALE:
1 in = 437 ft
PROJECT NO.
R3001844.00
FIGURE NO.
3-23



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)

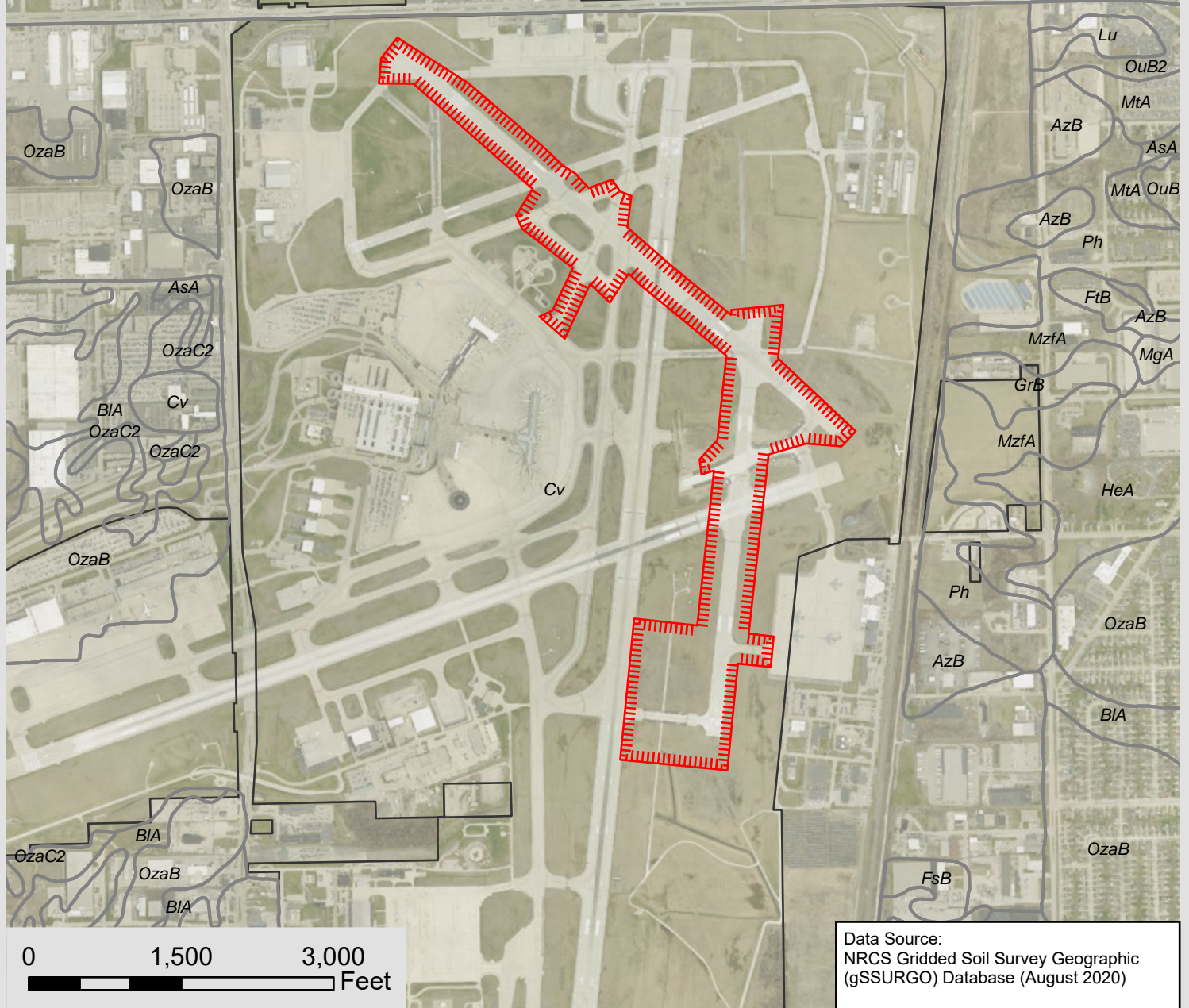
OzaB2 (Ozaukee silt loam, 2 to 6 percent slopes, eroded)

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 AND 13-31 REMOVAL SOILS MAP

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

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

Date: 11/5/2024

SCALE:
1 in = 1,500 ft
PROJECT NO.
R3001844.00

FIGURE NO.
3-24

CHAPTER 4 – ENVIRONMENTAL CONSEQUENCES

The Airport is proposing to decommission and remove Runway 1R/19L, decommission and remove Runway 13/31, and modify the supporting taxiway network. Taxiway network modifications include the conversion or construction of Taxiway CC and the removal of Taxiway G, Taxiway U, and partial removal of Taxiway N. This chapter describes the environmental consequences of the proposed action.

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 and proposed action.

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 oxides⁹⁵. Under the General Conformity Rule⁹⁶, 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_{2.5}.

The EPA has defined categories of federal actions that are exempt from the General Conformity Rule⁹⁷ that result in no emissions increase or low emission increases. Actions that fall under the

⁹⁵ National Ambient Air Quality Standards: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

⁹⁶ General Conformity Rule: <https://www.epa.gov/general-conformity/basic-information-about-general-conformity-rule>.

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

exemptions are not subject to further analysis under the General Conformity Rule⁹⁸. The proposed action does not align with exemptions to the General Conformity Rule. The EPA⁹⁹ and the WDNR¹⁰⁰ have established NAAQS de minimis levels for federal actions. Milwaukee county is designated a non-attainment zone for 8-hour ozone (moderate) and maintenance area for PM_{2.5}. The EPA and WDNR de minimis levels for ozone (VOC's or NO_x) in non-attainment areas range from 10-100 tons per year. Milwaukee County is considered a moderate non-attainment area which has a designated threshold of 100 Tons/year. It is estimated that the proposed action would result in approximately 3.65 metric tons (MT) of nitrogen oxides (NO_x) emissions if the partial parallel taxiway would be constructed within the existing Runway 1R/19L pavement footprint. If the proposed partial parallel taxiway would be relocated west of Runway 1R/19L, the proposed action would result in approximately 3.74 MT of NO_x emissions. EPA de minimis rates for PM_{2.5} in maintenance areas is 100 tons per year. It is estimated that the proposed action would result in approximately 0.66 MT of PM_{2.5}¹⁰¹ emissions if the partial parallel taxiway would be constructed within the existing Runway 1R/19L pavement footprint. If the proposed partial parallel taxiway would be relocated west of Runway 1R/19L, the proposed action would result in approximately 0.67 MT of PM_{2.5} emissions.

Additional discussion and calculations of construction emissions is presented in Chapter 4.3, Climate and **Appendix 6**.

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 proposed project action of decommissioning and removing Runway 1R/19L Runway 13/31 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 both runways. Construction activities for the proposed action would have temporary air quality impacts. The proposed action would not substantially impact air quality and are anticipated to be below de minimis levels. The no action alternative would not have an impact on air quality.

⁹⁸ 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>

⁹⁹ EPA De Minimis Tables: <https://www.epa.gov/general-conformity/de-minimis-tables>

¹⁰⁰ WDNR NR 489.03(2)(a): https://docs.legis.wisconsin.gov/code/admin_code/nr/400/489/03/2/a

¹⁰¹ PM_{2.5} Emissions calculated using the FHWA LCA Pave tool.

4.2 Biological Resources

4.2.1 Federally Listed Endangered and Threatened Species

Section 7 of the Endangered Species Act of 1973¹⁰², 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 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 location and the nearest critical habitat areas.

The USFWS IPaC online planning tool was used to obtain a list of species and habitat that could potentially be impacted¹⁰³. The federal list for endangered, threatened, or candidate species includes the following: Tricolored Bat, Monarch Butterfly, and Western Regal Fritillary. 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 species¹⁰⁴. Information pages on the listed species were reviewed. **Table 4-1** is a summary of the federally listed species evaluation and determination summary.

Further 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. USFWS IPaC letters can be found under USFWS Coordination included in **Appendix 2**.

Based on information reviewed and consultation with the agencies, the proposed action 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.

¹⁰² Endangered Species Act of 1973: https://www.fws.gov/sites/default/files/documents/endangered-species-act-accessible_7.pdf

¹⁰³ U.S. Fish & Wildlife Service, Information for Planning: <https://ipac.ecosphere.fws.gov>

¹⁰⁴ 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 |
|---|---|------------------------|---|----------------------------------|-----------------------------------|--|
| Tricolored Bat | <i>Perimyotis subflavus</i> | Proposed Endangered | Hibernates in caves and mines. During spring, summer, and fall; found in forested areas. | No | Not likely to adversely effect | There is no suitable habitat in the project area. Minnesota- Wisconsin Endangered Species Determination Key, Consistency Letter Obtained 07/12/2024. |
| 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 07/12/2024. |
| Western Regal Fritillary | <i>Argynnis idalia occidentalis</i> | Proposed Threatened | Grasslands and prairies | No | N/A | N/A |
| Date of Official Species List: November 4, 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 destruction¹⁰⁵. 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 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**.

¹⁰⁵ WDNR Natural Heritage Inventory Program: <https://dnr.wisconsin.gov/topic/NHI/Methods>

Visual observations of the proposed project areas noted mowed grass and disturbed land. Active streams¹⁰⁶, 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 proposed action would take place in previously disturbed areas. No state listed threatened or endangered species have been identified on the proposed project location. The proposed action 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

[REDACTED]

The proposed action was identified through the MPU. The MPU identified that the airfield capacity can remain the same with the removal of the runways¹¹⁰.

The proposed action 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. Runway 13/31 is used for 0.4% of daytime arrivals, 0.2% of nighttime arrivals, 0.9% of daytime departures, and 0.3% of nighttime departures¹¹¹. Runway 1R/19L and Runway 13/31 use is minimal in scale compared to other Airport runways, thus the impacts of increased taxi times are assumed to be negligible. Additionally due to taxiway modifications it is anticipated that aircraft movement will not substantially differ.

Runway 1R/19L, Runway 13/31, and taxiways currently have edge lighting that would be removed with the proposed project. Airfield lighting may need to be reconfigured due to the proposed

¹⁰⁶ The Wilson Park Creek does cross the project area underground in a storm sewer pipe.

¹⁰⁷ The CEQ was established by NEPA in 1969: <https://www.whitehouse.gov/ceq/>

[REDACTED]

[REDACTED]

¹¹⁰ 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>

¹¹¹ Data obtained from noise assessment, See Appendix 4 – Noise Technical Report

removals. Additionally, airfield lighting would be installed as taxiway lighting for the partial parallel taxiway construction. It is anticipated that the amount of taxiway lights along the proposed taxiway would be less than the existing runway lights, resulting in a net decrease in energy consumption for airfield lighting. The proposed action is not anticipated to increase the number of airfield lights.

The Wisconsin CEP objectives include goals to “maximize energy efficiency by strengthening energy efficiency standards and programs to reduce energy waste, create jobs, and save consumers money on energy costs.”¹¹² . Both Runway 1R/19L and Runway 13/31 have runway lights that consume electricity when illuminated. Through removal of both runways, electricity consumption and operation and maintenance costs would be decreased, aligning with the objectives of the Wisconsin CEP.

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.”¹¹³ The proposed project is anticipated to remove 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 runoff¹¹⁴.

The proposed action would not increase airport capacity or significantly change aircraft surface movements. There is no anticipated net GHG emission increase from aircraft operations when compared to the no action alternative¹¹⁵. However, during construction operations for the proposed action, depending on project phasing, there may be temporary closures of taxiways which would temporarily alter taxiway routes. 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 due to increased aircraft operations as a result of the proposed action. However, 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 (CO₂) emissions from heavy equipment such as dozers, excavators, pavers, and dump trucks. An engineers estimate for total diesel fuel needed for construction of the proposed action was quantified and converted to MT of CO₂ equivalent, MT of methane (CH₄) equivalent, MT of nitrous oxide (N₂O), MT of nitrogen oxides(NO_x), and MT of particulate matter (PM_{2.5}) equivalent. Estimates of GHG emissions are

¹¹² Wisconsin Clean Energy Plan Progress Report:
<https://osce.wi.gov/PublishingImages/Pages/Forms/EditForm/Clean%20Energy%20Plan%202023%20Progress%20Report.pdf>

¹¹³ EPA, Heat Islands: <https://www.epa.gov/heatislands/learn-about-heat-islands>

¹¹⁴ EPA, Heat Island Cooling Strategies: <https://www.epa.gov/heatislands/heat-island-cooling-strategies>

¹¹⁵ 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.”

shown in **Table 4-2**. Additionally, the production of construction materials would likely increase CO₂ emissions. The Federal Highway Administration (FHWA) LCA Pave Tool was used to calculate estimated CO₂ emissions associated with the production of concrete and asphalt materials for the proposed partial parallel taxiway. Results of estimated CO₂ 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 additional construction emissions in the near term. The no action alternative would not realize the benefits of decreased future construction emissions associated pavement repairs, general maintenance, and eventual pavement rehabilitation or reconstruction.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Following construction, increased emissions as a result of the proposed action are not anticipated to significantly vary from the no action alternative. The no action alternative may result in future need for rehabilitation or reconstruction of the proposed taxiways and runways. Additionally, the no action alternative would not realize the benefits of decreased emissions associated with operations and maintenance activities such as snow plowing.

[REDACTED]

[REDACTED]

Table 4-2. Temporary Construction Emissions

| | | Runway 1R/19L Removal | Runway 13/31 and Taxiway Removal | Partial Parallel Taxiway Existing Pavement Conversion | Partial Parallel Taxiway Relocation | No Action Alternative |
|--|--|--------------------------------------|---|--|--|----------------------------------|
| Equipment Emissions | Diesel Fuel Consumption (gal) | 38,1200 gal | 68,400 gal | 32,600 gal | 36,120 gal | 0 gal |
| | Carbon Dioxide, CO ₂ Equivalent (metric tons) | 388.1 MT-CO ₂ e | 679.3 MT-CO ₂ e | 331.9 MT-CO ₂ e | 367.7 MT-CO ₂ e | 0 MT-CO ₂ e |
| | Methane, CH ₄ Equivalent (metric tons) | 0.039 MT-CH ₄ e | 0.069 MT-CH ₄ e | 0.033 MT-CH ₄ e | 0.036 MT-CH ₄ e | 0 MT-CH ₄ e |
| | Nitrous Oxide, N ₂ O Equivalent (metric tons) | 0.036 MT-N ₂ Oe | 0.064 MT-N ₂ Oe | 0.031 MT-N ₂ Oe | 0.034 MT-N ₂ Oe | 0 MT-N ₂ Oe |
| | Nitrogen Oxides, NO _x (metric tons) | 1.00 MT-NO _x e | 1.795 MT-NO _x e | 0.855 MT-NO _x e | 0.948 MT-NO _x e | 0 MT-NO _x e |
| | Particulate Matter, PM _{2.5} (metric tons) | 0.174 MT-PM _{2.5} e | 0.321 MT-PM _{2.5} e | 0.161 MT-PM _{2.5} e | 0.178 MT-PM _{2.5} e | 0 MT-PM _{2.5} e |
| Construction Material (Concrete and Asphalt) Production Emissions | Carbon Dioxide, CO ₂ Equivalent (metric tons) | 0 MT -CO ₂ e | 0 MT -CO ₂ e | 3081 MT -CO ₂ e | 3090 MT -CO ₂ e | 0 MT -CO ₂ e |

Note: The no action alternative does not account for future emissions associated with continued maintenance, repairs, and rehabilitation of Runway 1R/19L or Runway 13/31 pavement and utilities.

| | | | | |
|------------|------------|------------|------------|------------|
| [REDACTED] | | | | |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

| | | | | |
|------------|------------|------------|------------|------------|
| [REDACTED] | | | | |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

| | | | | |
|------------|------------|------------|------------|------------|
| [REDACTED] | | | | |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

| | | | | |
|------------|------------|------------|------------|------------|
| [REDACTED] | | | | |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

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.¹¹⁸ 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. A

¹¹⁸ Wisconsin Coastal Management Program: <https://doa.wi.gov/Pages/LocalGovtsGrants/CoastalManagement.aspx>.

preliminary coordination letter was sent to WCMP on November 11, 2023 and no response was received. Preliminary EA documents were sent for review and comment on April 26, 2024 and no response was received. Copies of correspondence are included in **Appendix 2**.

The proposed action would not result in any foreseeable effects to coastal resources and would not be constructed along the Lake Michigan coastline. Additionally, the proposed action is 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 Act¹¹⁹. The Airport is not located within or adjacent to the Coastal Barrier Resource System. Therefore, the provisions of the Coastal Barriers Resources Act do not apply. There are no coastal barriers impacts with either the proposed action 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 use¹²⁰.

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 location 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 proposed action or no action alternative.

¹¹⁹ Coastal Barriers Resources: <https://www.fws.gov/program/coastal-barrier-resources-act>.

¹²⁰ 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 Act¹²¹ (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 proposed action would be located. There would be no acquisition of farmland for the proposed action. There are no farmland impacts associated with the no action alternative.

4.7 Hazardous Materials, Solid Waste, and Pollution Prevention

A Phase I Environmental Site Assessment (ESA) was prepared for Runway 1R/19L¹²² and Runway 13/31¹²³ proposed project areas. An environmental records review was completed for each Phase I ESA. 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.

The Phase I ESA identified one listing to be within the project area listed as the Shell Pipeline. This listing is a closed ERP site titled BRRTS#02-41-558334 Shell Pipeline at Gen Mitchell Intl. Airport

¹²¹ Farmland Protection Policy Act: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>

¹²² Phase I Environmental Site Assessment, Milwaukee Mitchell International Airport – Runway 1R/19L, prepared by Westwood Professional Services, Inc., dated March 11, 2024. A copy of the Phase I ESA can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>

¹²³ Phase I Environmental Site Assessment, Milwaukee Mitchell International Airport – Runway 13-31, prepared by Westwood Professional Services, Inc., dated March 26, 2024. A copy of the Phase I ESA can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>

and was identified to have continuing obligations. Through evaluation of the continuing obligations, it was concluded that the project is not anticipated to conflict with the continuing obligations of the closed BRRTS site. The conclusions in regard to each continuing obligation is listed below:

1. Residual Groundwater Contamination: The proposed Project does not include the construction or modification of a well.
2. Residual Soil Contamination: Anticipated construction activities include pavement removal, minor grading, and topsoil placement restored to turf near the closed BRRTS site.
3. Structural Impediment: The structural impediment was identified to have been located east of Taxiway E. The proposed project removals are located west of Taxiway E and north of the pipeline excavation area.

To verify the conclusions regarding the continuing obligations, a meeting was requested of the WDNR Remediation and Redevelopment (R&R) program. A meeting was held on March 5, 2024 with WDNR R&R staff. At the meeting, Airport staff and Westwood gave a background of the proposed project, timeline, and detail on where the identified structural impediment was located in proximity to the proposed project. The WDNR R&R staff inquired about the disposal of materials. It is anticipated that concrete and asphalt pavement would be crushed and recycled, and some may be removed from the project area to allow for placement of topsoil for turf restoration. Additionally, soil excavation and removal below the existing pavement and base is not anticipated. Assuming that the proposed project is not disturbing soil, the WDNR R&R staff had no further concerns about the proposed project and no formal notification was needed at the time of the meeting. Once construction plans are finalized, the WDNR R&R staff should be notified for proper review.

WDNR R&R staff recommended that a contingency plan be added in the event soil would require removal from site or if contaminated soil is encountered. Although soil excavation and removal below the existing pavement and sub-base are not anticipated, if soil would be excavated there is a potential that the soil could be impacted. If the proposed project proceeds, during the design phase the WDNR R&R staff would be consulted to determine if a Materials Management Plan, or similar documentation, should be prepared if soil would need to be excavated or disturbed. Other Materials Management Plans recently approved by WDNR for Airport or military base development projects resulted in soils being placed back in the excavation or kept onsite in a berm¹²⁴. It is anticipated that similar guidance from the WDNR for disturbed soil will be applied for the proposed project. Project specifications would include a special provision describing necessary approvals, notification procedures, soil handling, and documentation requirements.

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

¹²⁴ WDNR BRRTS #02-41-584547 General Mitchell International Airport PFAS – A Materials Management Plan was submitted in January 2024 for on-airport soil management.

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 would be recycled as soil fill material for the pavement removal areas 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 proposed action. However, due to the historic operations of the Airport, there is a potential for encountering contaminated materials. If evidence of soil or groundwater contamination is suspected during removal and construction 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. 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 amended¹²⁵, and the Archaeological and Historic Preservation Act of 1974¹²⁶.

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.

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.

¹²⁵ National Historic Preservation Act of 1966, as amended: <https://www.achp.gov/digital-library-section-106-landing/national-historic-preservation-act>

¹²⁶ Archaeological and Historic Preservation Act: https://dahp.wa.gov/sites/default/files/Moss_Bennett_Act_ArchHistPres.pdf

An APE is defined by 36 CFR 800.16(d)¹²⁷ 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. No cultural resources were identified during the pedestrian survey.¹²⁸ The Architecture/History site visit observed no historic-age resources that would be considered eligible for the NRHP within the proposed project APE.

¹²⁷36 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))

¹²⁸ Archaeological Reports Inventory - WHS Project #23-1601

A 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 emails were sent on December 8, 2023. One response was received from the Forest County Potawatomi Historic Preservation Office was received on December 11, 2023. The response offered a finding of No Historic Properties affected of significance to the Forest County Potawatomi Community but requested to remain as a consulting party for the project. Copies of tribal correspondence is included in **Appendix 2**.

Preliminary coordination letters were 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 coordination letters were sent on November 11, 2023 and no response was received. Copies of historical society correspondence is included in **Appendix 2**.

The architecture history and archeological investigations were submitted to the SHPO. The SHPO concurred on February 28, 2024 that there are no properties listed in or eligible for the NRHP are 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 proposed action 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 proposed 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 proposed action also includes the conversion of pavement to a parallel taxiway to Runway 1R/19L or the construction of a taxiway west of the existing runway pavement. A parallel taxiway to Runway 1L/19R is shown on the ALP. Either taxiway conversion or construction would be located solely on Airport property.

The proposed action 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.

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

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.”¹²⁹

The proposed action 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. Runway 13/31 is used for 0.4% of daytime arrivals, 0.2% of nighttime arrivals, 0.9% of daytime departures, and 0.3% of nighttime departures¹³⁰. Runway 1R/19L and Runway 13/31 use is minimal in scale compared to other Airport runways, thus the impacts of increased taxi times are assumed to be negligible.

Currently, aircraft movements associated with the 128th 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 128th ANG.

There would be additional energy consumption during removal of Runway 1R/19L, Runway 13/31, taxiways, and construction operations associated with constructing Taxiway CC. 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.

Material 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, Runway 13/31, and taxiways is anticipated to produce recycled aggregate, pulverized asphalt, or millings. The proposed action does not require the use of unusual materials or those in short supply.

The proposed action 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.

¹²⁹ Energy Independence and Security Act of 2007: <https://www.govinfo.gov/content/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf>

¹³⁰ 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 and Runway 13/31 (proposed action) compared to the no action alternative¹³¹. The report assumed that future operations on Runway 1R/19L would shift to parallel Runway 1L/19R and future operations on Runway 13/31 would be distributed among Runway 1L/19R and Runway 7L/25R. Additional assumptions include that due to the minimal usage of the runways, the distribution of day/night split for aircraft operations would remain the same from the existing conditions. The proposed action is anticipated to not cause an increase in airport operations.

The report concluded that the proposed action of decommissioning Runway 1R/19L and Runway 13/31 would not result in a significant noise impact for the CY2029 and CY2034 forecast years. The analysis identified areas of noise increase as a result of the proposed action, all identified noise increase areas occur on airport property. There is no change to the DNL 65 dB contour off airport property in the 2029 or 2034 scenarios and the number of people within the DNL 65 dB contour remains the same (68 people in 2029, 94 people in 2034) between the no action and proposed action scenarios. The proposed project is not projected to impact any additional noncompatible land uses including housing units or noise sensitive areas when compared to the no action alternative.

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

4.12 Socioeconomics, [REDACTED] 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.

The proposed 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

¹³¹ Noise Technical Report prepared by Harris Miller Miller & Hansen, Inc. See Appendix 4.

removal of Runway 1R/19L, Runway 13/31, and taxiways 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 Runway 13/31 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 proposed action would not significantly alter the job and economic outlook surrounding the 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.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]





4.12.3 Children's Environmental Health and Safety Risks

Executive Order 13045¹³⁴ 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 proposed action removal and construction activities should not have an impact on environmental health and safety risks for children.

The decommissioning of Runway 1R/19L and Runway 13/31 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 and Runway 13/31 (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 CY2029 and CY2034. The potential impacts of noise as a result of the proposed action are not anticipated to have an impact on environmental health and safety risks for children when compared to the no action alternative.

4.12.4 Summary of Socioeconomics, 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 

¹³⁴ Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks.

[REDACTED] and it meets the requirements of Executive Order 13045 on children's environmental health and safety risks.

[REDACTED]

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 proposed action consist of the removal of the existing runway/taxiway lights, FAA owned REILs, and FAA owned PAPIs. 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 night¹³⁵. A PAPI system consists of four light boxes arranged perpendicular to the runway and provide visual approach slope information to landing aircraft¹³⁶.

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 proposed action 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 runway pavement landscape.

The proposed action would result in a decrease in white runway lights, removal of FAA owned REILs, and removal of FAA owned PAPIs resulting in minor light emissions improvements. Additionally, the proposed partial parallel taxiway would include the incorporation of blue taxiway lights. There are no substantial impacts to visual effects with the proposed action.

For the no action alternative, the existing runway lights, REILs, and PAPIs 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.

¹³⁵ FAA, Runway End Identifier Lights:
https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/reil

¹³⁶ FAA, Precision Approach Path Indicator,
https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/papi

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 wetlands¹³⁷. 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:

“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.”¹³⁸

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 waters¹³⁹.

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 Act¹⁴⁰. The WDNR has jurisdiction of isolated wetlands, which are outside of USACE jurisdiction under Section 281.36 of the Wisconsin Statutes¹⁴¹.

A wetland delineation was performed on September 11, 2023 at the proposed project location¹⁴². 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**).

¹³⁷ Executive Order 11990: <https://www.epa.gov/cwa-404/protection-wetlands-executive-order-11990>

¹³⁸ DOT Order 5660.1A: <https://www.codot.gov/programs/environmental/wetlands/assets/USDOTOrder56601A.pdf>

¹³⁹ Rivers and Harbors Appropriation Act of 1899: <https://www.govinfo.gov/content/pkg/COMPS-5399/pdf/COMPS-5399.pdf>

¹⁴⁰ Section 404 of the Clean Water Act: <https://www.federalregister.gov/d/2023-15284/p-66>

¹⁴¹ Section 281.36 of Wisconsin Statutes: <https://docs.legis.wisconsin.gov/statutes/statutes/281/iii/36>

¹⁴² A Wetland Delineation Report was prepared by Quest Civil Engineers, LLC, dated September 11, 2023

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.

All wetland impacts and wetland mitigation will be coordinated with both the WDNR and USACE, mitigation would take place through the WisDOT wetland mitigation bank. The goal of the proposed action is to avoid or minimize impacts to wetlands. Some best design practices to minimize impacts may be to implement the maximum allowable slopes within FAA standards to avoid wetland fill or adjust taxiway elevations to minimize grading within wetland areas.

Figure 4-4 displays wetlands included on the Wisconsin Wetland Inventory maps provided by the WDNR¹⁴³. Wetlands near, but outside the project area are not anticipated to be impacted. Proper Best Management Practices (BMPs) for erosion control and sediment control as described in Chapter 4.15 should be used to protect nearby wetlands during project construction.

The proposed action may result in wetland impacts depending on the limits of project grading that would be identified during project design. Through preliminary coordination with USACE, it was discussed that preliminary plans did not show large impacts to wetlands/waterways and many impacts may be avoidable. The need for a PCN may not be necessary if the impacts are below thresholds within the USACE St. Paul District's Transportation Regional General Permit¹⁴⁴. Due to the proximity of the wetlands to the 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 [REDACTED] 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

¹⁴³ Wisconsin Wetland Inventory: <https://dnr.wisconsin.gov/topic/Wetlands/inventory.html>

¹⁴⁴ Appendix 2 includes correspondence with USACE regarding permitting requirements and initial review of impacts.

[REDACTED]

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 4-5** 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 ¹⁴⁶.

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 the proximity of the project area to the floodplain, there is a potential for disturbance. If disturbance is identified through project planning, a notice of floodplain encroachment¹⁴⁷ will be published as described in Chapter 6.3.

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 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.¹⁴⁸

The proposed action would utilize the existing Taxiway S pavement footprint. Through pavement construction, drainage associated with the existing pavement footprint would not be significantly

¹⁴⁶ FEMA Flood Mapping Center: <https://msc.fema.gov/portal/home>

¹⁴⁷ “Encroachments are activities or construction within the floodway including fill, new construction, substantial improvements, and other development. These activities are prohibited within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses that the proposed encroachment would not result in any increase in flood levels.” <https://www.fema.gov/about/glossary/encroachments>

¹⁴⁸ 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.

altered. If the partial parallel taxiway would be relocated west of Runway 1R/19L drainage north of Taxiway S may be altered. 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 States¹⁴⁹. 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 affected¹⁵⁰.

Wilson Park Creek is enclosed in underground culverts running along Runway 13/31 as shown in **Figure 4-6** and **Figure 4-7**. The proposed action 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 stream¹⁵¹.

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 1st to June 15th (inclusive) to minimize impacts to fish and other aquatic organism during sensitive time periods of spawning and migration¹⁵².

The proposed action 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).

¹⁴⁹ EPA, Summary of the Clean Water Act: <https://www.epa.gov/laws-regulations/summary-clean-water-act>

¹⁵⁰ 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

¹⁵¹ WDNR Initial Review Letter (1/10/2024), See Appendix 2.

¹⁵² WDNR Initial Review Letter (1/10/2024), See Appendix 2.

The proposed action includes the removal of concrete and asphalt pavement with restoration to turf. The removal of impervious material (concrete and asphalt) would have an effect on groundwater quality through the groundwater recharge process. As water runs through topsoil and grass, there is a natural filtering effect that would assist in eliminating pollutants or other solids from reaching local groundwater supplies. Additionally, through the elimination of impervious material, previous stormwater will be allowed to infiltrate as opposed to running off pavements and potentially into engineering infrastructure that would eventually lead to a creek or a stream.

There are no anticipated impacts to EPA designated SSAs, as none are identified in the State of Wisconsin or Northern Illinois. Additionally, the proposed action is anticipated to be beneficial for local groundwater as impervious surface would be removed. The proposed action would have limited disturbance to surface materials which would limit the effect of groundwater. The no action alternative would not change the existing groundwater conditions. 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 Act¹⁵³ 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 directive¹⁵⁴ 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)¹⁵⁵. 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 Waters¹⁵⁶ 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

¹⁵³ 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.>

¹⁵⁴ Presidential Directive: https://www.nps.gov/subjects/rivers/upload/Presidential-Memorandum-for-Heads-of-Departments-and-Agencies_508-2.pdf

¹⁵⁵ Nationwide Rivers Inventory: <https://www.rivers.gov/nri#:~:text=Under%20the%20Wild%20and%20Scenic,adversely%20affect%20NRI%20river%20segments.>

¹⁵⁶ 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.

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 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 proposed action would remove runway and taxiway pavement and restore to a mowed grass field.

Stormwater in the proposed project areas currently consists of topographic sheet flow, storm sewer structures and pipes, channels, and ditches. The project area north of Taxiway S is located in 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 located in the southern airport drainage basin that flows into the Mitchell Field Drainage Ditch that exists the southeast corner of airport property. **Figure 4-6** shows the storm sewer and airport drainage utilities **Figure 4-7** is an aerial view of the proposed project areas with the 24K Hydro Waterbodies (lakes)/Flowline (rivers, streams) map layer overlaid.

The proposed action is not anticipated to alter the existing drainage patterns within the project area. The construction of a partial parallel taxiway may alter the existing drainage patterns in the project area. Through the potential incorporation of culvert pipes, swales, and ditches the construction of the taxiway is not anticipated to change existing drainage patterns outside of the project area.

The proposed action would convert impermeable surfaces (pavement) to a permeable surface (turf). The construction of a partial parallel taxiway 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 conference¹⁵⁷.

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 shall¹⁵⁸:

“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 proposed action 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).

4.15 Construction Impacts

Construction activities may cause temporary environmental impacts. Generally, these impacts are associated with noise resulting from construction equipment, haul roads, staging areas, 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 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,

¹⁵⁷ See WDNR Initial Review Letter (1/10/2024). See Appendix 2.

¹⁵⁸ FAA AC 150/5370-10H: https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5370-10H.pdf

typical noise levels may occur in the 73 to 96 decibels, adjusted range at a distance of 50 feet¹⁵⁹. 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.

Additional temporary construction impacts would include the use of existing airport haul roads and staging areas. The proposed construction haul roads and staging areas are currently used by the airport as staging areas for contractors during airfield construction operations. There are no other anticipated impacts for construction haul roads and staging areas through analysis of the exhibits presented in this document and current use.

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. These impacts are anticipated to be within de minimis levels as discussed in Chapter 4.1. The impact would be localized and are not anticipated to be disruptive to occupants of residences adjacent to the Airport. Dust control measures including watering would be used to minimize the potential impact on nearby residents.

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.

¹⁵⁹ 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

- 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.

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, bitumen, 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. If a spill were to occur, the contractor should report any and all spills to the Airport for proper handling and management. Spill coordination procedures will be communicated prior to construction operations. 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 proposed action 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.”¹⁶⁰

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. Additionally, past projects have been identified as presumed to conform or maintenance projects for air quality evaluation, thus no further analysis is required. Both current and future airfield projects have anticipated timelines as identified in Section 1.4. Currently, there is only one airfield project anticipated to be constructed simultaneously with the proposed action. When considering potential air quality impacts the fuel farm roadway reconstruction project (estimated 2028 construction) is anticipated to be considered a maintenance project.

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. The proposed South Ramp Taxilane Strengthening & South Cargo Development project is anticipated to have wetland impacts; however, wetlands have been granted exemption from the WDNR. The proposed Taxiway Y and South Airfield Rehabilitation projects are located within floodplain zone AE. Impacts to the floodplain are not anticipated due to the project occurring on previously disturbed land but impacts would be analyzed during NEPA review for each respective project. Most of the potential improvements to the Airport involve construction. Therefore, the potential does exist for minor and short-term impacts from the potential improvements. The future proposed projects mostly consist of pavement maintenance and reconstruction and are not anticipated to alter airport operations. The future proposed projects are not anticipated to permanently increase noise or air emissions. There may be temporary noise impacts due to runway or taxiway closures to facilitate construction operations. When considering the potential for air quality impacts, the proposed projects are all anticipated to be either maintenance or presumed to conform actions and based on anticipated construction timelines are not anticipated to have cumulative effects that would exceed de-minimis levels. All future project potential impacts will be analyzed through NEPA review for each respective project.

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 proposed action combined with other area projects are not anticipated. The proposed action allows for potential future Airport development without requiring

¹⁶⁰ 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))

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.

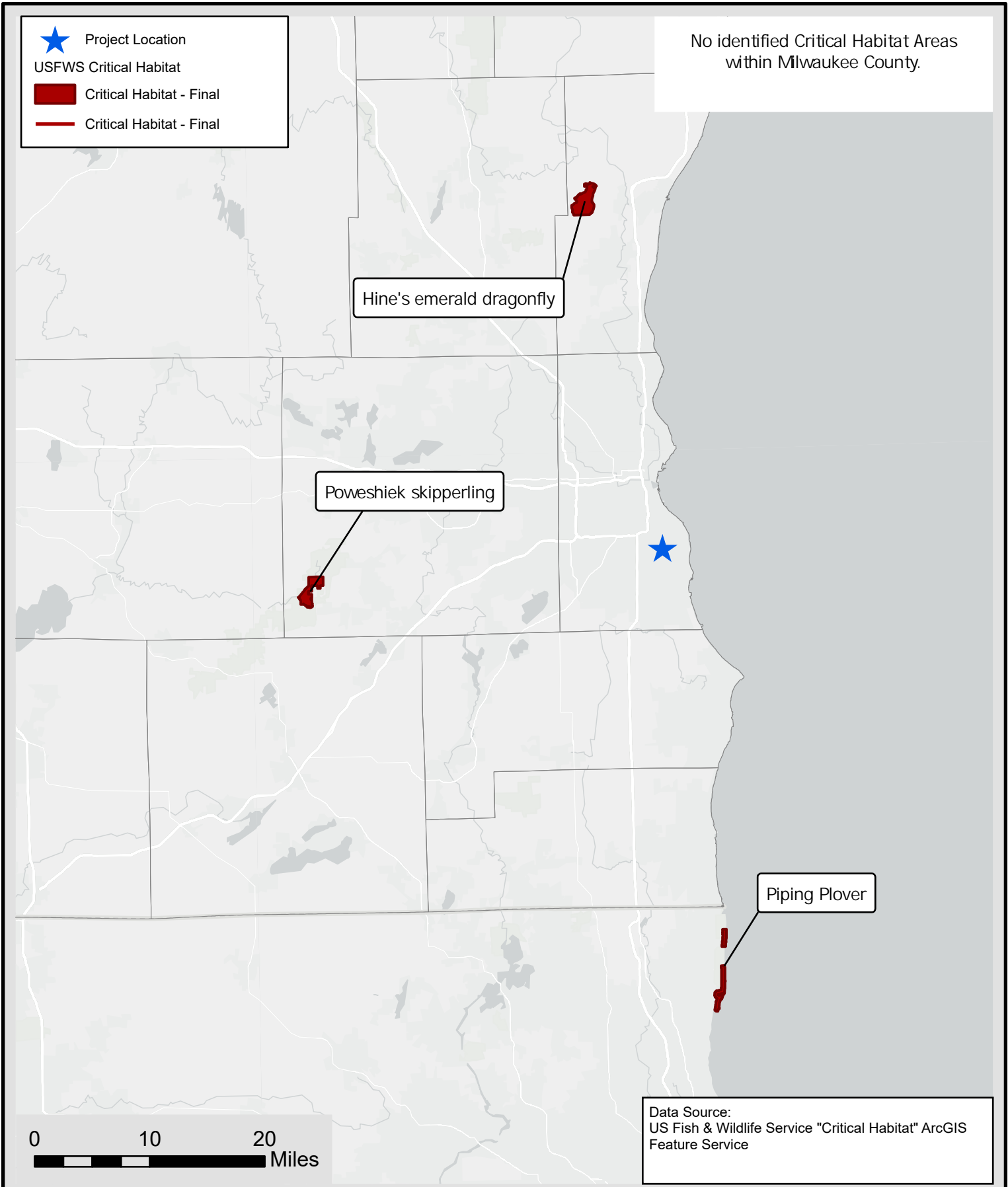
4.17 Secondary (Induced) Impacts

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, Runway 13/31, and taxiway modifications allow for future airport development without requiring the acquisition of additional property while improving airfield safety. Future 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. Future airport development would occur when purpose and need for a proposed improvement is identified and would be subject to NEPA review and approval.

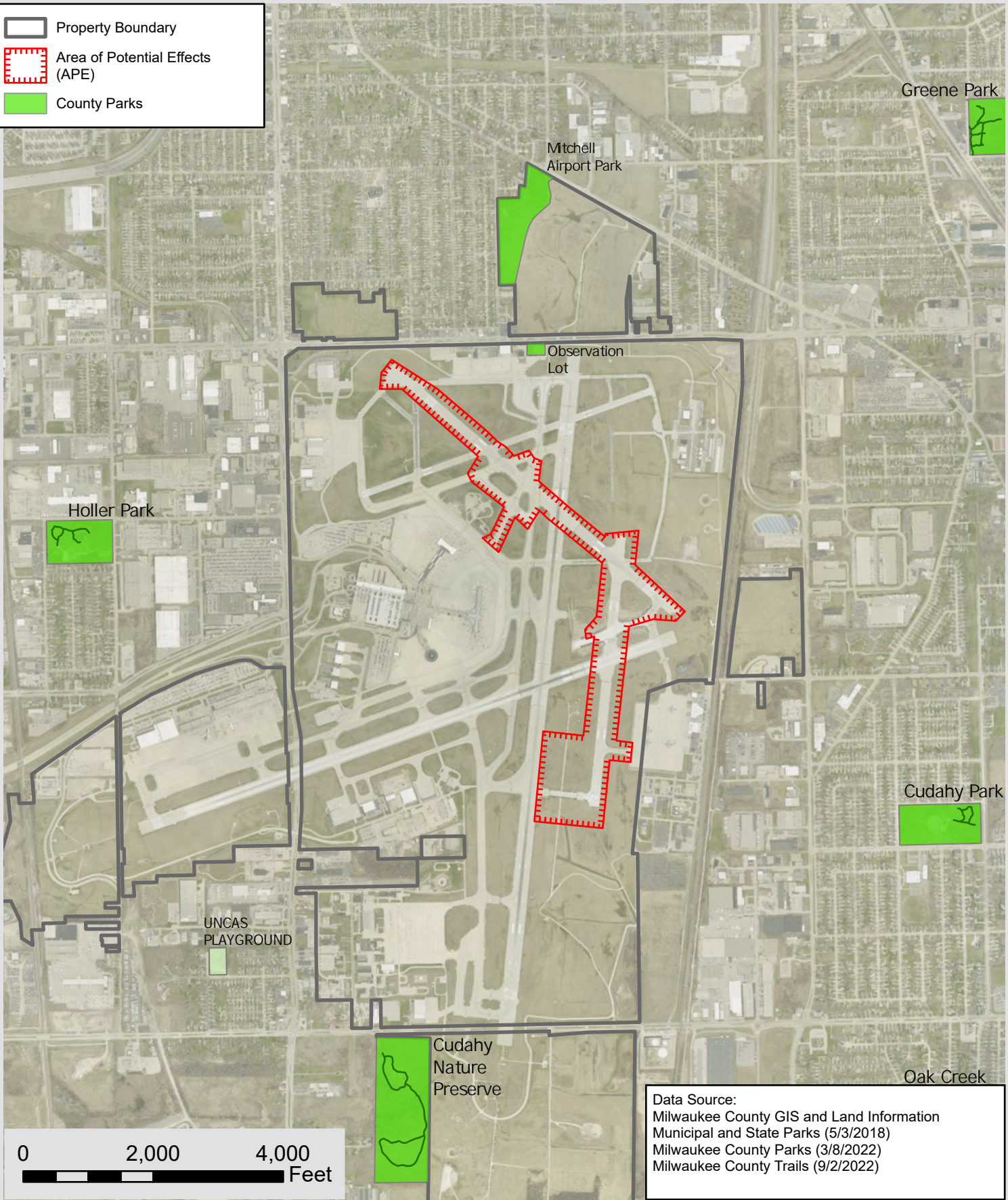
As discussed in other sections of this chapter, the proposed action would not have substantial adverse impact on noise and land use. There are no anticipated changes to the population, public service demands, or adverse impacts to the businesses and economy of the surrounding community.

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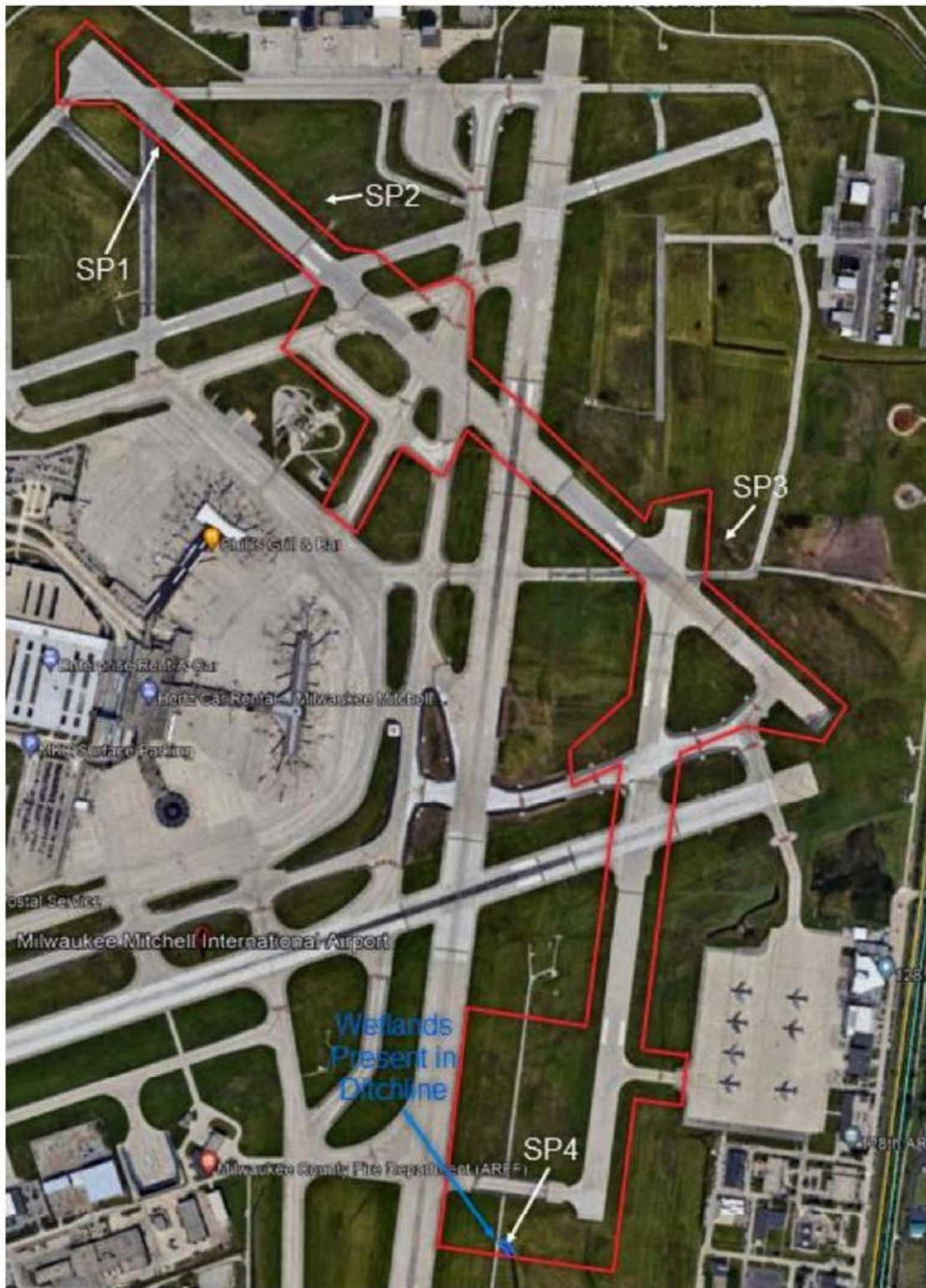
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|---|--|---|------------|-------------------|--------------------|
| <div><div>Westwood</div><div>1 Systems Drive Appleton, WI 54914</div><div>(920) 735-6900 www.westwoodps.com</div></div> | | <div>MKE RUNWAY 1R-19L AND 13-31 REMOVAL</div> <div>USFWS CRITICAL HABITAT AREAS</div> | | Project Manager: | SCALE: |
| | | <div>GENERAL MITCHELL INTERNATIONAL AIRPORT</div> <div>CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</div> | | Project Engineer: | 1 in =58,208 ft |
| | | | | Drawn By: JCW | PROJECT NO. |
| | | | | Checked By: | R3001844.00 |
| | | Date: 6/27/2024 | FIGURE NO. | | |
| | | | 4-1 | | |

- Property Boundary
- Area of Potential Effects (APE)
- County 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)

| | | | | |
|--|--|---|---|---|
| <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> | | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL PARKS AND TRAILS MAP</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | Project Manager: Project Engineer: Drawn By: JCW Checked By: | SCALE: 1 in =2,000 ft PROJECT NO. R3001844.00 |
| | | | Date: 6/27/2024 | FIGURE NO. 4-2 |



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

Westwood

1 Systems Drive (920) 735-6900
Appleton, WI 54914 www.westwoodps.com



MKE RUNWAY 1R-19L AND 13-31 REMOVAL WETLAND DELINEATION MAP

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

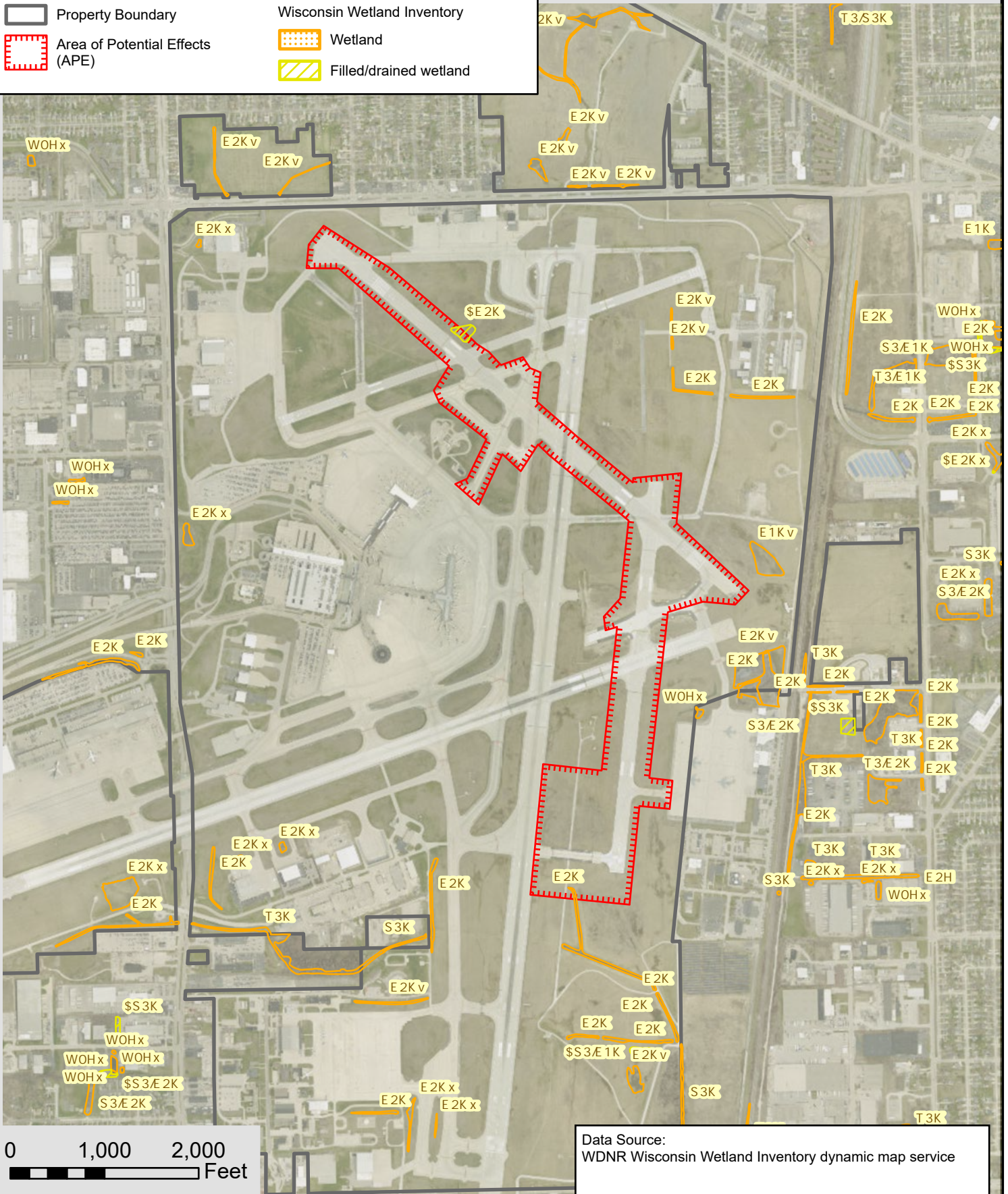
Project Manager:
Project Engineer:
Drawn By: JCW
Checked By:

Date: 6/27/2024

SCALE:
1 in = 437 ft
PROJECT NO.
R3001844.01

FIGURE NO.
4-3

- Property Boundary
- Area of Potential Effects (APE)
- Wisconsin Wetland Inventory
- Wetland
- Filled/draind wetland



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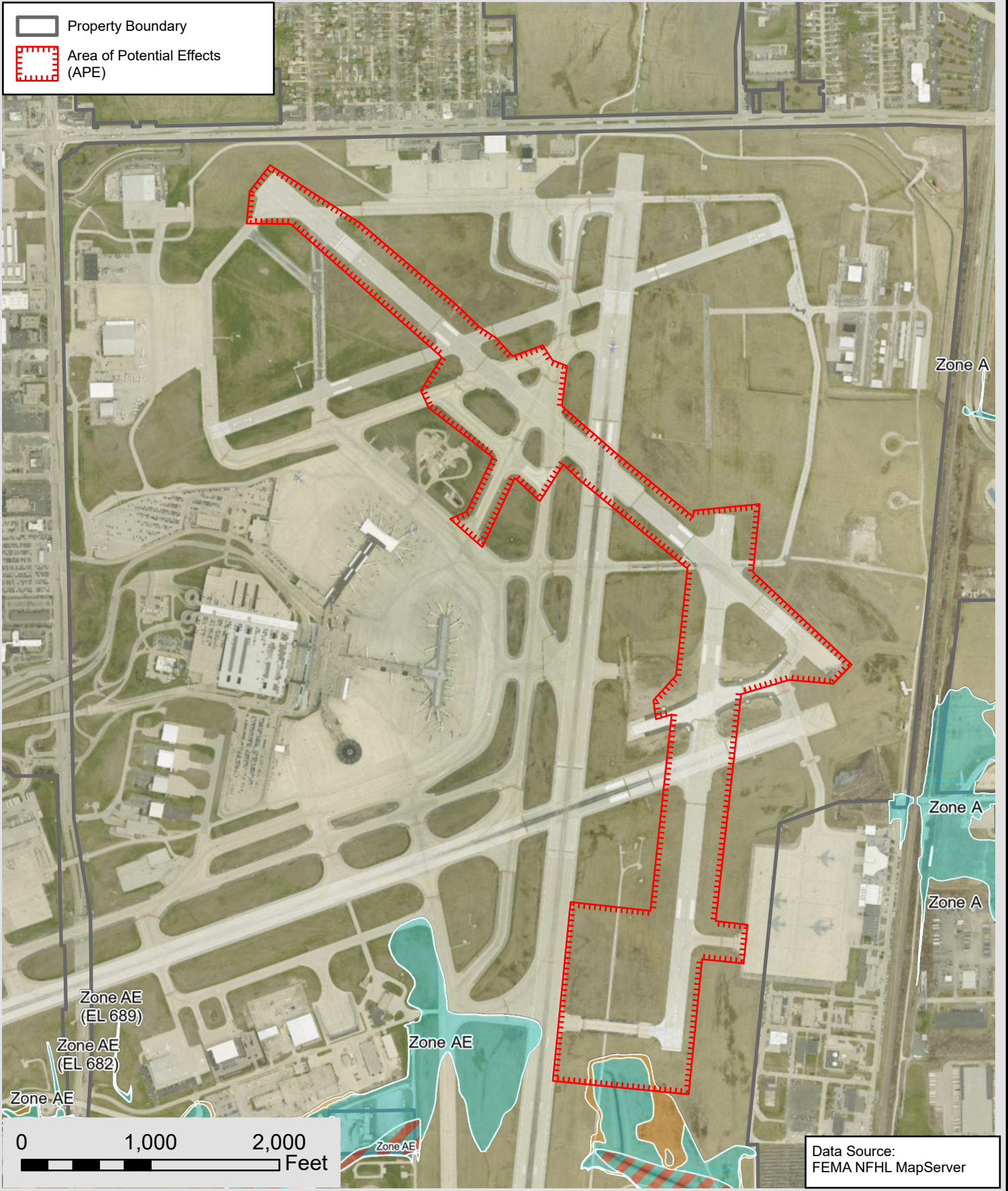
MKE RUNWAY 1R-19L AND 13-31 REMOVAL WETLAND MAP

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

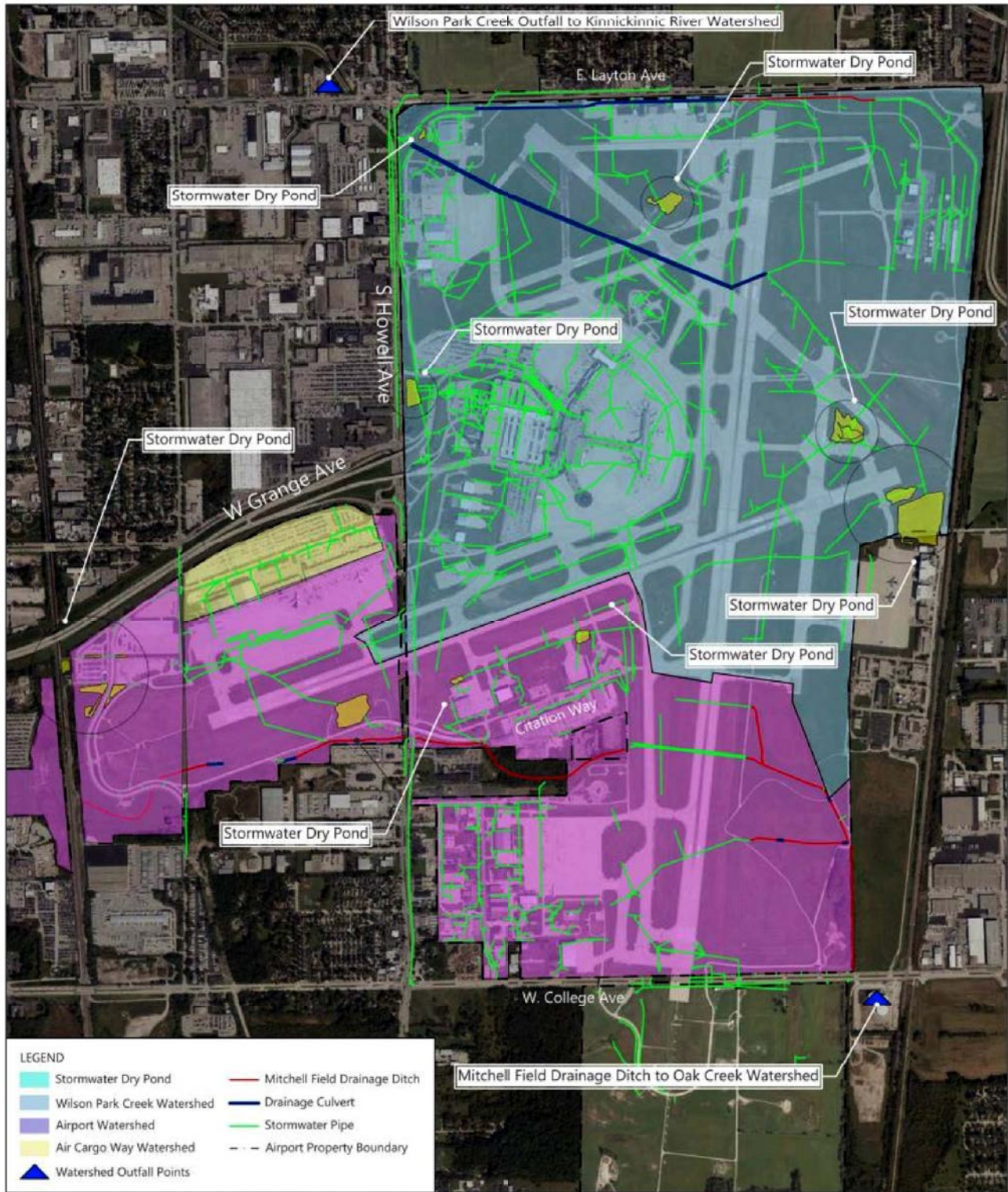
Project Manager:
Project Engineer:
Drawn By: JCW
Checked By:

Date: 6/27/2024

SCALE:
1 in = 1,376 ft
PROJECT NO.
R3001844.01
FIGURE NO.
4-4



| | | | | |
|---|---|---|-------------------|--------------------|
|  1 Systems Drive Appleton, WI 54914 (920) 735-6900 www.westwoodps.com |  | MKE RUNWAY 1R-19L AND 13-31 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: | R3001844.00 |
| | | | Date: 6/27/2024 | FIGURE NO. |
| | | | | 4-5 |



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



Drawing: P:\Project-Chicago\MKE\MKE Master Plan Update\Master Plan Project 201803 - Inventory of Existing Conditions\3.23 - Working Paper and Issues Identification\M_H Inventory Exhibits\MKE Inventory Exhibits_CAD\EXHIBIT 2-45 Storm Sewer and Drainage.dwg/Layout: Exhibit 2-45 Plotted: Sep 23, 2019, 01:52PM

Master Plan Update

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

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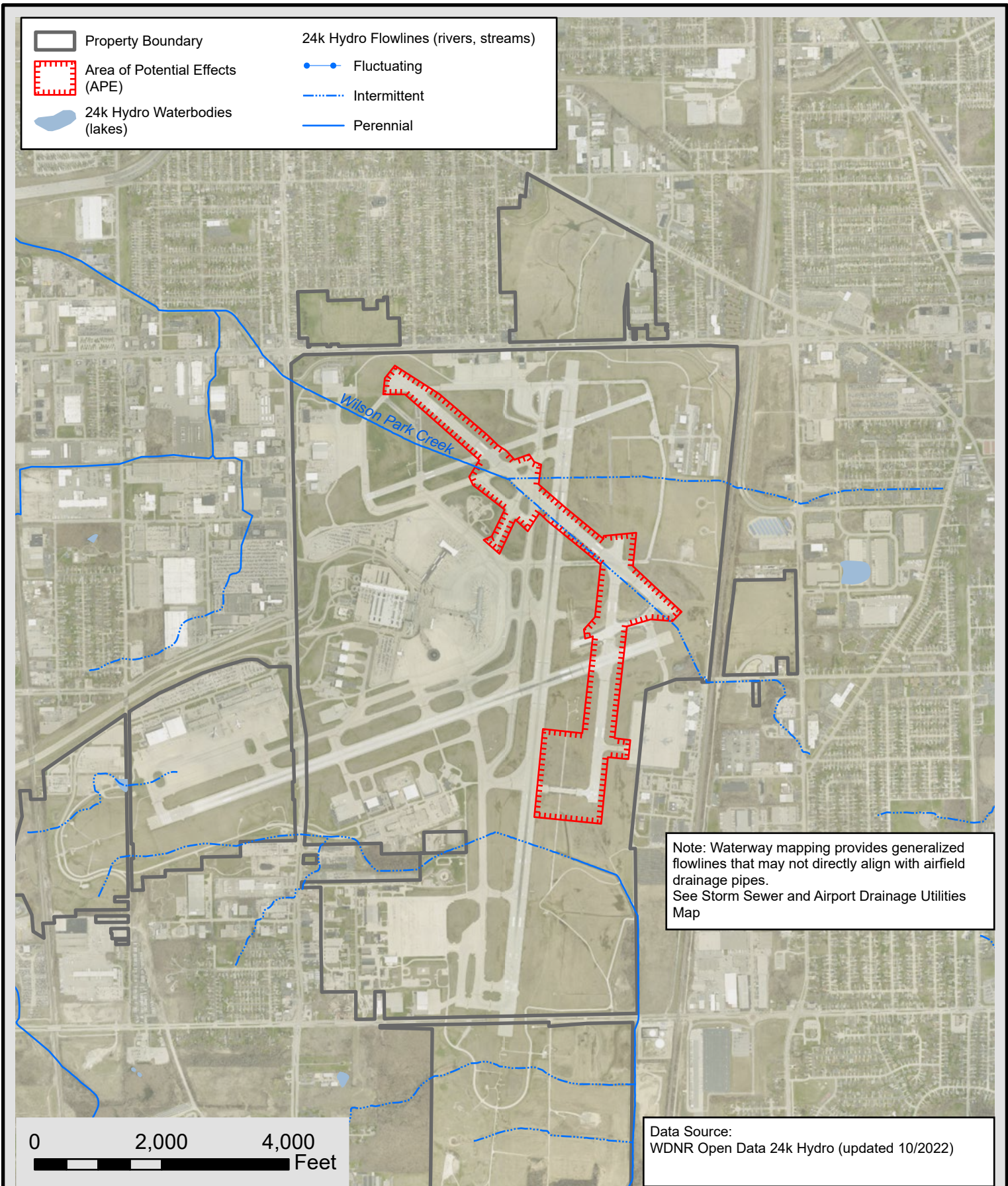
MKE RUNWAY 1R-19L AND 13-31 REMOVAL STORM SEWER AND AIRPORT DRAINAGE UTILITIES MAP

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

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

Date: 6/27/2024

SCALE:
1 in = 417 ft
PROJECT NO.
R3001844.01
FIGURE NO.
4-6



| | | | | |
|---|--|---|---|--|
| <p>Westwood</p> <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> | | <p>MKE RUNWAY 1R-19L AND 13-31 REMOVAL WATERWAY MAP (24K HYDRO)</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager: Project Engineer: Drawn By: JCW Checked By:</p> | <p>SCALE: 1 in = 2,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 4-7</p> |
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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 proposed action 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 2030¹⁶¹ and the Airport Master Plan Update¹⁶².

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 Environmental Assessment from Federal, State, and local agencies and officials to identify controversial actions. The proposed 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**.

¹⁶¹ Wisconsin State Airport System Plan 2030: <http://wisconsindot.gov/Pages/projects/multimodal/sasp/air2030-chap.aspx>

¹⁶² Master Plan Update: <https://www.mkeupdate.com/>

Table 5-1. Permits, Coordination, and Resources

| Agency | Project Activity | Permit Name/ Coordination | Notes |
|---------------|--|--|--|
| 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 ¹⁶³ . |
| 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. |

¹⁶³ FAA Runway Safety, Runway and Taxiway Construction webpage:
https://www.faa.gov/airports/runway_safety/runway_construction

| | | | |
|-------------------|---|--|---|
| 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. |
| WDNR | Remediation and Redevelopment – Continuing Obligation | Coordination and Plan Submission | The closed BRRS site #02-41-558334 has continuing obligations. Due to proximity to the proposed project area once project plans are finalized notify WDNR Remediation and Redevelopment a minimum of 90-days prior to project construction. If issues are encountered regarding BRRS site #02-41-558334 correspond with WDNR Remediation and Redevelopment. |
| WDNR | Remediation and Redevelopment | Coordination and Document Submission | Correspond with Remediation and Redevelopment staff of the WDNR if the final design requires soil removal. BRRS site#: 02-41-584547 for PFAS contamination is open and site investigation is continuing. Regulatory approval for notification procedures, soil handling, and documentation requirements may be required. |
| 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. |

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 feedback¹⁶⁴.

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 9th, 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. Additionally, prior to the petition for seeking State and Federal aid for the Environmental Assessment to evaluate the decommissioning and removal of Runway 13/31, a public hearing was held on March 14, 2023.

A public open house regarding the proposed project was held on May 7, 2024 at the Milwaukee Mitchell International Airport Terminal Building from 5:00pm-7:00pm. A notice of the open house was published in the Milwaukee Journal Sentinel on April 27, 2024 and made available on the airport website in both English and Spanish. During the open house displays were made available for viewing and project team members were on hand to answer questions. Individuals were also given the opportunity to provide verbal or written comments regarding the proposed project. Attendees included airport and project staff, no verbal comments were received, one written comment was submitted in support of the proposed project. Documentation including copies of the public notice, attendance sheet, and written comment is included in Appendix 7.

A public workshop regarding the proposed project was held on October 23, 2024 at the Milwaukee Mitchell International Airport Terminal Building from 5:00pm – 6:00pm. A notice of availability of the Draft EA and public workshop was published in the Milwaukee Journal Sentinel on September 23, 2024, El Conquistador Latino Newspaper on September 26, 2024, and made available on the

¹⁶⁴ 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>

airport website in both English and Spanish. Comments received during the Draft EA public availability period are included in Appendix 8. During the public workshop, displays were made available for viewing and project team members were on hand to answer questions. Individuals were also given the opportunity to provide verbal or written comments regarding the proposed project. Attendees included airport and project staff, no verbal comments were received, no written comments were submitted. A summary of the public workshop is included in Appendix 9.

6.2 Agency Coordination

Coordination includes the following agencies:

- City of Milwaukee – Department of City Development
- Milwaukee County Historical Society
- Milwaukee Metropolitan Sewerage District
- Native American Tribes
- Southeastern Wisconsin Regional Planning Commission
- United States Army Corps of Engineers
- United States Department of Agriculture – Natural Resources Conservation Services
- United States Department of Housing & Urban Development
- United States Department of Interior – Fish and Wildlife Service
- United States Environmental Protection Agency
- Wisconsin Air National Guard – 128th Mission Support Group
- Wisconsin Department of Administration – Coastal Management Program
- Wisconsin Department of Natural Resources
- Wisconsin Department of Transportation – Bureau of Aeronautics (BOA)
- Wisconsin Department of Transportation – Bureau of Technical Services
- Wisconsin Department of Transportation – Cultural Resources Team
- Wisconsin Department of Transportation - Office of Business Opportunity & Equity Compliance
- 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 |
|--|---|
| State Agencies | |
| State Historic Preservation Office (Wisconsin Historical Society) | <p>February 28, 2024 - Section 106 signed by State Historic Preservation Officer. (Appendix 5)</p> <p>April 26, 2024 – Preliminary documents mailed for review and comment.</p> <p>April 30, 2024 – Received follow up email received from WHS compliance requesting digital copies. Sent digital copies.</p> <p>September 23, 2024 – State Historic Preservation Officer (Wisconsin Historical Society) provided copy of Draft EA for review and comment.</p> |
| Wisconsin Air National Guard – 128 th Mission Support Group | <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>September 23, 2024 – 128th Mission Support Group provided copy of Draft EA for review and comment.</p> <p>September 25, 2024 – Response received confirming receipt of Draft EA.</p> <p>October 6, 2024 – 128th Mission Support Group comments received.</p> <p>October 17, 2024 – Response sent discussing how recommendations would be incorporated into Final EA.</p> <p>October 18, 2024 – 128th Mission Support Group requested to remain apprised on changes in the Final EA regarding comments.</p> |
| Wisconsin Department of Transportation - Cultural Resources Team (CRT) | <p>January 2024 - BOA submitted Section 106 documentation to CRT for review.</p> <p>February 25, 2024 - Section 106 signed by WisDOT Historic Preservation Officer. (Appendix 5)</p> |

| | |
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| <p>Wisconsin Department of Natural Resources (WDNR)</p> | <p>September 9, 2023 - Wetland delineation submitted for WDNR confirmation.</p> <p>September 28, 2023 - Wetland delineation confirmation received from WDNR Bureau of Watershed Management.</p> <p>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.</p> <p>December 7, 2023 - WDNR Transportation Liaison sent request to BOA to prepare "DNR Coordination Form".</p> <p>December 11, 2023 - "DNR Coordination Form" submitted to BOA who forwarded to WDNR Transportation Liaison.</p> <p>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.</p> <p>January 10, 2024 - WDNR Initial Project Review Received.</p> <p>February 22, 2024 – Continuing Obligation inquiry sent to WDNR Remediation and Redevelopment program staff to discuss closed BRRTS site #02-41-558334 continuing obligations due to proximity to the proposed project area. A project summary and project maps were included.</p> <p>March 5, 2024 – Airport Staff and Westwood met with WDNR Remediation and Redevelopment staff. Discussion included project background, continuing obligations identified, potential project impacts, and timeline. The WDNR remediation and redevelopment staff indicated that they did not have concerns with the proposed project and no formal notification was needed. Once project plans are finalized the WDNR remediation and redevelopment program should be notified at a minimum 90-days before project construction.</p> <p>April 26, 2024 - Preliminary documents sent to Transportation Liaison and Remediation & Redevelopment staff for review and comment.</p> <p>September 23, 2024 - Transportation Liaison and Remediation & Redevelopment staff provided copy of Draft EA for review and comment.</p> |
|---|--|

| | |
|--|---|
| <p>Wisconsin Department of Transportation - Bureau of Aeronautics (BOA)</p> | <p>August 26, 2022 - Petition submitted seeking State and Federal aid for the Runway 1R/19L Environmental Assessment.</p> <p>March 28, 2023 - Petition submitted seeking State and Federal aid for the Runway 13/31 Environmental Assessment.</p> <p>October 27, 2023 - Draft tribal coordination letter and supporting documentation sent to BOA.</p> <p>December 13, 2023 - Initial Section 106 Review Archaeological/Historical Information documentation sent for review.</p> <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>June 10, 2024 – Comments received from airport project manager.</p> <p>June 17, 2024 – Comments received from environmental team.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> |
| <p>Wisconsin Department of Transportation – Bureau of Technical Services Environmental Process & Documentation Section</p> | <p>April 26, 2024 - Preliminary documents sent to section chief for review and comment.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> |
| <p>Wisconsin Department of Transportation – Office of Business Opportunity & Equity Compliance (OBOEC)</p> | <p>April 26, 2024 – Preliminary documents sent for review and comment.</p> <p>May 3, 2024 – Responded asking to be removed from future correspondence. Will not remain as a consulting party on the project.</p> |
| <p>Wisconsin Department of Administration - Coastal Management Program (WCMP)</p> | <p>November 8, 2023 - Notification letter sent to outline the proposed project and solicit input.</p> <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> |

| Federal Agencies | |
|---|--|
| 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> <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> |
| United States Department of Agriculture – Natural Resources Conservation Service (NRCS) | <p>April 26, 2024 - Preliminary documents mailed for review and comment.</p> <p>September 20, 2024 – Provided mailed copy of Draft EA for review and comment.</p> |
| United States Department of Housing and Urban Development (HUD) | <p>April 26, 2024 - Preliminary documents mailed for review and comment.</p> <p>September 20, 2024 - Provided mailed copy of Draft EA for review and comment.</p> |

| | |
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| 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> <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>May 2, 2024 – Response received saying the service had no comments.</p> <p>July 12, 2024 – Updated consistency letter received for effect determination using the Minnesota-Wisconsin Federal Endangered Species Determination Key.</p> <p>July 12, 2024 – Updated concurrence letter received for effect determination using the Northern Long-eared Bat Range wide Determination Key</p> <p>September 5, 2024 – Updated project area species list. Official species list updates included the addition of the Western Regal Fritillary and the removal of the Northern Long-eared Bat. The Northern Long-eared Bat Range wide Determination Key was removed and is no longer included in project documentation.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> <p>November 4, 2024 - Updated species list for proposed project area, no changes were identified.</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> <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> |
| Native American Tribes | |

| | |
|---|---|
| Tribal Notification | <p>December 8, 2023 - Notification letter sent to outline the proposed project and solicit input.</p> <p>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.</p> |
| Local Governments/Agencies | |
| City of Milwaukee – Department of City Development | <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> <p>October 2, 2024 – Question received from City of Milwaukee – Department of City Development and comment addressing a grammatical error.</p> <p>October 8, 2024 – Response sent answering question.</p> |
| Milwaukee County Historical Society | <p>November 8, 2023 - Notification letter sent to outline the proposed project and solicit input.</p> |
| Milwaukee Metropolitan Sewerage District | <p>November 8, 2023 - Notification letter sent to outline the proposed project and solicit input.</p> <p>November 14, 2023 - Response received stating there were no questions at this time.</p> <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> <p>October 3, 2024 – Comment received addressing a grammatical error.</p> |
| Milwaukee County Committee on Transportation, Public Works, and Transit | <p>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 13/31 was mentioned. The</p> |

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| | approval to submit the ALP documentation was recommended for adoption by the committee ¹⁶⁵ . |
| Milwaukee County Board of Supervisors | <p>March 24, 2022 - Request for approval to submit ALP documentation to the FAA was adopted¹⁶⁶.</p> <p>April 7, 2022- The resolution was signed by the County Executive¹⁶⁷.</p> |
| Southeastern Wisconsin Regional Planning Commission | <p>April 26, 2024 - Preliminary documents sent for review and comment.</p> <p>May 1, 2024 – Response received saying the documents were briefly looked at and had no comments. Project team responded indicating that if they had any further questions to reach out.</p> <p>September 23, 2024 - Provided copy of Draft EA for review and comment.</p> |
| General Public | |
| 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 ¹⁶⁸ . |
| Public Hearing | <p>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.</p> <p>March 14 2023 - A public hearing was held prior to the petition for seeking State and Federal aid for the Environmental</p> |

¹⁶⁵ 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>

¹⁶⁶ 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>

¹⁶⁷ County Legislative Information Center, File #22-372:
<https://milwaukeecounty.legistar.com/LegislationDetail.aspx?ID=5472285&GUID=75F8957E-12F9-4148-8319-28BA95402834&Options=&Search=>

¹⁶⁸ 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>

| | |
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| | Assessment to evaluate the decommissioning and removal of Runway 13/31. |
| Public Open House | May 7, 2024 - A public open house regarding the proposed project was held at the Milwaukee Mitchell International Airport Terminal Building from 5:00pm-7:00pm. A notice of the open house was published in the Milwaukee Journal Sentinel on April 27, 2024 and made available on the airport website in both English and Spanish. During the open house displays were made available for viewing and project team members were on hand to answer questions. Individuals were also given the opportunity to provide verbal or written comments regarding the proposed project. Attendees included airport and project staff, no verbal comments were received, one written comment was submitted in support of the proposed project. |
| Public Workshop | October 23, 2024 - A public workshop regarding the proposed project was held on October 23, 2024 at the Milwaukee Mitchell International Airport Terminal Building from 5:00pm – 6:00pm. A notice of the public workshop was published in the Milwaukee Journal Sentinel on September 23, 2024, El Conquistador Latino Newspaper on September 26, 2024, and made available on the airport website in both English and Spanish. During the public workshop displays were made available for viewing and project team members were on hand to answer questions. Individuals were also given the opportunity to provide verbal or written comments regarding the proposed project. Attendees included airport and project staff, no verbal comments were received, no written comments were submitted. |

6.3 Future Opportunities for Public Involvement

The comment period on the Draft Environmental Assessment is closed. The process has moved on to the decision document. If a FONSI is issued, a notification of the issuance of the FONSI will be placed in the local newspaper.

If it is determined through project design that floodplains will be impacted, a notice of floodplain encroachment would be published.

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 draft and final environmental assessments (when available), project information/updates, and a notice of public hearing. The web site is accessible at <https://westwoodps.com/milwaukee-mitchell-international-airport>.

Following the public availability period for the final environmental assessment, documents may be removed from the website page. Documents can be made available upon request to the Wisconsin Department of Transportation - Bureau of Aeronautics¹⁶⁹ or the FAA Chicago Airport District Office.

¹⁶⁹ 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

Vladimir Jovic, MSEM – *Project Manager*

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

7.2 Westwood Professional Services

Kaitlyn M. Schlosser (Wehner) - *Airport Engineer*

Mrs. Schlosser 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 - Runway 1R-19L | Date: | 9/12/23 | Photo # | 1 |
| Description: | Standing on Taxiway S looking south | | | | |
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|-----------------------|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 2 |
| Description: | Standing on Taxiway S looking north | | | | |
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| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 3 |
| Description: | Standing on Runway 1R-19L looking west at Taxiway S, shows pavement deterioration | | | | |
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|-----------------------|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 4 |
| Description: | Standing Runway 1R-19L looking south towards Taxiway S | | | | |
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|-----------------------|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 5 |
| Description: | Standing on Runway 1R-19L looking east at Taxiway W | | | | |
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|-----------------------|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 6 |
| Description: | Standing on Runway 1R-19L north of Taxiway W looking south | | | | |
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|-----------------------|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 7 |
| Description: | Standing on Runway 1R-19L looking south | | | | |
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|-----------------------|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 8 |
| Description: | Standing on Runway 1R-19L looking north | | | | |
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|--|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 9 |
| Description: | Standing on Runway 1R-19L and Runway 13-31 intersection looking south | | | | |
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|---|--|--------------|---------|----------------|----|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 10 |
| Description: | Standing on Runway 1R-19L looking north, area shows pavement deterioration | | | | |
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| Site Location: | General Mitchell International Airport - Runway 1R-19L | | | Date: | 9/12/23 | Photo # | 11 |
| Description: | Standing on Taxiway M looking west at Runway 1R-19L | | | | | | |
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|---|---|--------------|---------|----------------|----|
| Site Location: | General Mitchell International Airport - Runway 1R-19L | Date: | 9/12/23 | Photo # | 12 |
| Description: | Standing on Runway 1R-19L and Runway 13-31 intersection looking north | | | | |
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| Site Location: | General Mitchell International Airport | Date: | 9/12/23 | Photo # | 13 |
| Description: | Standing in proposed staging area looking southwest at haul road and entrance gate. | | | | |
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| Site Location: | General Mitchell International Airport | Date: | 9/12/23 | Photo # | 14 |
| Description: | Standing in proposed staging area looking southwest at haul road and entrance gate. | | | | |
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Site Location: General Mitchell International Airport – Runway 13-31

Date: 9/12/23

Photo # 15

Description: Standing on Runway 13-31 looking southwest.




Site Location: General Mitchell International Airport – Runway 13-31

Date: 9/12/23


Photo # 16

Description: Standing on Runway 13-31 looking southeast towards runway end.



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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 17 |
| Description: | Standing on Runway 13-31 looking northwest. | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 18 |
| Description: | Standing Runway 13-31 looking southeast towards Runway 1R-19L . | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 19 |
| Description: | Standing on Runway 13-31 near Taxiway G looking northeast. | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 20 |
| Description: | Standing on Taxiway U looking northeast at Taxiway G. | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 21 |
| Description: | Standing on at intersection of Taxiway U and Taxiway G looking southwest towards passenger terminal. | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 22 |
| Description: | Standing on Taxiway U near Taxiway E facing southeast. Looking at Taxiway Lighting and Signage | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 23 |
| Description: | Standing on Runway 13-31 near Runway 7L-25R looking northeast at PAPIs. | | | | |
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| Site Location: | General Mitchell International Airport – Runway 13-31 | Date: | 9/12/23 | Photo # | 24 |
| Description: | Standing on Runway 13-31 looking northwest towards Taxiway F. | | | | |
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Site Location: General Mitchell International Airport – Runway 13-31

Date: 9/12/23

Photo # 25

Description: Standing on Runway 13-31 near Taxiway F looking northwest.



Site Location: General Mitchell International Airport - Runway 13-31

Date: 9/12/23

Photo # 26

Description: Standing on Runway 13-31 near Taxiway F looking southeast.



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| Site Location: General Mitchell International Airport Runway 13-31 | Date: 9/12/23 | Photo # 27 |
| Description: Standing on Taxiway M looking northeast at Taxiway N. | | |
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| Site Location: General Mitchell International Airport – Runway 13-31 | Date: 9/12/23 | Photo # 28 |
| Description: Standing on Taxiway M looking northwest at potential Alternate B Holding Pad location | | |
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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).

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.

Sincerely, 
Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure

Email CC: USACE Project Manager
Brian Krostedt, Quest



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

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 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 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. Thank you for your assistance.

Sincerely,

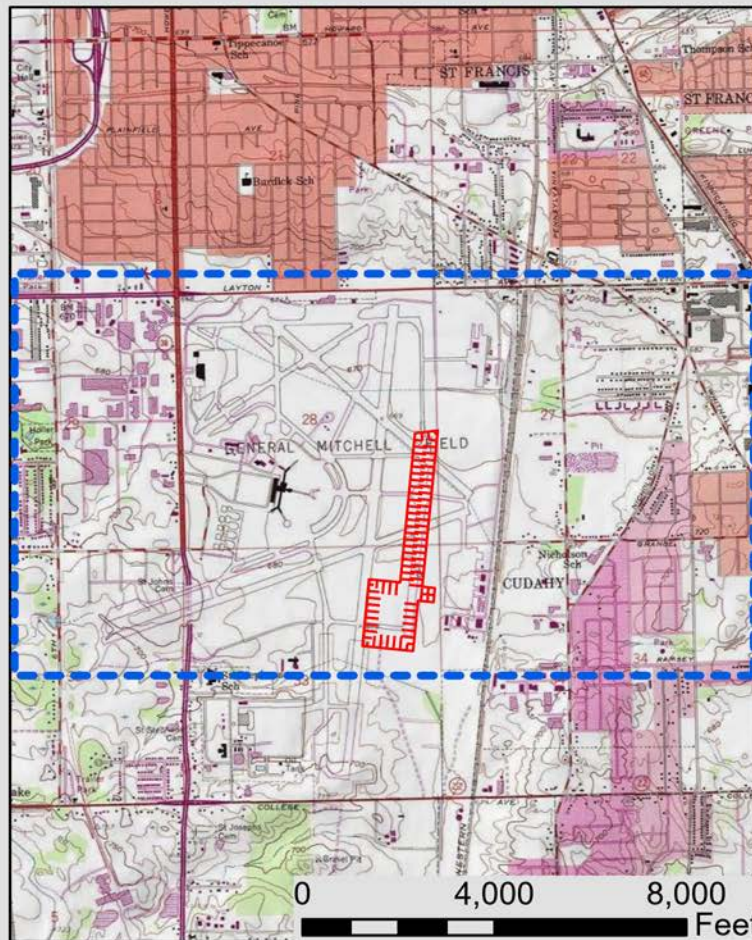
A handwritten signature in blue ink, appearing to read "Christine Turk".

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)



Westwood

1 Systems Drive (920) 735-6900
Appleton, WI 54914 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

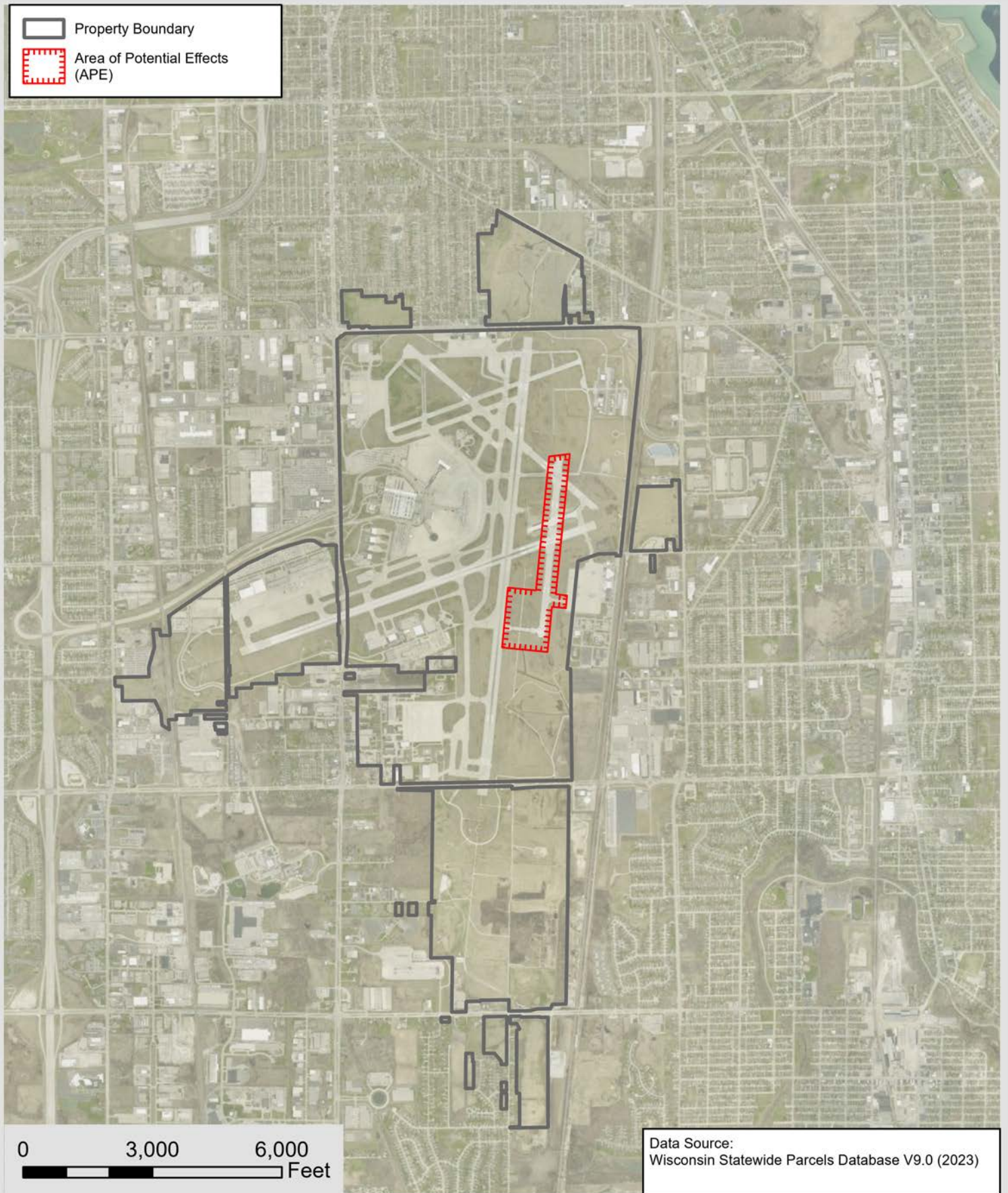
SCALE:
1 in = 2,000 ft
PROJECT NO.
R3001844.00
FIGURE NO.
1



Property Boundary



Area of Potential Effects
(APE)



Westwood

1 Systems Drive (920) 735-6900
Appleton, WI 54914 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:

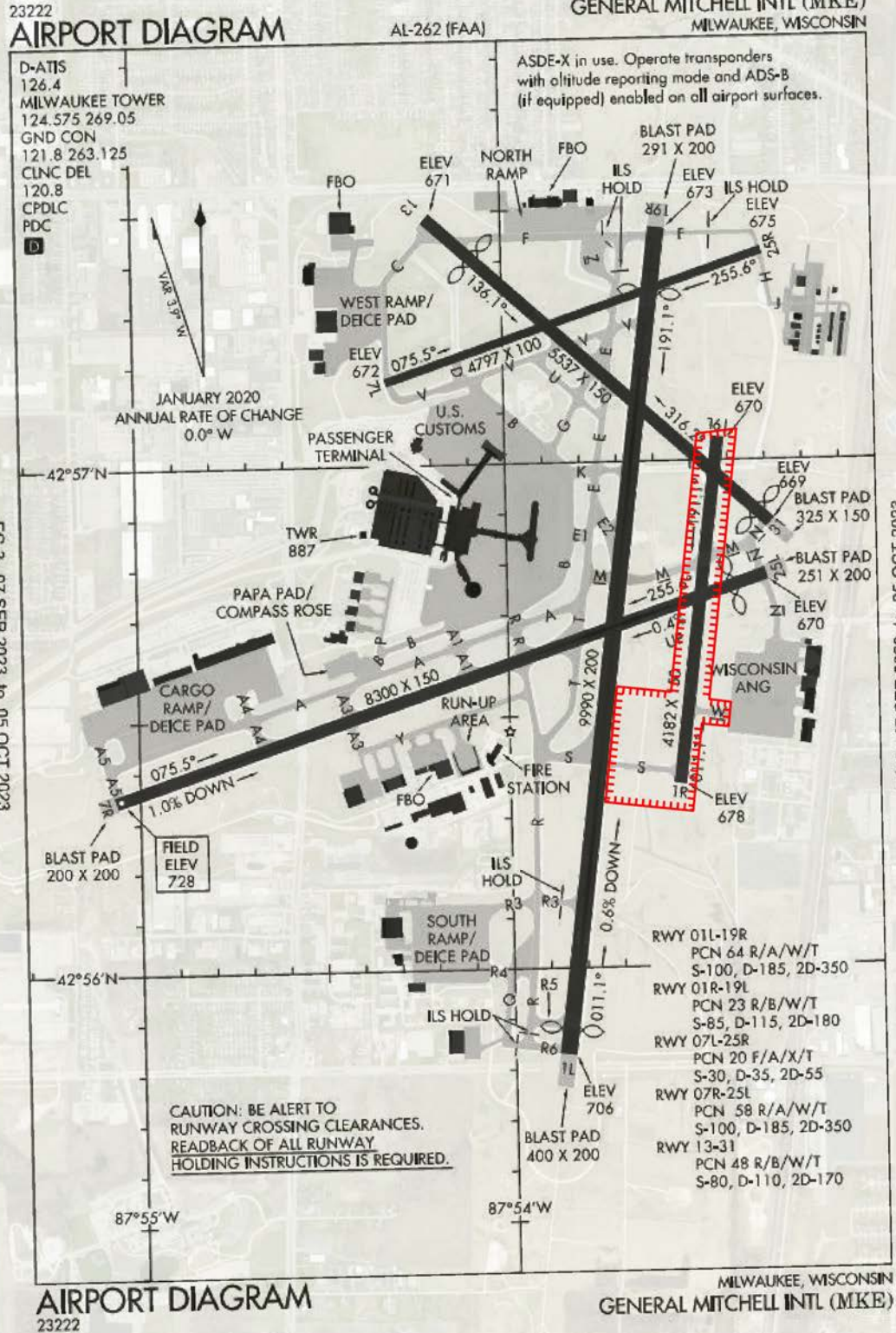
Date: 10/17/2023

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

FIGURE NO.
2



Area of Potential Effects



EC-3, 07 SEP 2023 to 05 OCT 2023

EC-3, 07 SEP 2023 to 05 OCT 2023

0 2,000 4,000 Feet

Data Source:
FAA (Sep/Oct 2023)

Westwood

1 Systems Drive
Appleton, WI 54914 (920) 735-6900
www.westwoodps.com



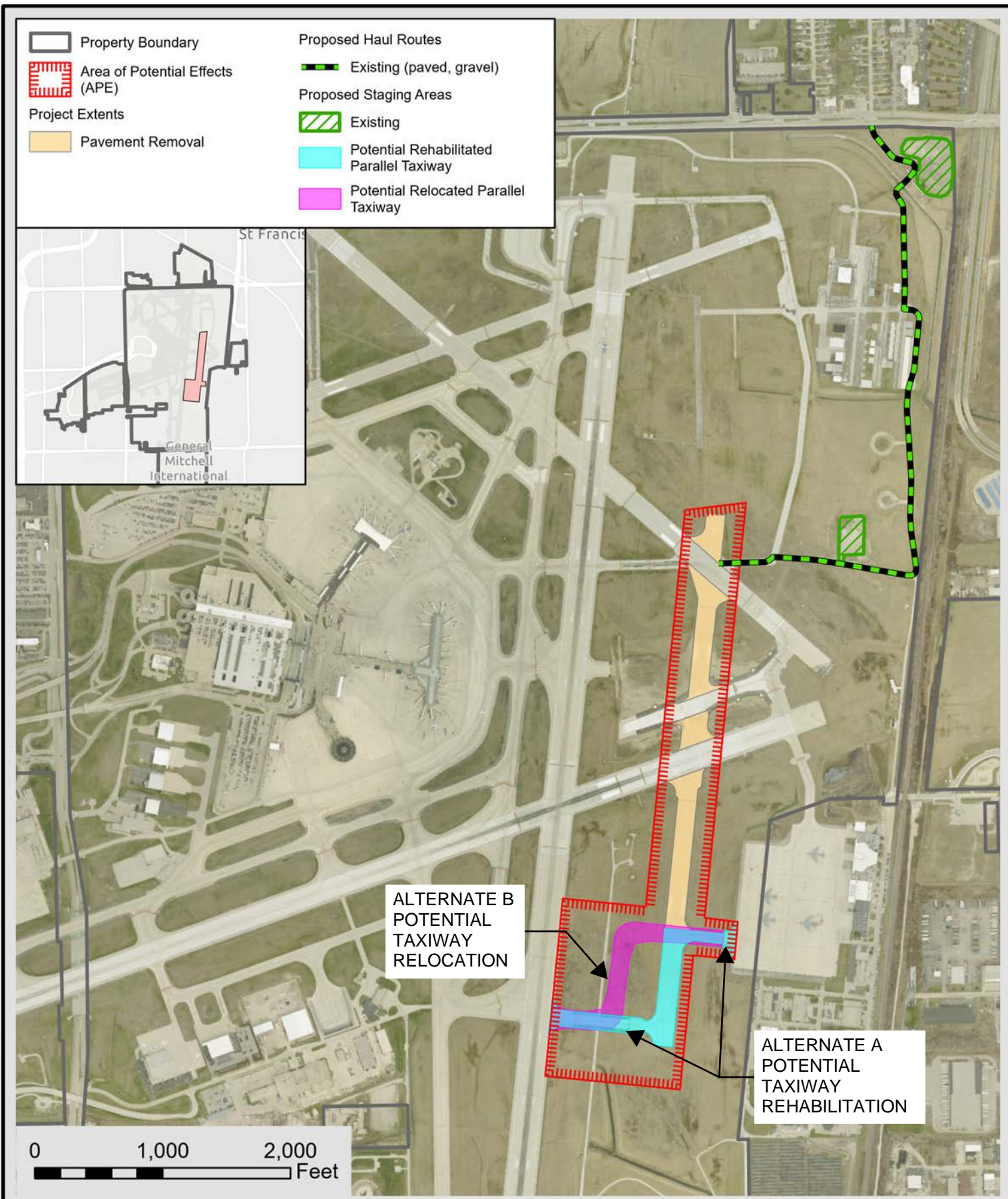
**MKE RUNWAY 1R-19L REMOVAL
AIRPORT DIAGRAM MAP**

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

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

Date: 10/17/2023

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



| | | | | |
|---|--|--|--|--|
| <p>Westwood</p> <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> | | <p>MKE RUNWAY 1R-19L REMOVAL</p> <p>AREA OF POTENTIAL EFFECTS</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager:</p> <p>Project Engineer:</p> <p>Drawn By: JCW</p> <p>Checked By:</p> <p>Date: 10/10/2023</p> | <p>SCALE: 1 in = 1,000 ft</p> <p>PROJECT NO. R3001844.00</p> <p>FIGURE NO. 4</p> |
|---|--|--|--|--|

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/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.

Sincerely, 
Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure

Email CC: USACE Project Manager
Brian Krostedt, Quest



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

| | | | |
|-----------------------|--|----------------------|------------------|
| 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 | | | | | | |
|  | | | | | | | |

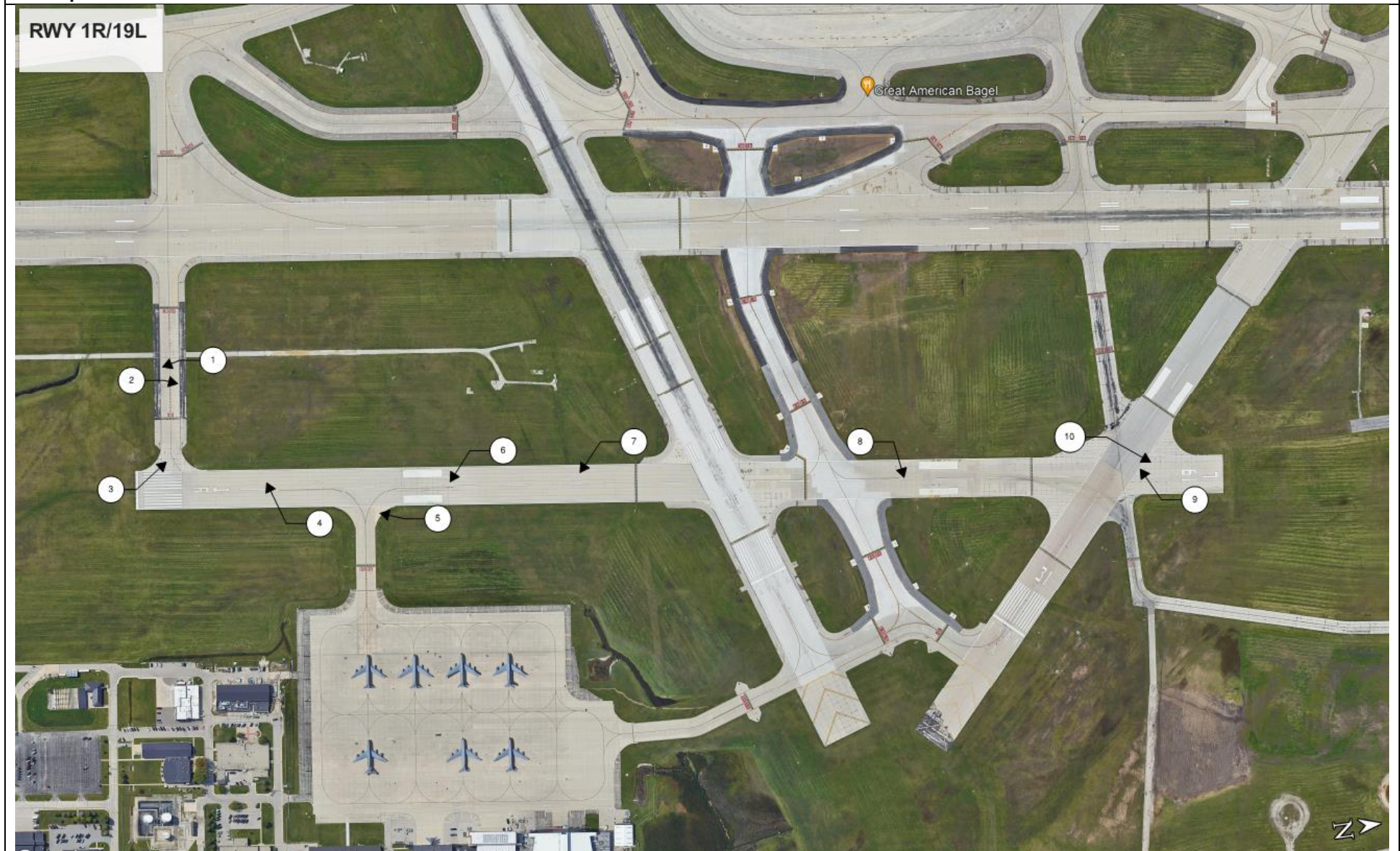
| | | | | | |
|---|--|--------------|---------|----------------|----|
| Site Location: | General Mitchell International Airport – Decommission Runway 1R-19L | Date: | 9/12/23 | Photo # | 10 |
| Description: | Standing on Runway 1R-19L looking north, area shows pavement deterioration | | | | |
|  | | | | | |

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

Date: N/A

Photo # 11

Description: Site Aerial Overview



Kaitlyn Wehner

From: Turk, Christine <cturk@mitchellairport.com>
Sent: Wednesday, November 8, 2023 3:40 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 13-31 Decommissioning and Removal Project
Attachments: MKE RWY 13-31 - WDNR Initial Project Review Request.pdf; Attachment 1 - RWY 13-31 Location Map.pdf; Attachment 2 - RWY 13-31 Airport Property Map.pdf; Attachment 3 - RWY 13-31 Airport Diagram Map.pdf; Attachment 4 - RWY 13-31 Area of Potential Effects Map.pdf; Attachment 5 - Wetland Delineation Confirmation.pdf; Attachment 6 - RWY 13-31 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 13-31 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 13-31 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 13-31 (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 improve safety by removing non-standard runway/taxiway intersections.

Currently, Runway 13-31 is 5,537 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 13-31 primarily serves general aviation aircraft. Currently the intersection of Runway 13-31, Taxiway G, and Taxiway E can be classified as non-standard and has a greater potential for pilot confusion.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.



A wetland delineation was performed at the proposed location and submitted to the DNR. The delineation identified wetlands present in a ditch line southwest of Runway 1R-19L and is located outside of the Area of Potential Effects for the proposed project. (See Attachment 5 – Wetland Delineation Confirmation).

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 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 27 and 28 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. Thank you for your assistance.

Sincerely,

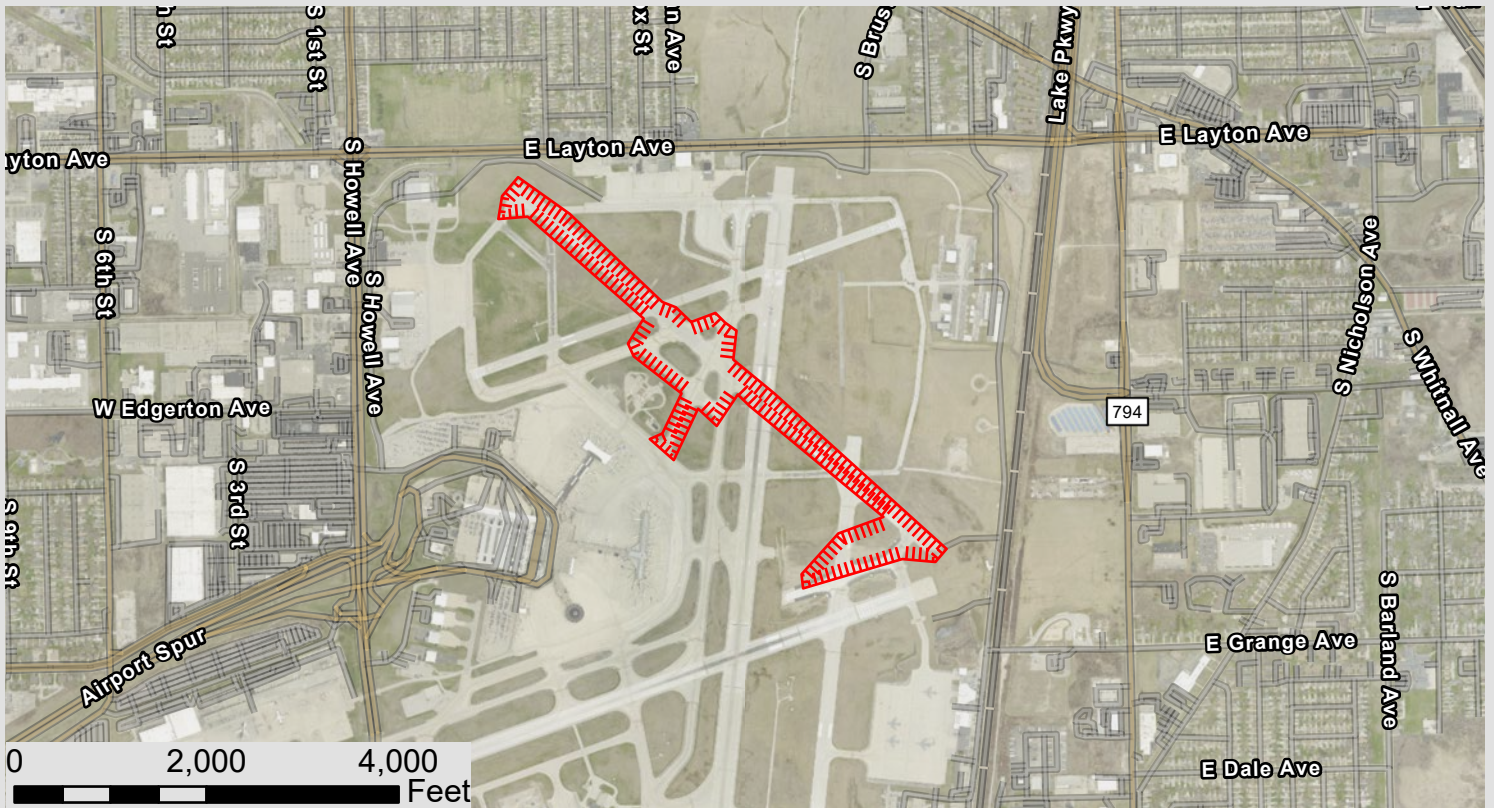
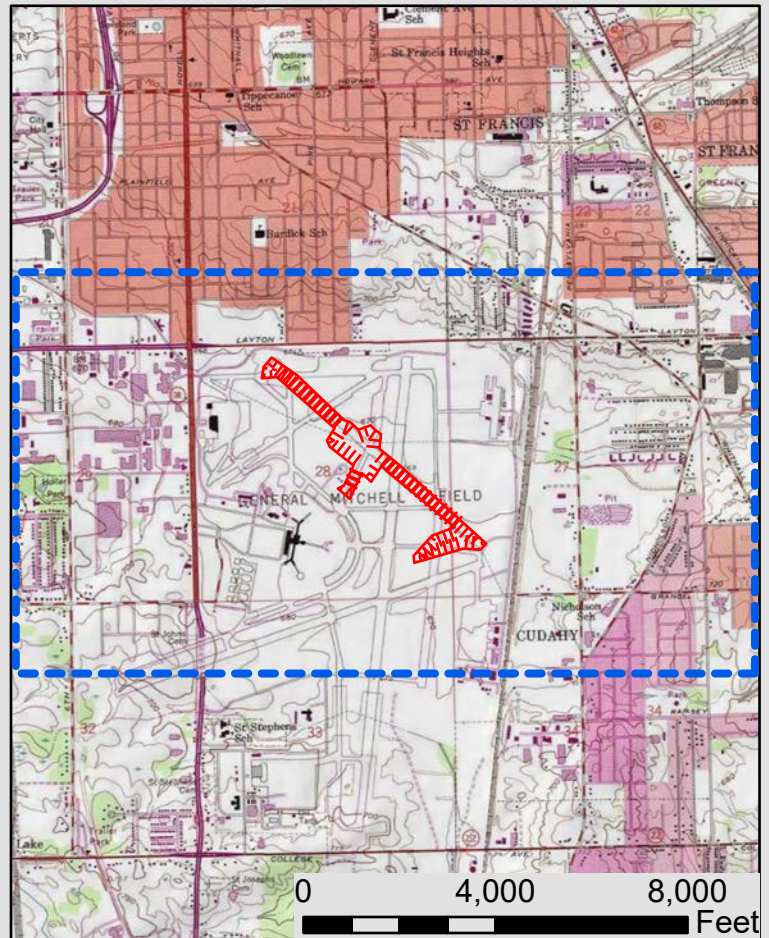
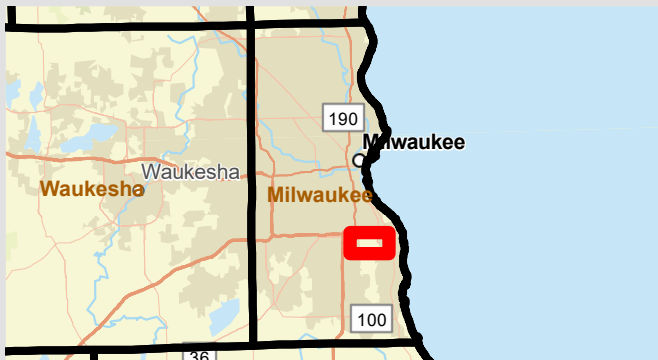
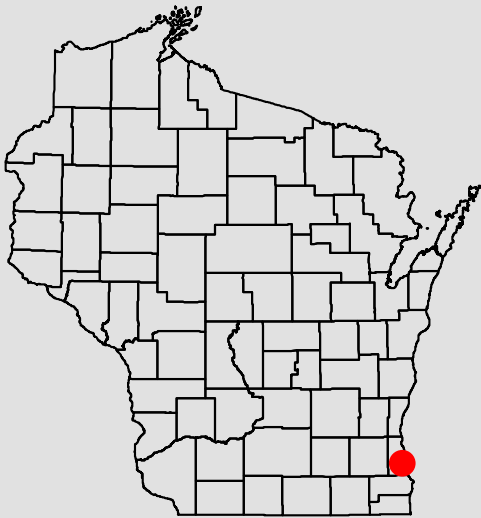
A handwritten signature in blue ink, appearing to read "Christine Turk".

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)



Westwood

1 Systems Drive (920) 735-6900
Appleton, WI 54914 www.westwoodps.com



MKE RUNWAY 13-31 REMOVAL LOCATION MAP

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

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

Date: 9/12/2023

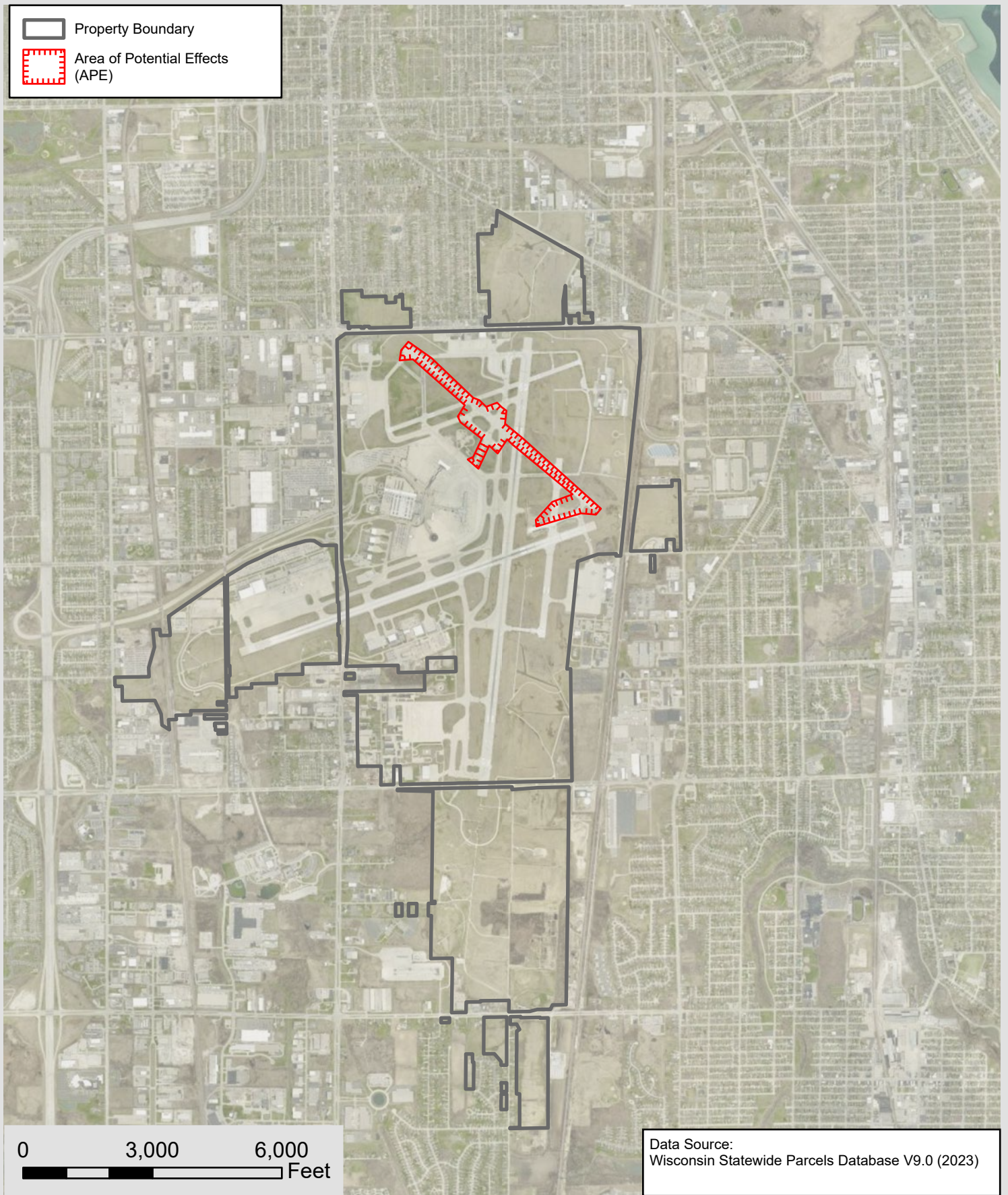
SCALE:
1 in = 2,000 ft
PROJECT NO.
R3001844.01
FIGURE NO.
1



Property Boundary



Area of Potential Effects
(APE)



Westwood

1 Systems Drive (920) 735-6900
Appleton, WI 54914 www.westwoodps.com



MKE RUNWAY 13-31 REMOVAL AIRPORT PROPERTY MAP

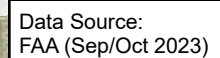
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 9/12/2023

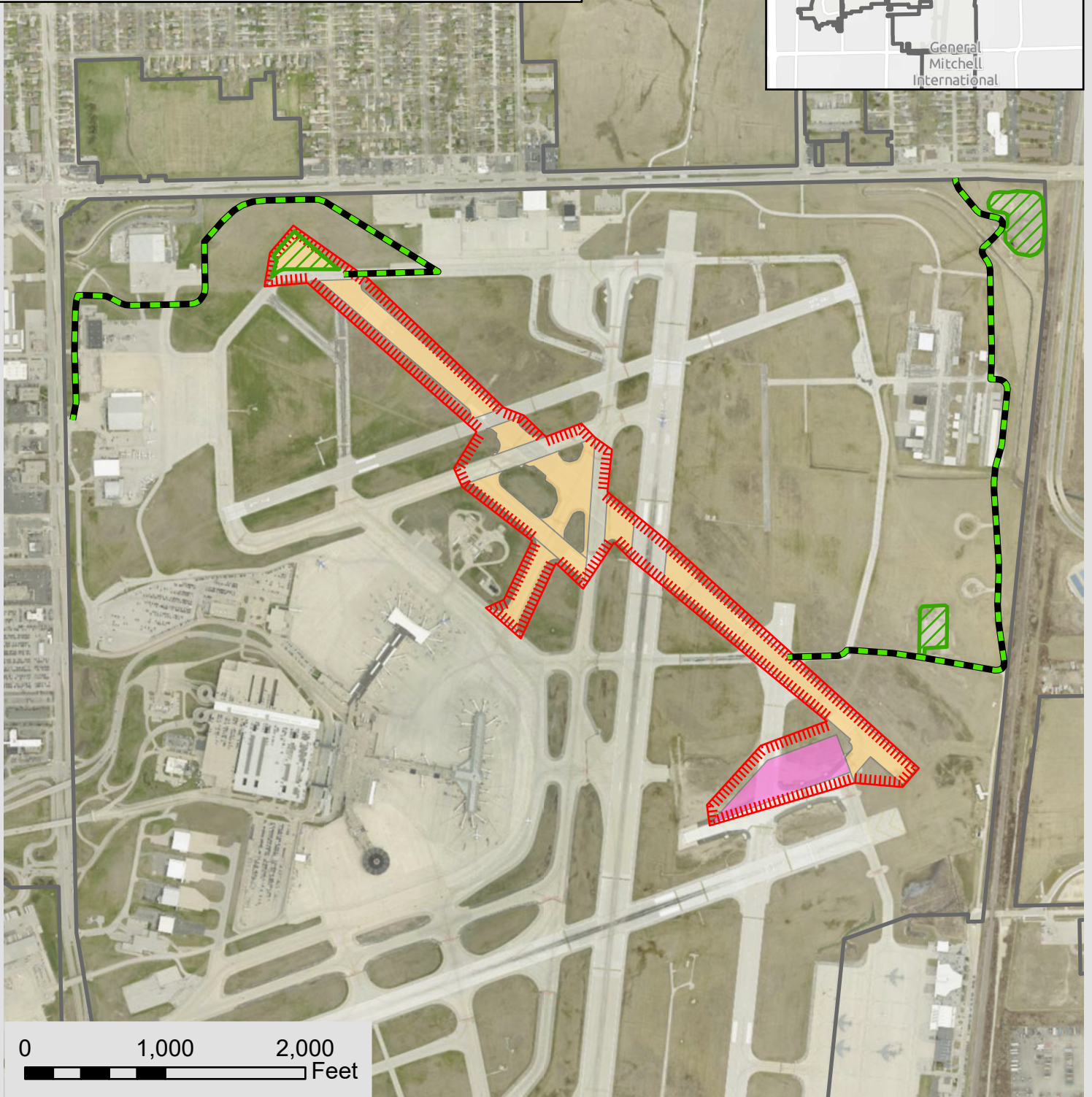
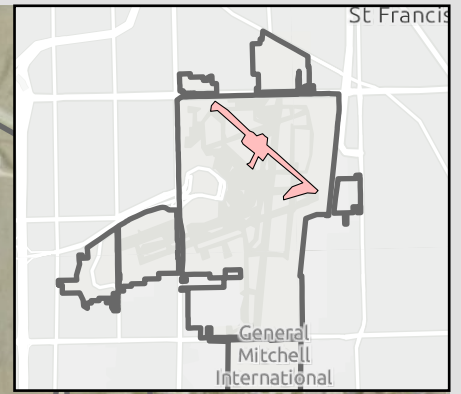
SCALE:
1 in = 3,000 ft
PROJECT NO.
R3001844.01

FIGURE NO.
2



- Property Boundary
- Area of Potential Effects (APE)
- Project Extents
 - Pavement Removal
 - Proposed Holding Bay

- Proposed Haul Routes
 - Existing (paved, gravel)
- Proposed Staging Areas
 - Existing



Westwood

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Appleton, WI 54914 www.westwoodps.com



MKE RUNWAY 13-31 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: 9/12/2023

SCALE:
1 in = 1,000 ft
PROJECT NO.
R3001844.01
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


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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.

Sincerely, 
Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure

Email CC: USACE Project Manager
Brian Krostedt, Quest




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

| | | | |
|-----------------------|--|----------------------|------------------|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 1 |
| Description: | Standing on Taxiway N looking southwest. | | |
| |  | | |


| | | | |
|-----------------------|---|----------------------|------------------|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 2 |
| Description: | Standing on Runway 13-31 looking southeast towards runway end. | | |
| |  | | |

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|--|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 3 |
| Description: | Standing on Runway 13-31 looking northwest. | | | | |
|  | | | | | |

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|---|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 4 |
| Description: | Standing Runway 13-31 looking southeast towards Runway 1R-19L . | | | | |
|  | | | | | |


| | | | | | |
|-----------------------|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 5 |
| Description: | Standing on Runway 13-31 near Taxiway G looking northeast. | | | | |
| |  | | | | |

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|-----------------------|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 6 |
| Description: | Standing on Taxiway U looking northeast at Taxiway G. | | | | |
| |  | | | | |

| | | | | | |
|--|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 7 |
| Description: | Standing on at intersection of Taxiway U and Taxiway G looking southwest towards passenger terminal. | | | | |
|  | | | | | |

| | | | | | |
|---|---|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 8 |
| Description: | Standing on Runway 13-31 near Runway 7L-25R looking northeast at PAPIs. | | | | |
|  | | | | | |

| | | | | | | | |
|--|--|--|--|--------------|---------|----------------|---|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | | | Date: | 9/12/23 | Photo # | 9 |
| Description: | Standing on Runway 13-31 looking northwest towards Taxiway F. | | | | | | |
|  | | | | | | | |

| | | | | | |
|---|--|--------------|---------|----------------|----|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 10 |
| Description: | Standing on Runway 13-31 near Taxiway F looking northwest. | | | | |
|  | | | | | |

| | | | | | |
|-----------------------|--|--------------|---------|----------------|----|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 11 |
| Description: | Standing on Runway 13-31 near Taxiway F looking southeast. | | | | |
| |  | | | | |

| | | | | | |
|-----------------------|---|--------------|---------|----------------|----|
| Site Location: | General Mitchell International Airport – Decommission Runway 13-31 | Date: | 9/12/23 | Photo # | 12 |
| Description: | Proposed Staging Area northeast of proposed project, looking east. | | | | |
| |  | | | | |

Site Location: General Mitchell International Airport – Decommission Runway 13-31

Date: N/A

Photo # 13

Description: Site Aerial Overview



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.

| | | |
|---|---|---|
| WDNR Transportation Liaison | WisDOT Aeronautical Environmental Coordinator (Send copy of all coordination to AEC) | WisDOT BOA Project Manager |
| TO: Ryan Pappas (414) 750-7495 Ryan.Pappas@Wisconsin.Gov | FROM: 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) | | |
| Type of Document Requested <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: | Document Delivery Date Information (mm/dd/yyyy) 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: | |
| Proposed Work Involved <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 | | |
| Storm Water Management (check all that apply) <i>Estimated Acres of Ground Disturbance</i> (include total acreage of all disturbed areas, plus known select sites) <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 (Guidance) | Attachments <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: | |

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.

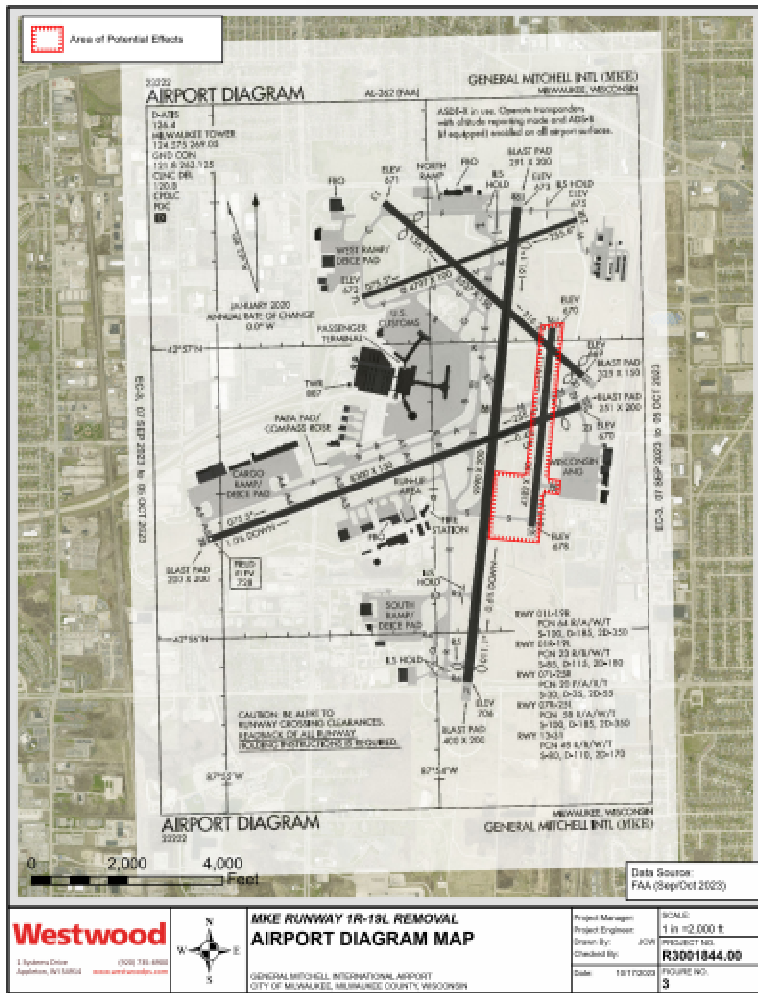
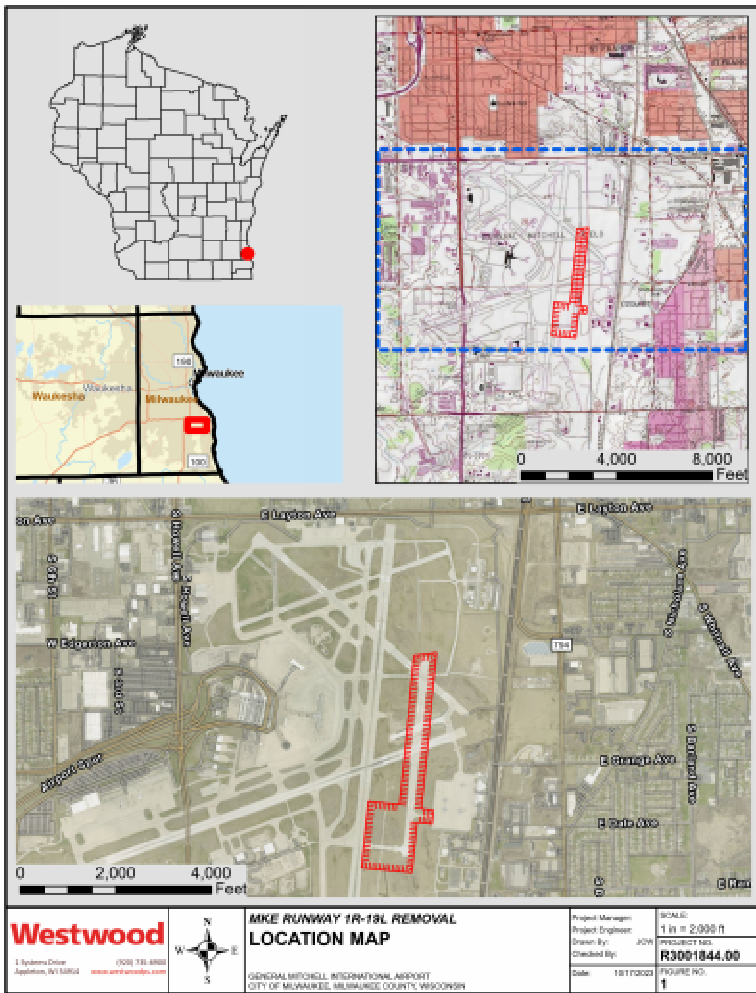
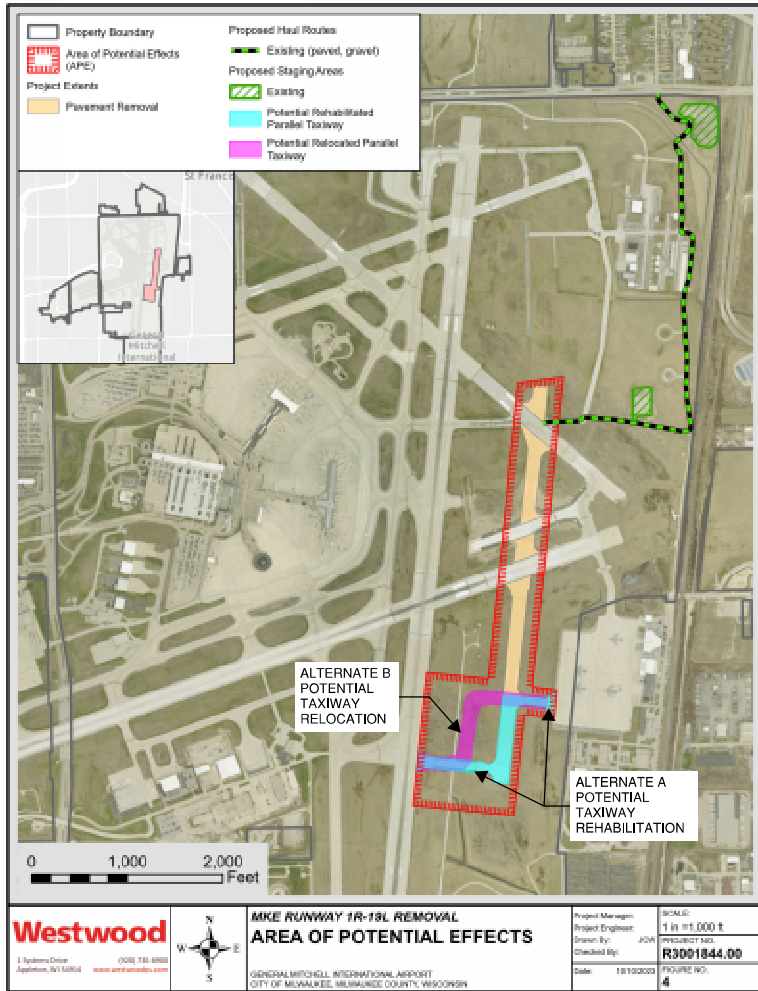
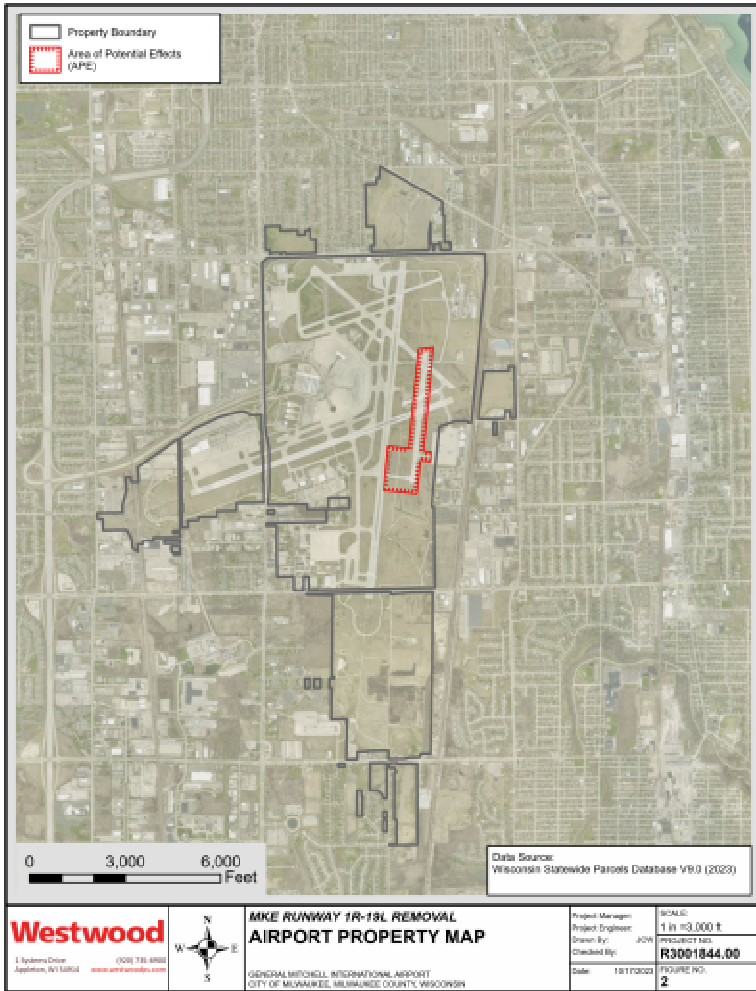
Proposed Project Purpose and Need

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.

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





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 1-888-436-7463
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/ERRReview/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.

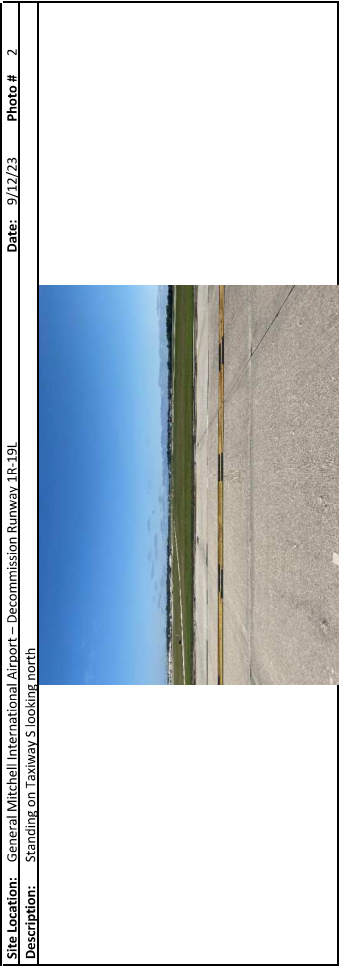
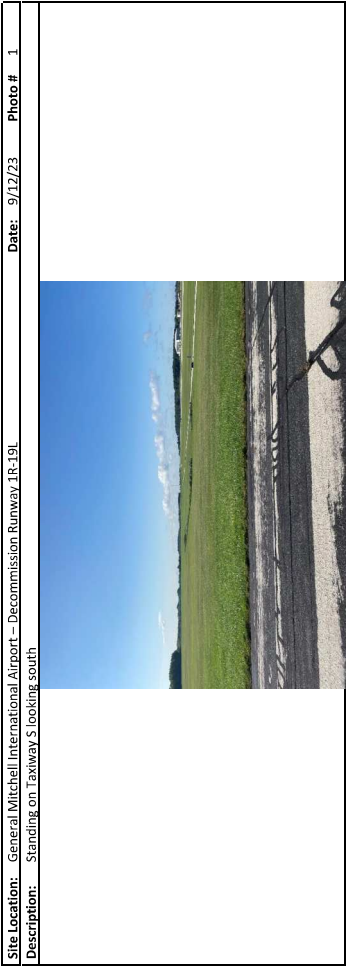
If you have any questions, please call me at (414) 306-6780 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely,

Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure


Email CC: USACE Project Manager
Brian Krostedt, Quest




| | | |
|---|----------------------|------------------|
| 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 | | |
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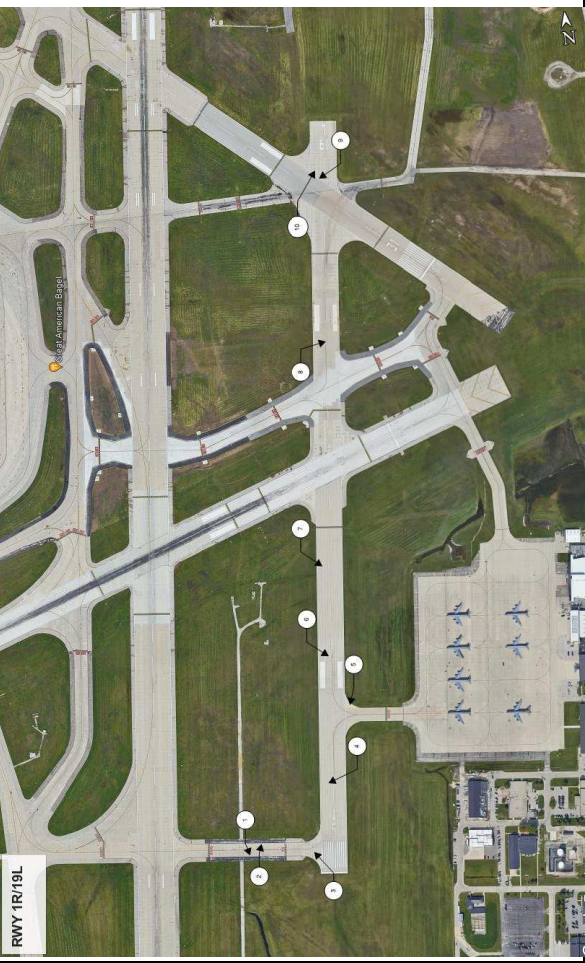
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| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Runway 1R-19L north of Taxiway W looking south | | |
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| 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 | | |
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| 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 | | |
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| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 7 |
| Description: Standing on Runway 1R-19L looking south | | |
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|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 8 |
| Description: Standing on Runway 1R-19L looking north | | |
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|---|------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: N/A | Photo # 11 |
| Description: Site Aerial Overview | | |
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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.

| | | |
|--|---|---|
| WDNR Transportation Liaison | WisDOT Aeronautical Environmental Coordinator (Send copy of all coordination to AEC) | WisDOT BOA Project Manager |
| TO: Ryan Pappas (414) 750-7495 Ryan.Pappas@Wisconsin.Gov | FROM: 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 13-31 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) | | |
| Type of Document Requested <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: | Document Delivery Date Information (mm/dd/yyyy) DNR Project Coordination Request Submittal: 12/11/2023 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: | |
| Proposed Work Involved <input type="checkbox"/> Runway Rehabilitation/Reconstruction – Runway ID: <input type="checkbox"/> Taxiway Rehabilitation/Reconstruction – Taxiway ID: <input type="checkbox"/> Apron Rehabilitation/Reconstruction <input checked="" 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 13/31 Decommissioning with Pavement Removal, Removal of Taxiway G, U, N, Taxiway M Holding Bay | | |
| Storm Water Management (check all that apply) <i>Estimated Acres of Ground Disturbance</i> (include total acreage of all disturbed areas, plus known select sites) <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 (Guidance) | Attachments <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 13-31. 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 on Airport property in Sections 27 & 28 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 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.

The estimated start date and duration of the project construction is spring of 2027 to fall of 2028.

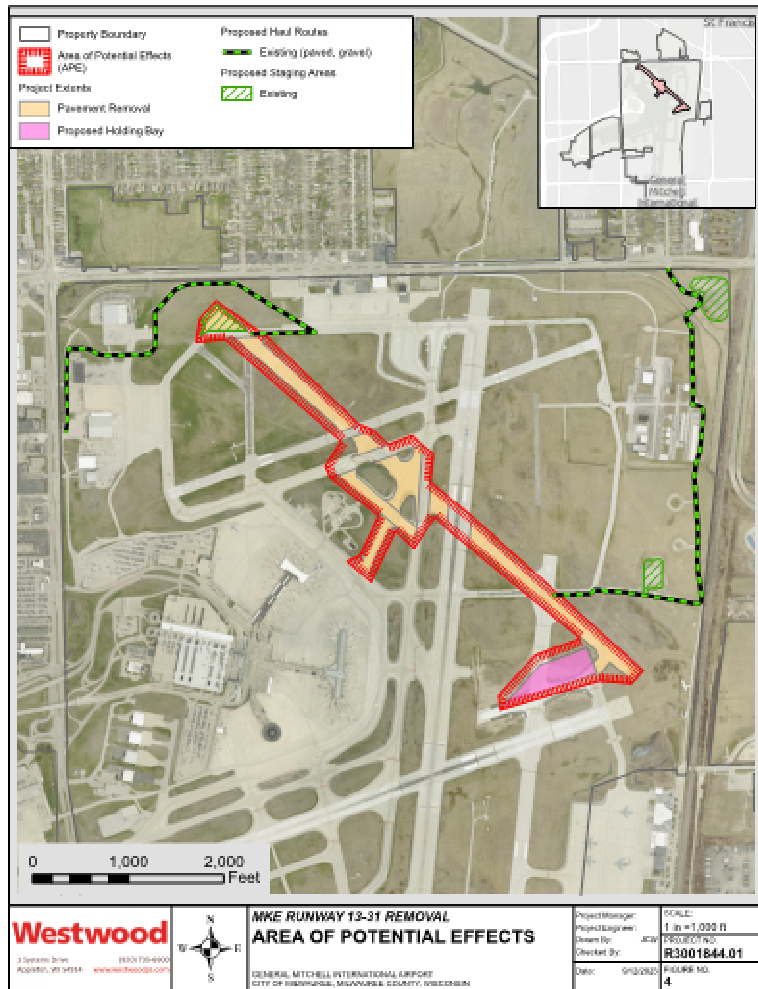
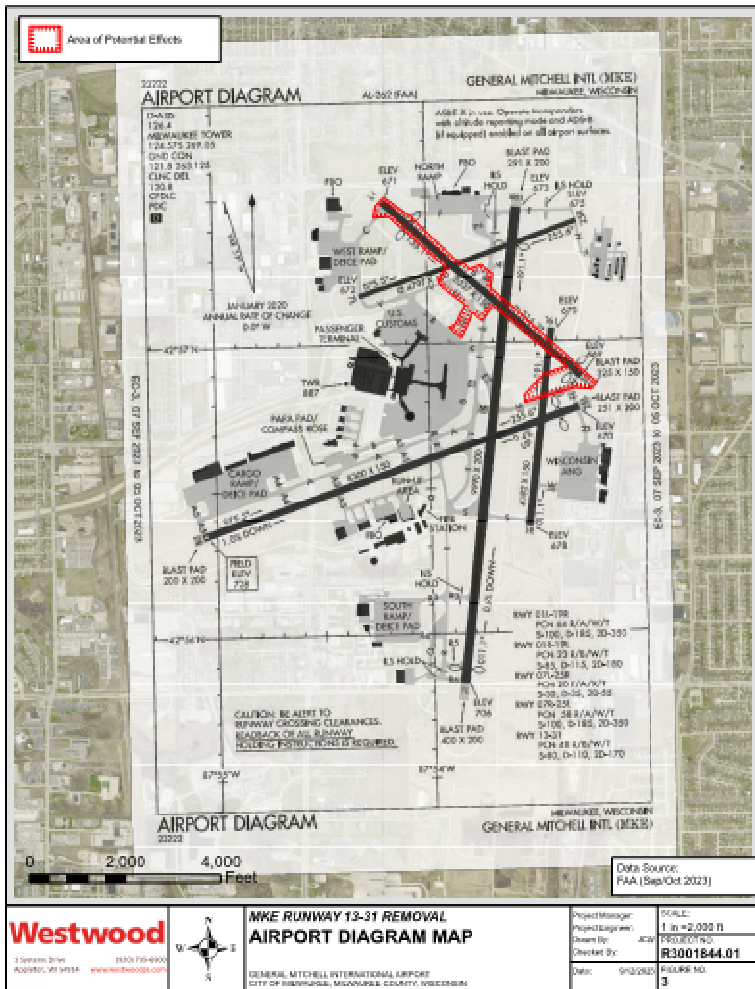
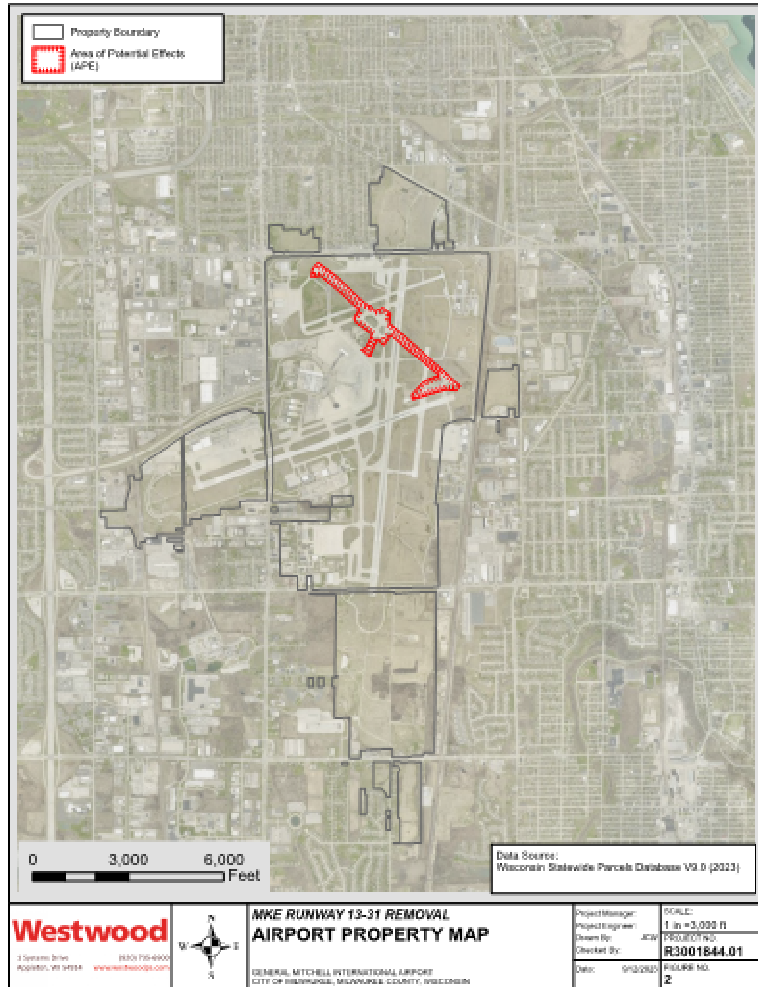
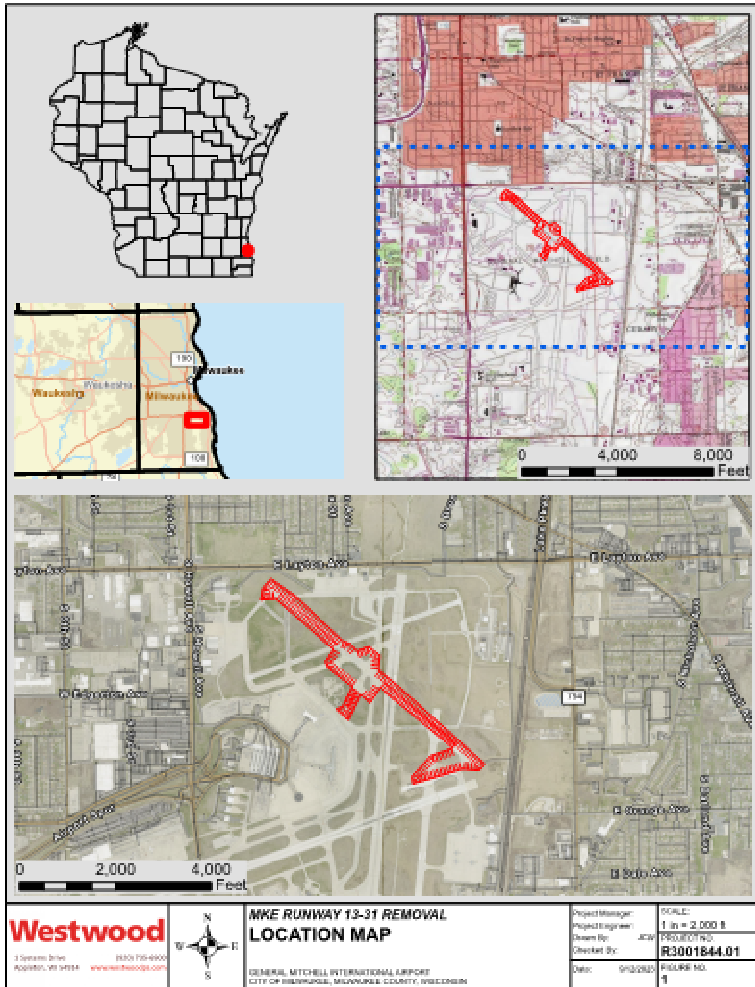
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List of Attachments *(A Project Location Map with proposed project limits and aerial map showing resources in project area must be included. Other attachments not referenced on the previous page that may expedite the IRL process include; scoping information, 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
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4. Area of Potential Effects Map
5. Wetland Delineation Confirmation
6. Photo Log



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).

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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.

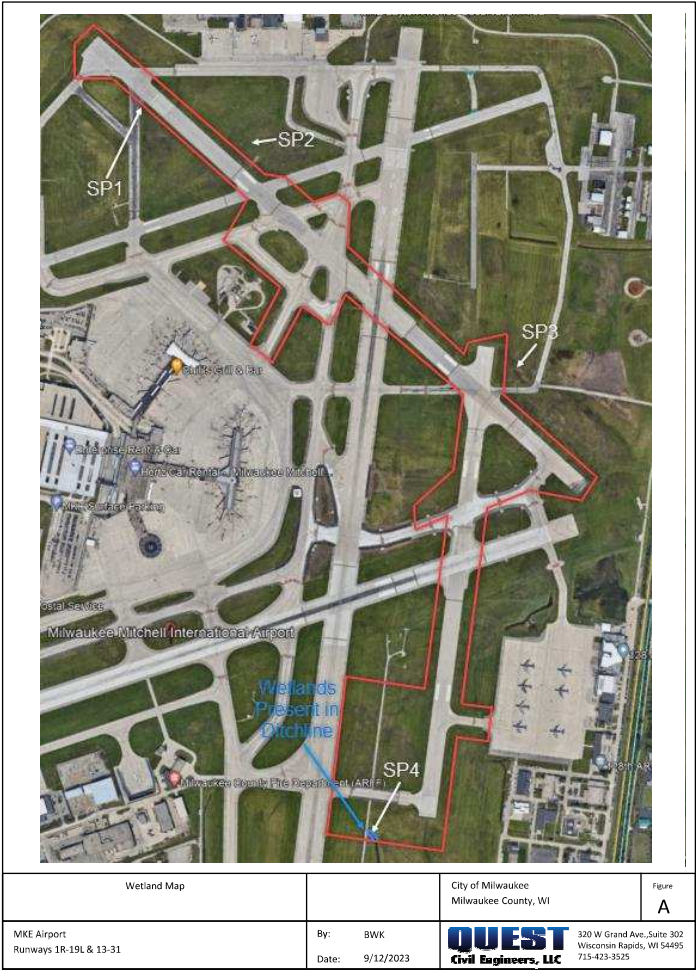
If you have any questions, please call me at (414) 306-6780 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely, 

Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure

Email CC: USACE Project Manager
Brian Krostedt, Quest



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 7 |
| Description: Standing on at intersection of Taxiway U and Taxiway G looking southwest towards passenger terminal. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 8 |
| Description: Standing on Runway 13-31 near Runway 7L-25R looking northeast at PAPIs. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 5 |
| Description: Standing on Runway 13-31 near Taxiway G looking northeast. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Taxiway U looking northeast at Taxiway G. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 11 |
| Description: Standing on Runway 13-31 near Taxiway F looking southeast. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 12 |
| Description: Proposed Staging Area northeast of proposed project, looking east. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 9 |
| Description: Standing on Runway 13-31 looking northwest towards Taxiway F. | | |



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|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 10 |
| Description: Standing on Runway 13-31 near Taxiway F looking northwest. | | |



Site Location: General Mitchell International Airport – Decommission Runway 13-31

Description: Site Aerial Overview

Date: N/A

Photo # 13





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 128th 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 15th 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.

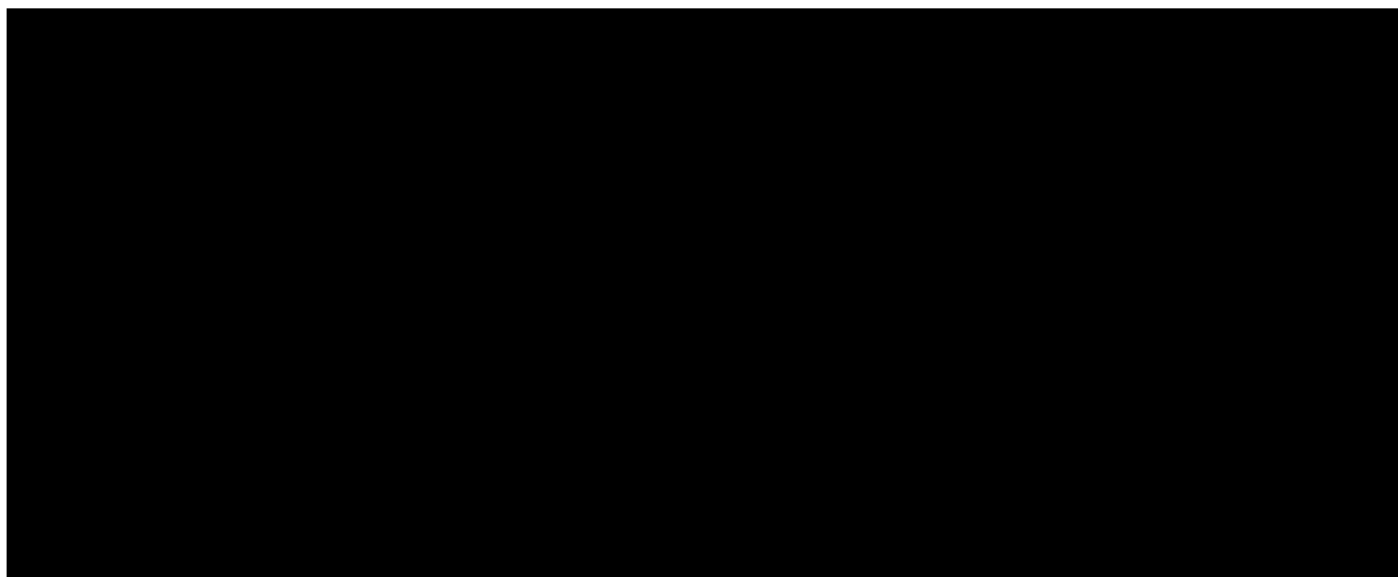
If erosion control matting is to be used along stream corridors, DNR recommends biodegradable non-netted matting (e.g. Class I Type A Urban, Class I Type B Urban, or Class II Type C). Long-term netted mats may cause animal entrapment. Avoid the use of fine mesh matting that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size.



Figure 1. Wilson Park Creek and associated tributary are shown highlighted on the above map. These are navigable waterways that are enclosed on the airport property.

Natural Heritage Conservation

Based upon a review of the Natural Heritage Inventory (NHI) dated 12-1-2023, there are no known state listed threatened or endangered species or suitable habitat that could be impacted by this project. With this review the following has also been determined:



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

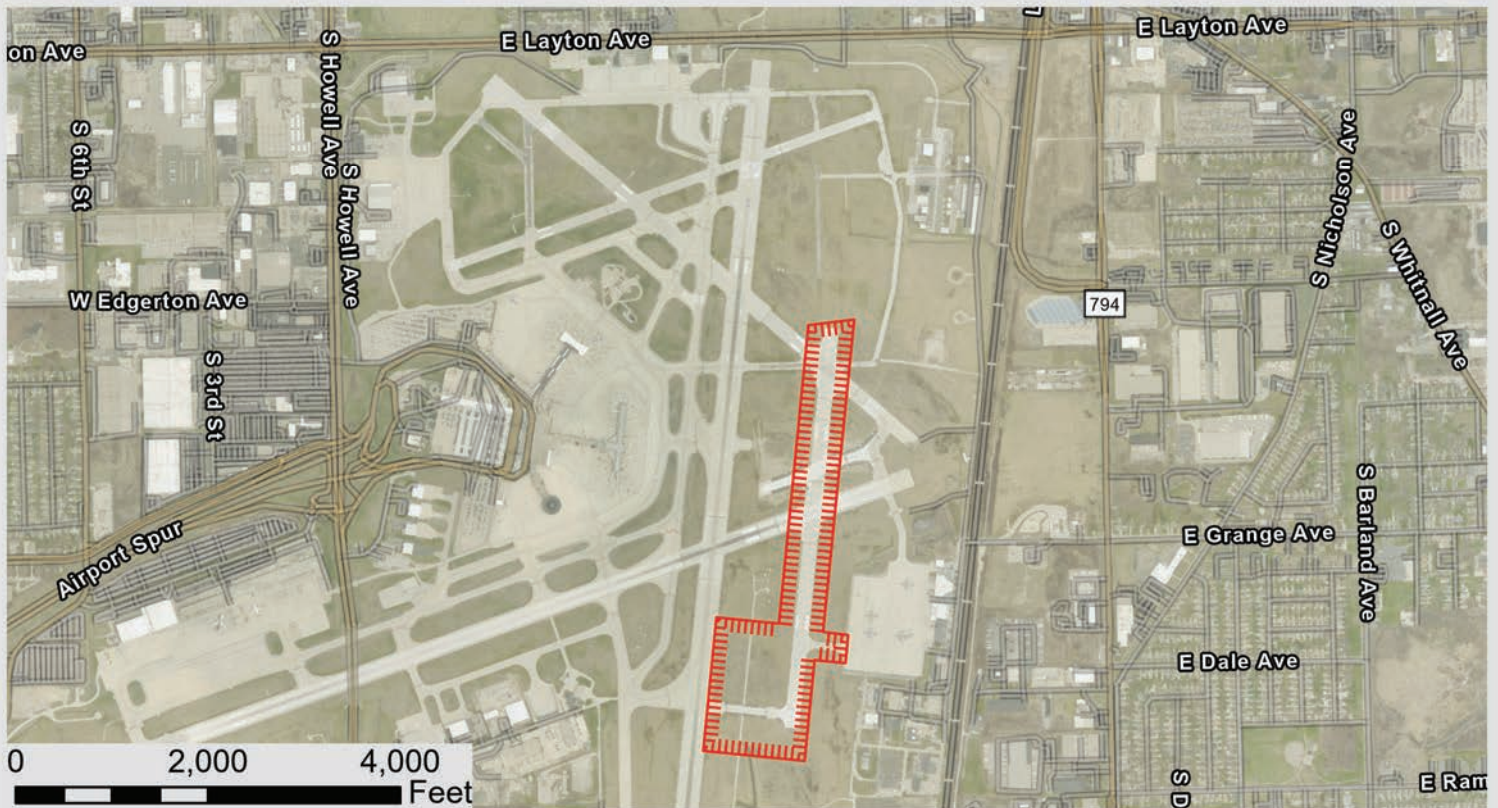
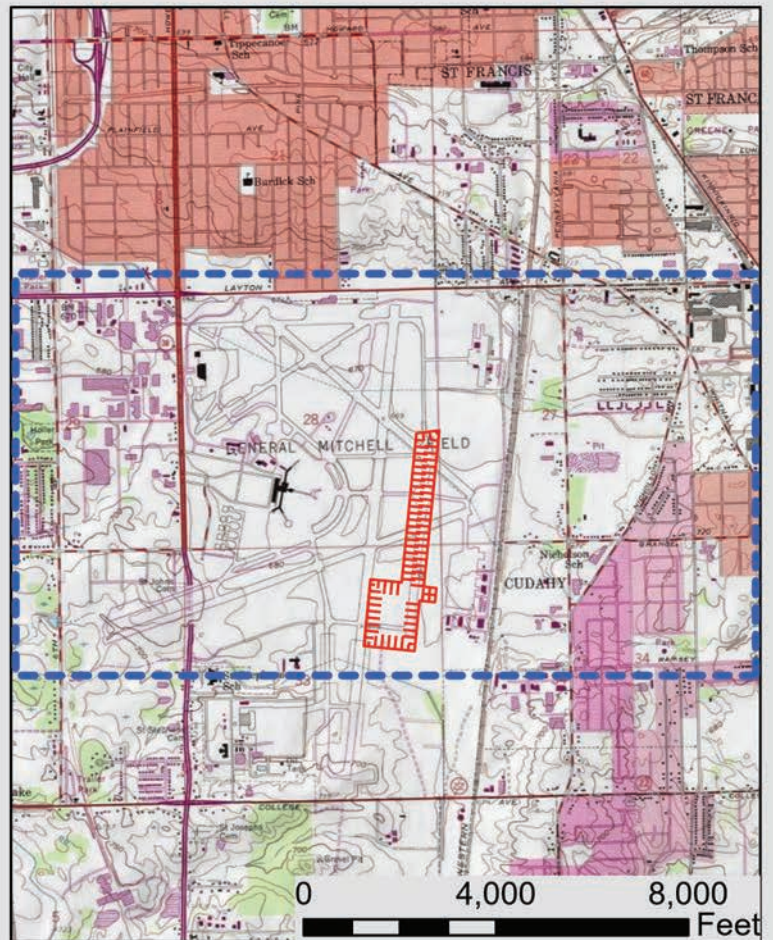
Sincerely,



Ryan Pappas
Environmental Analysis & Review Specialist

Enclosure: Map

cc: Wendy Hottenstein, WisDOT – BOA Wendy.Hottenstein@dot.wi.gov
Justin Weiss, General Mitchell International Airport jweiss@mitchellairport.com
Anthony Raab, General Mitchell International Airport araab@mitchellairport.com



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1 Systems Drive (920) 735-6900
Appleton, WI 54914 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



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 13-31 Decommissioning and Removal
General Mitchell International Airport (MKE)
City of Milwaukee, Milwaukee County
Sections 27 and 28 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 13-31 at the General Mitchell International Airport (MKE). The proposed project undertaking will consist of the following actions:

- Decommissioning of runway 13-31.
- Removal of taxiway G, taxiway U, and taxiway N connectors
- Removal of approx. 126,900 SY of pavement and associated electrical utilities and NAVAIDs for runway 13-31, taxiway G, taxiway U, and taxiway N.
- Proposed addition of a holding bay adjacent to taxiway M including associated lighting.

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 are no wetland concerns with this project, based on the information provided.

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 15th 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.
- Currently no in-stream work is proposed in the scope of work of this project. Runway and associated features would be removed over the top of the enclosed stream.
- Map below in figure 1.

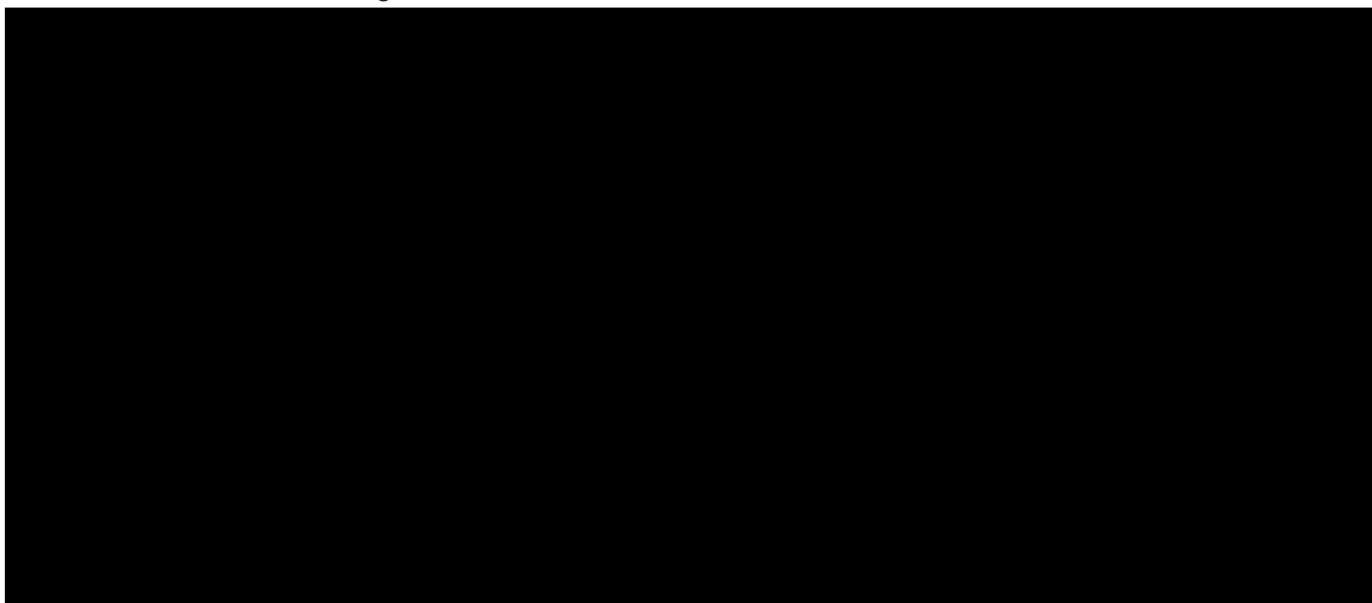
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Implementation Plan (ECIP) must comply with the TCGP in order to receive permit-coverage from the DNR.

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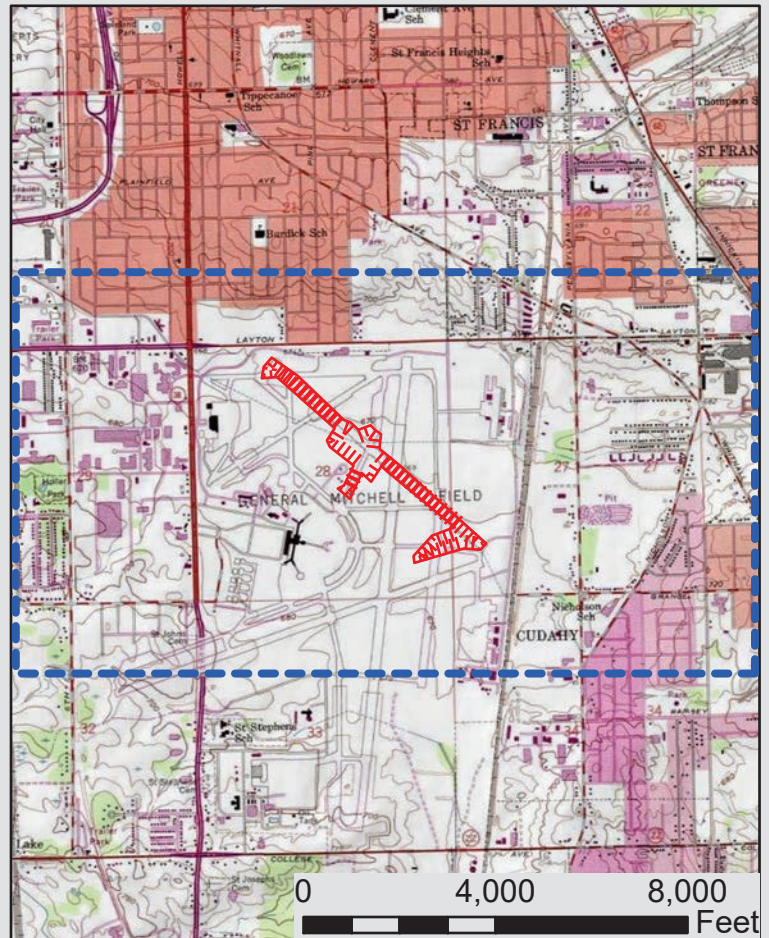
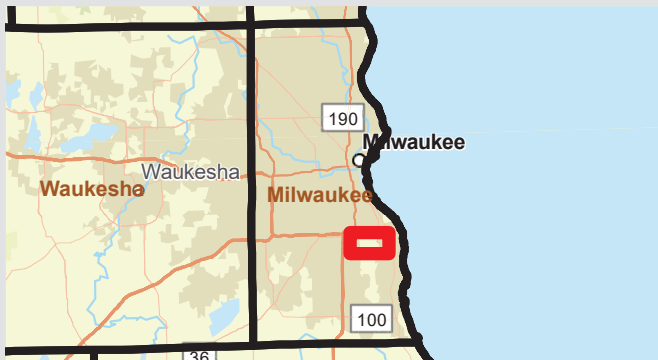
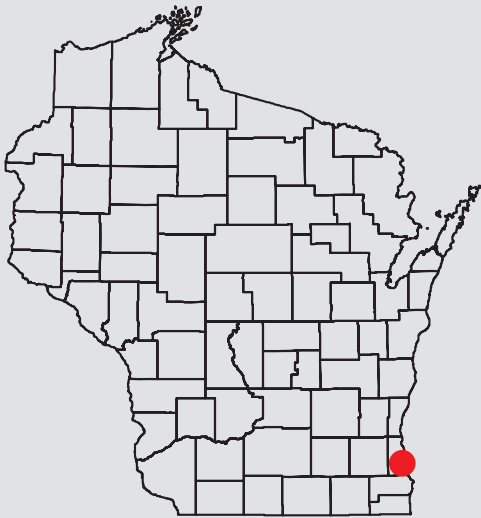
Sincerely,



Ryan Pappas
Environmental Analysis & Review Specialist

Enclosure: Map

cc: Wendy Hottenstein, WisDOT – BOA Wendy.Hottenstein@dot.wi.gov
Justin Weiss, General Mitchell International Airport jweiss@mitchellairport.com
Anthony Raab, General Mitchell International Airport araab@mitchellairport.com



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Appleton, WI 54914 www.westwoodps.com



MKE RUNWAY 13-31 REMOVAL LOCATION MAP

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

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

Date: 9/12/2023

SCALE:
1 in = 2,000 ft
PROJECT NO.
R3001844.01
FIGURE NO.
1

Kaitlyn Wehner

From: Dasse, Michelle <mdasse@mitchellairport.com>
Sent: Thursday, February 22, 2024 2:18 PM
To: David.Hanson@wisconsin.gov
Cc: Weiss, Justin; Kaitlyn Wehner; Brian Wayner
Subject: Milwaukee General Mitchell Airport – Runway 13-31 EA Continuing Obligation Inquiry (BRRTS # 02-41-558334)
Attachments: Attachments - MKE RWY 13-31 BRRTS# 02-41-558334 Continuing Obligation_20240214.zip

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

Mr. Hanson,

Milwaukee General Mitchell International Airport is beginning preliminary studies for a proposed project of decommissioning and removal of Runway 13-31 (Project). The purpose for the proposed project is to align the airfield configuration with the recent FAA-approved Airport Layout Plan.

The proposed Project would consist of the following (See Attachment 1 – Airport Property Map & Attachment 2 – Area of Potential Effects):

- Decommissioning of Runway 13-31.
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors.
- Removal of approximately 126,900 square yards of pavement with restoration to turf.
- Removal of associated electrical utilities and Navigational Aids (NAVAIDs).
- Alternative for the addition of a holding bay adjacent to Taxiway M, including lighting.

Through preliminary analysis during a Phase 1 Environmental Site Assessment, continuing obligations were identified for closed site BRRTS# 02-41-558334 Shell Pipeline at Gen Mitchell Intl. Airport.

The proposed Project is anticipated to remove pavement within and around the footprint of the closed BRRTS site. Attachment 3 and Attachment 4 show the proposed project anticipated pavement removals in relation to the closed BRRTS site.

The continuing obligations identified include:

1. Residual Groundwater Contamination
 - a. The proposed Project does not include the construction or modification of a well.
2. Residual Soil Contamination
 - a. Anticipated construction activities include pavement removal, minor grading, and topsoil placement restored to turf near the closed BRRTS site.
3. Structural Impediments
 - a. The Structural Impediment appears to have been east of Taxiway E. The proposed project removals are located west of Taxiway E and north of the pipeline excavation area.

Currently, a NEPA preliminary environmental assessment is being prepared for the Project. The Project is not anticipated to conflict with the continuing obligations of the closed BRRTS site. Please let me know if you have availability for a brief meeting to discuss the proposed Project and any concerns DNR has with the proposed work.

Thank you,
Michelle

Michelle Dasse

Airport Environmental Manager

MKE – Milwaukee Mitchell International Airport

5300 South Howell Avenue

Milwaukee, WI 53207

Tel: 414-747-5713

Cell: 414-307-2545

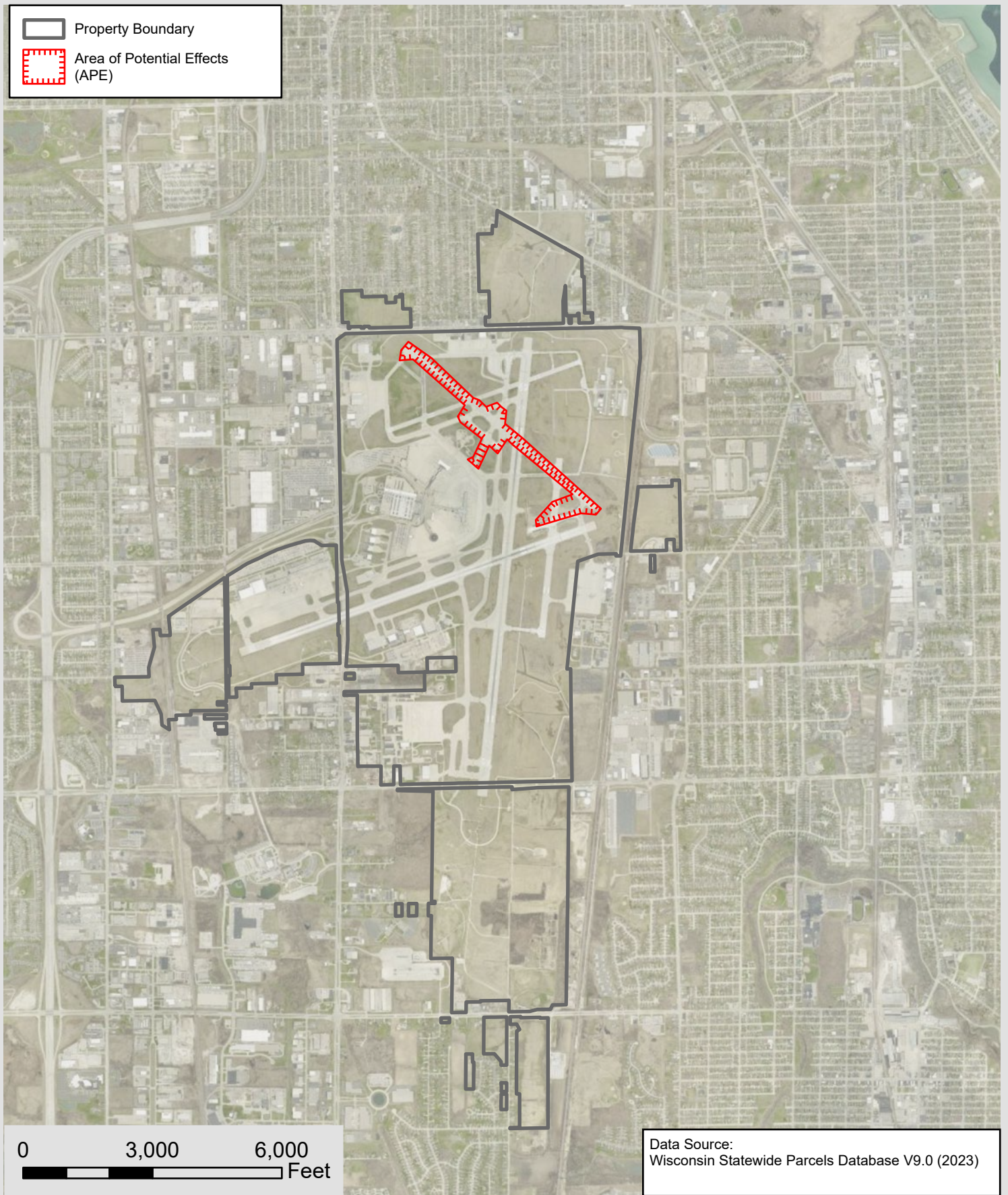




Property Boundary



Area of Potential Effects
(APE)



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Appleton, WI 54914 www.westwoodps.com



MKE RUNWAY 13-31 REMOVAL AIRPORT PROPERTY MAP

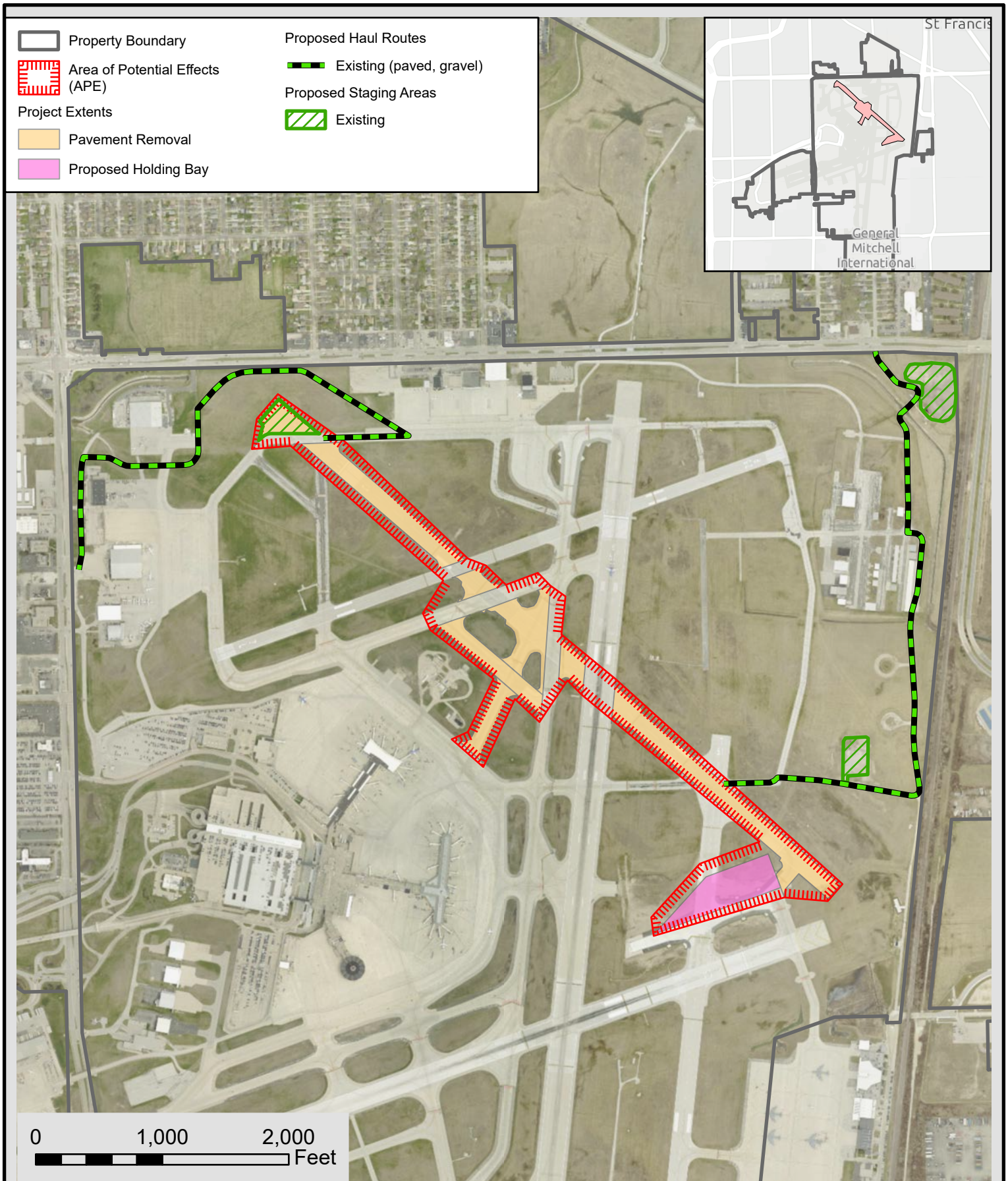
GENERAL MITCHELL INTERNATIONAL AIRPORT
CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

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

Date: 9/12/2023

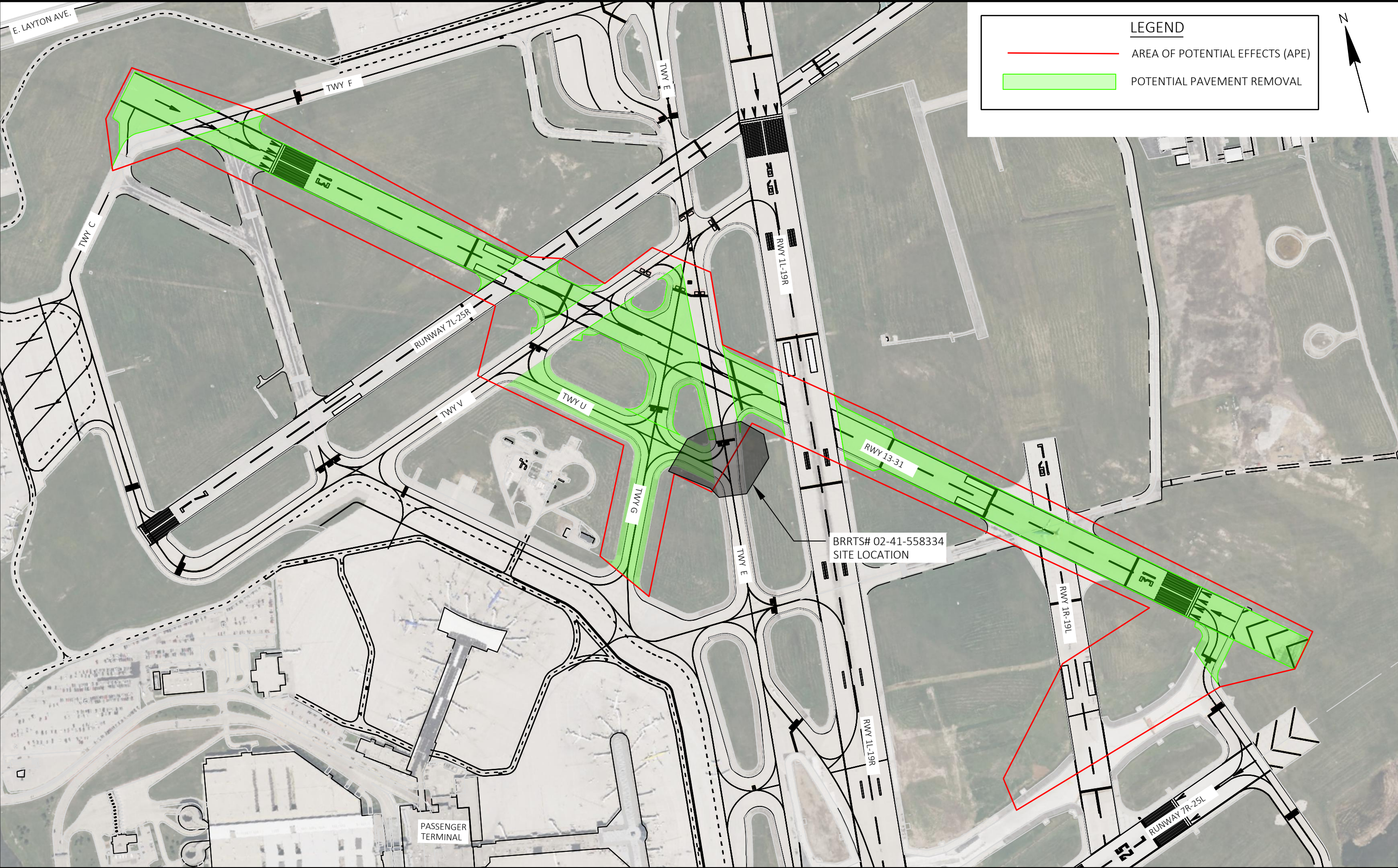
SCALE:
1 in = 3,000 ft
PROJECT NO.
R3001844.01

FIGURE NO.
2



| | | | | |
|---|------------------------|---|---|--|
| <p>Westwood</p> <p>1 Systems Drive Appleton, WI 54914</p> <p>(920) 735-6900 www.westwoodps.com</p> | <p>N W E S</p> | <p>MKE RUNWAY 13-31 REMOVAL</p> <p>AREA OF POTENTIAL EFFECTS</p> <p>GENERAL MITCHELL INTERNATIONAL AIRPORT CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN</p> | <p>Project Manager:</p> <p>Project Engineer:</p> <p>Drawn By: JCW</p> <p>Checked By:</p> <p>Date: 9/12/2023</p> | <p>SCALE: 1 in = 1,000 ft</p> <p>PROJECT NO. R3001844.01</p> <p>FIGURE NO. 4</p> |
|---|------------------------|---|---|--|

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Source Property Information

CLOSURE DATE: 05/19/2015

BRRTS #: 02-41-558334

ACTIVITY NAME: SHELL PIPELINE AT GEN MITCHELL INTL AIRPORT

FID #: 241336370

PROPERTY ADDRESS: 5300 S Howell Ave

DATCP #:

MUNICIPALITY: Milwaukee

PECFA#:

PARCEL ID #: 6409999118

*WTM COORDINATES:

WTM COORDINATES REPRESENT:

X: 691696 Y: 277576

☒ Approximate Center Of Contaminant Source

** Coordinates are in
WTM83, NAD83 (1991)*

☐ Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

☒ Groundwater Contamination > ES (236)

☒ Soil Contamination > *RCL or **SSRCL (232)

☐ Contamination in ROW

☐ Contamination in ROW

☐ Off-Source Contamination

☐ Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

Site Specific Obligations:

☐ Soil: maintain industrial zoning (220)

☐ Cover or Barrier (222)

*(note: soil contamination concentrations
between non-industrial and industrial levels)*

☐ Direct Contact

☒ Structural Impediment (224)

☐ Soil to GW Pathway

☐ Site Specific Condition (228)

☐ Vapor Mitigation (226)

☐ Maintain Liability Exemption (230)

*(note: local government unit or economic
development corporation was directed to
take a response action)*

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? (234)

☒ Yes ☐ No ☐ N/A

** Residual Contaminant Level*

***Site Specific Residual Contaminant Level*

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-3128

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



May 19, 2015

Mr. Terrence G. Slaybaugh
Airport Director
General Mitchell International Airport
5300 S Howell Ave
Milwaukee, WI 53207

Mr. John Robbins
Shell Oil Products US
20945 S Wilmington Ave
Carson, CA 90810

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

Subject: Final Case Closure with Continuing Obligations
Shell Oil Products Pipeline Spill at General Mitchell International Airport
5300 S Howell Ave, Milwaukee, WI 53207
DNR BRRTS Activity #: 02-41-558334
FID #: 241336370

Dear Messrs. Slaybaugh and Robbins:

The Wisconsin Department of Natural Resources ("DNR") considers the Shell Oil Products pipeline spill closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you. Certain continuing obligations also apply to affected property owners or rights-of-way holders. These are identified within each continuing obligation.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The Southeast Region Closure Committee reviewed the request for closure on September 4, 2014 and on March 5, 2015. The DNR Closure Committee reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases. The Shell Oil Products pipeline spill is located at General Mitchell International Airport ("GMIA") at the intersection of taxiways Echo and Uniform, adjacent to the main north-south runway. Hydrocarbons were observed in Wilson Park Creek in late January 2012. Investigation to identify and locate the source indicated that jet fuel was emanating from an observation riser pipe in the Shell Oil Products pipeline. Jet fuel emanating from the riser pipe was flowing over the ground surface and into an adjacent storm sewer catch basin. The storm sewers at the site discharge to the surface at the North West Outfall, located at the intersection of Layton Ave and S Howell Ave in Milwaukee, at the northwest corner of GMIA. The conditions of closure and continuing obligations required were based on the property being used as a commercial airport.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Groundwater contamination is present at or above the ch. NR 140, Wis. Adm. Code, enforcement standards.
- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- If a structural impediment that obstructed a complete site investigation and/or cleanup is removed or modified, additional environmental work must be completed.

The DNR fact sheet, "Continuing Obligations for Environmental Protection," RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau of Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/clean.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Site Map (RRSM), a map view, under the Geographic Information System ("GIS") Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown of the GIS Registry, in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the Southeast Regional DNR office, at 2300 N Dr. Martin Luther King Jr. Drive, Milwaukee. This letter and information that was submitted with your closure request application, including any maps, can be found as a Portable Document Format (PDF) in BRRTS on the Web.

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which the current property owner and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wis. Stats., to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources
Attn: Remediation and Redevelopment Program Environmental Program Associate
2300 N Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212

Residual Groundwater Contamination (ch. NR 140, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present on the contaminated property, as shown on the attached map, Groundwater Isoconcentrations, Figure B.3.b, dated April 24, 2014. If you intend to construct a new well, or reconstruct an existing well, you'll need prior DNR approval. This continuing obligation also applies to the owners of 5300 S Howell Ave, Milwaukee, WI 53207.

Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code, or ch. 289, Wis. Stats.)

Soil contamination remains at the east end of the pipeline excavation due to the proximity of the 250-foot offset for the main north-south runway, as indicated on the attached site maps, Figures B.1.b and B.2.b, dated April 29, 2014. If soil in the specific locations described above is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine if the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval. This continuing obligation also applies to the owners of 5300 S Howell Ave, Milwaukee, WI 53207.

In addition, all current and future owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Depending on site-specific conditions, construction over contaminated soils or groundwater may result in vapor migration of contaminants into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and means of migration should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

Structural Impediments (s. 292.12(2)(b), Wis. Stats., s. NR 726.15, s. NR 727.07, Wis. Adm. Code)

The remaining north-south runway as shown on the attached maps, Figure 1 Residual Soil Sample Analytical Results, dated February 11, 2014, and Figure 2 Groundwater Analytical Results Summary, dated February 10, 2013 (possibly misdated as 2013), made complete investigation and/or remediation of the soil contamination on this property impracticable. If the structural impediment is to be removed, the property owner shall notify the DNR at least 45 days before removal, and conduct an investigation of the degree and extent of hydrocarbon contamination below the structural impediment. If contamination is found at that time, the contamination shall be properly remediated in accordance with applicable statutes and rules. This continuing obligation also applies to the owners of 5300 S Howell Ave, Milwaukee, WI 53207.

General Wastewater Permits for Construction Related Dewatering Activities

The DNR's Water Quality Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits, or to the ground surface. This includes discharges from construction related dewatering activities, including utility and building construction.

If you or any other person plan to conduct such activities, you or that person must contact that program, and if necessary, apply for the necessary discharge permit. Additional information regarding discharge permits is available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>. If residual soil or groundwater contamination is likely to affect water collected in a pit/trench that requires dewatering, a general permit for Discharge of Contaminated Groundwater from Remedial Action Operations may be needed. If water collecting in a pit/trench that requires dewatering is expected to be free of pollutants other than suspended solids and oil and grease, a general permit for Pit/Trench Dewatering may be needed.

In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- If additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- If the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats., or
- A property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Scott Ferguson at 414-263-8685, or at Scott.Ferguson@wisconsin.gov.

Sincerely,



Pamela A. Mylotta
Southeast Region Team Supervisor
Remediation & Redevelopment Program

PM/sjf://3-25-2015/shellpipeline.closurelet.pdf

Attachment: Maps, 5 total, described above

C: Scott Ferguson – SER
SER FID #: 241336370 File
Leonard Zintak – USEPA Region 5
Greg Failey – GMIA Environmental Manager
Kurt McClung – URS Corp

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| MW-4 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | 2.2 | 1.9 | 1.5 | 0.91 J |
| Toluene | 0.83 J | <0.67 | 0.76 J | <0.44 |
| Total Xylenes | 6.1 | <2.63 | 5.7 | 3.0 J |
| 1,2,4-TMB | 11.5 | 6.9 | 6.8 | 10.9 |
| 1,3,5-TMB | 4.2 | 2.8 | 2.8 J | 3.5 J |
| Naphthalene | 1.7 J | 1.4 J | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0045 | 0.020 J | <0.0056 | <0.0054 |
| Benzo(b)fluoranthene | <0.0048 | 0.042 J | <0.0077 | <0.0074 |
| Chrysene | 0.0067 J | 0.024 J | <0.0070 | <0.0068 |
| DRO | 240 | 98 | 130 | 64 |
| GRO | 95.7 | 70.4 | 37.9 J | 55.6 |

| MW-7 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.41 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.54 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.67 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <2.63 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.97 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <0.83 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <0.89 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0044 | <0.0055 | <0.0055 |
| Benzo(b)fluoranthene | <0.0047 | <0.0047 | <0.0075 | <0.0074 |
| Chrysene | <0.0048 | <0.0048 | <0.0069 | <0.0068 |
| DRO | 90 | 71 | 92 | 180 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-6 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0054 | <0.0057 | <0.0053 |
| Benzo(b)fluoranthene | <0.0046 | <0.0074 | <0.0077 | <0.0072 |
| Chrysene | <0.0047 | <0.0068 | <0.0071 | <0.0066 |
| DRO | 130 | 140 | 340 | 100 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-8 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0047 | <0.0057 | <0.0056 | <0.0050 |
| Benzo(b)fluoranthene | <0.0050 | <0.0077 | <0.0077 | <0.0069 |
| Chrysene | <0.0051 | <0.0071 | <0.0070 | <0.0063 |
| DRO | 180 | 84 | 49 | 44 J |
| GRO | <32.4 | 35.3 J | <32.4 | <34.9 |

| MW-1 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0048 | <0.0058 | <0.0055 | <0.0054 |
| Benzo(b)fluoranthene | <0.0051 | <0.0079 | <0.0075 | <0.0074 |
| Chrysene | <0.0052 | <0.0073 | <0.0069 | 0.11 J |
| DRO | 12 J | <11 | 57 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-2 | | | | |
|----------------------|--------------|--------------|--------------|-------------|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | 18.1 | <1.6 | <1.0 | 3.3 |
| Ethylbenzene | 203 | 68.1 | 31.7 | 82.0 |
| Toluene | <0.67 | <2.7 | <0.88 | <0.88 |
| Total Xylenes | 455.8 | 218.9 | 105.4 | 93.4 |
| 1,2,4-TMB | 604 | 431 | 188 | 256 |
| 1,3,5-TMB | 154 | 136 | 71 | 79.2 |
| Naphthalene | 92.4 | 59.0 | 29.9 | 68.5 |
| Benzo(a)pyrene | <0.54 | <0.56 | <0.22 | <0.55 |
| Benzo(b)fluoranthene | <0.58 | <0.77 | <0.30 | <0.75 |
| Chrysene | <0.59 | <0.70 | <0.28 | <0.69 |
| DRO | 2,100 | 2,700 | 2,300 | 3,900 |
| GRO | 3,720 | 2,170 | 1,960 | 1,550 |

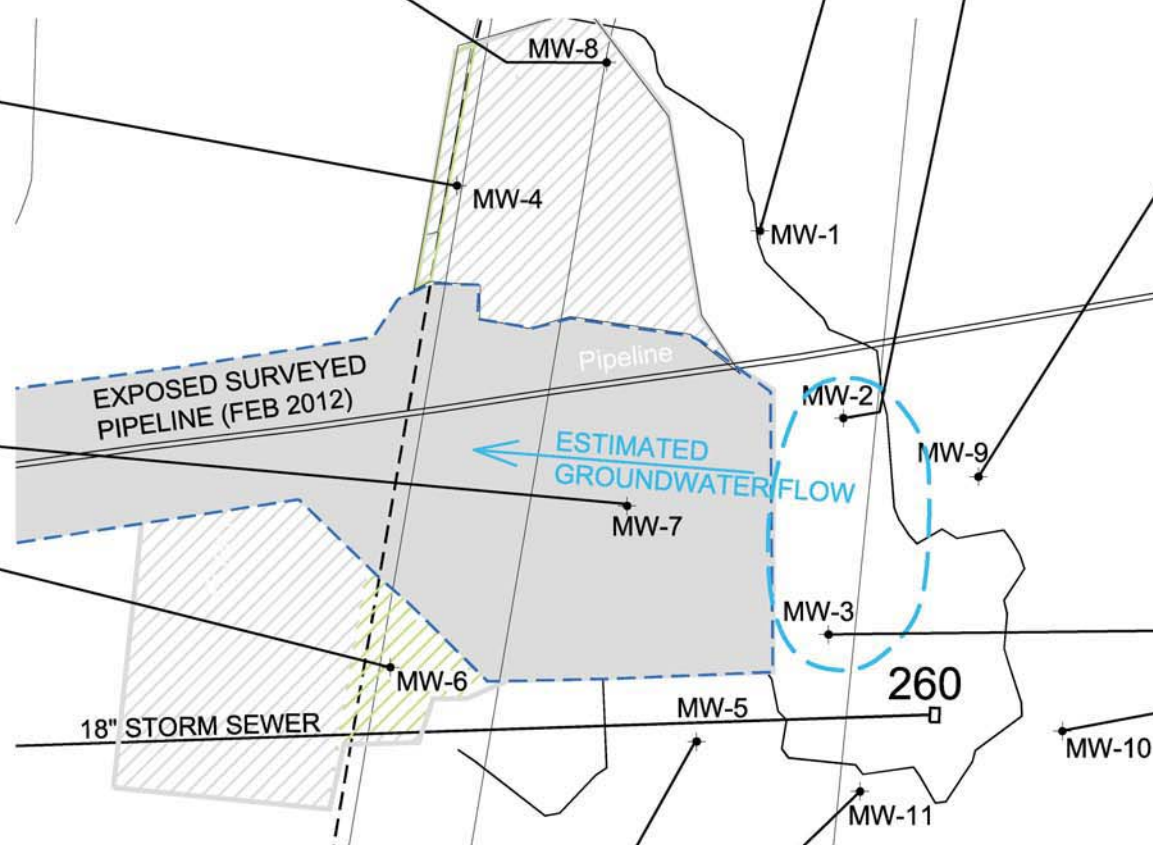
| MW-9 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | 0.85 J | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | 0.0049 J | <0.0056 | <0.0056 | <0.0054 |
| Benzo(b)fluoranthene | 0.0061 J | <0.0076 | <0.0076 | <0.0074 |
| Chrysene | 0.0069 J | <0.0070 | <0.0070 | <0.0068 |
| DRO | 27 J | 70 | 120 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-3 | | | | |
|----------------------|-------------|-------------|----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | 0.95 J | <0.41 | 1.6 | 1.6 |
| Ethylbenzene | 3.8 | 6.5 | 4.9 | 4.7 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | 2.3 | 13.6 | 12.9 |
| 1,2,4-TMB | 9.6 | 41.5 | 19.5 | 17.3 |
| 1,3,5-TMB | 4.6 | 15.6 | 6.8 | 6.1 |
| Naphthalene | 4.1 J | 8.5 | 4.2 J | 4.2 J |
| Benzo(a)pyrene | 0.22 | 0.90 | 0.064 J | 0.059 J |
| Benzo(b)fluoranthene | 0.21 | 1.1 | 0.064 J | 0.059 J |
| Chrysene | 0.26 | 0.89 | 0.10 | 0.088 J |
| DRO | 3,500 | 420 | 690 | 650 |
| GRO | 192 | 317 | 150 | 141 |

| MW-10 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0045 | <0.0054 | <0.0057 | <0.0054 |
| Benzo(b)fluoranthene | <0.0048 | <0.0074 | <0.0078 | <0.0074 |
| Chrysene | <0.0049 | <0.0068 | <0.0072 | <0.0068 |
| DRO | 27 J | <11 | 75 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

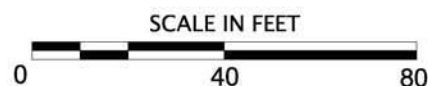
| MW-5 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0055 | <0.0055 | <0.0058 |
| Benzo(b)fluoranthene | <0.0047 | <0.0075 | <0.0075 | <0.0079 |
| Chrysene | <0.0048 | <0.0069 | <0.0069 | <0.0073 |
| DRO | <10 | <10 | 24 J | 80 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-11 | | | | |
|----------------------|----------|-----------|-----------|-----------|
| Date | 8/1/2012 | 11/2/2012 | 2/21/2013 | 5/10/2013 |
| Benzene | <0.41 | <0.41 | | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | | <0.50 |
| Toluene | <0.67 | <0.67 | | <0.44 |
| Total Xylenes | <2.63 | <2.63 | | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | | <2.5 |
| Naphthalene | <0.89 | <0.89 | | <2.5 |
| Benzo(a)pyrene | 0.0036 J | <0.0044 | | <0.0056 |
| Benzo(b)fluoranthene | 0.0038 J | <0.0047 | | <0.0076 |
| Chrysene | 0.0056 J | <0.0048 | | <0.0070 |
| DRO | 36 J | 12 J | | 65 |
| GRO | <32.4 | <32.4 | | <32.4 |



Notes:
Detections presented in **bold** type indicate an exceedance of the NR 140 groundwater enforcement standard.
Detections presented in *italic* type indicate an exceedance of the NR 140 preventive action limit.
Results are expressed in µg/L (ppb).
J Estimated concentration detected between the detection limit and reporting limit.
DRO Diesel Range Organics
GRO Gasoline Range Organics
1,2,4-TMB 1,2,4-Trimethylbenzene
1,3,5-TMB 1,3,5-Trimethylbenzene

Estimated Extent of Intermittent Exceedence of the NR140 ES.



Apr. 24, 2014
JOB NO.: 49233474
DRAWN BY: RF
SCALE: AS SHOWN

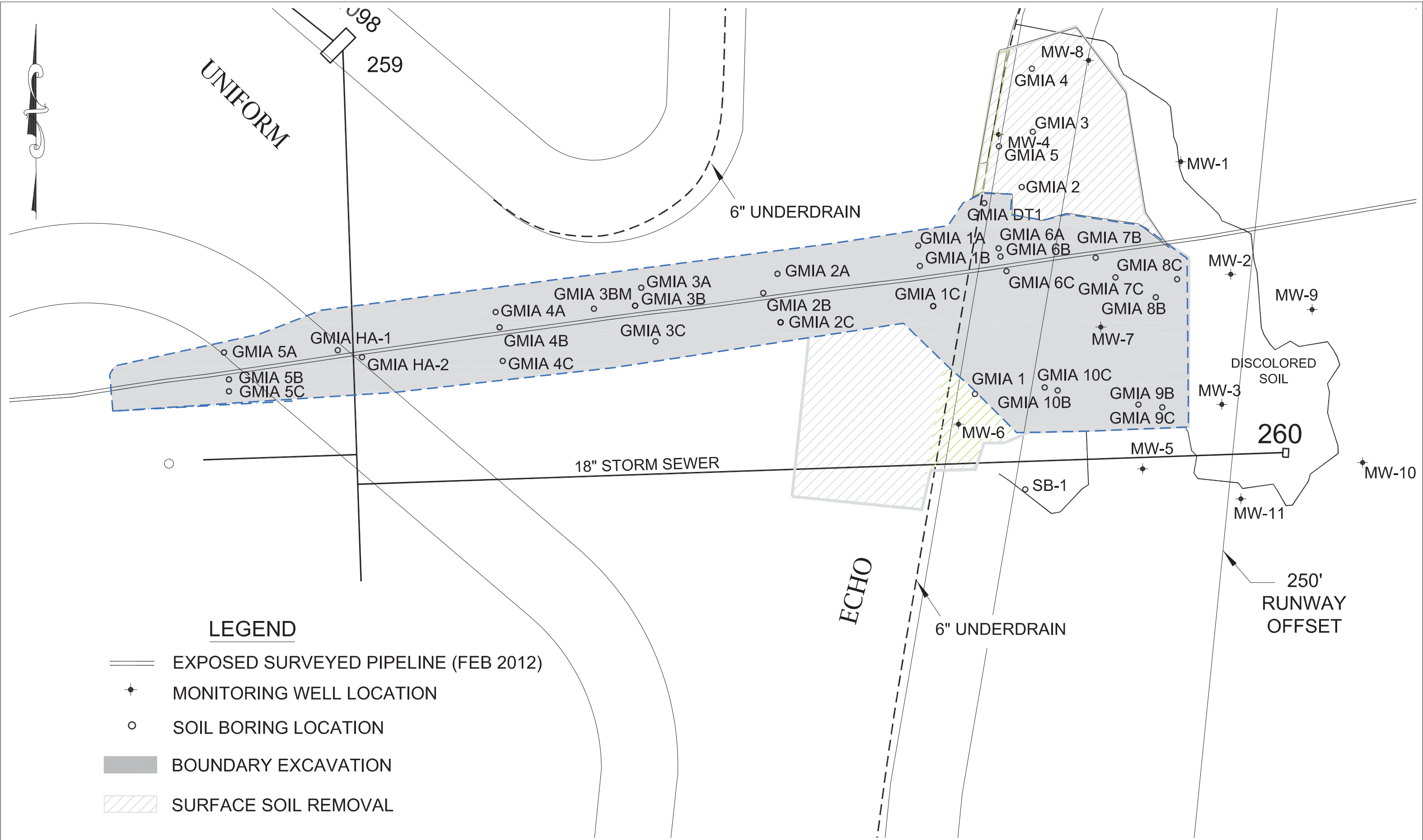
URS
342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101

PREPARED FOR:
 SHELL
PIPELINE
COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE B.3.b
GROUNDWATER ISOCONCENTRATIONS

P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.1.b Site Map.dwg User:michele_mcgavock Apr 30, 2014 - 3:37pm



| | |
|-------------------|---------------|
| Apr. 29, 2014 | |
| JOB NO.: 49233474 | |
| DRAWN BY: RF | APP'D BY: KDM |
| SCALE: AS SHOWN | |

URS

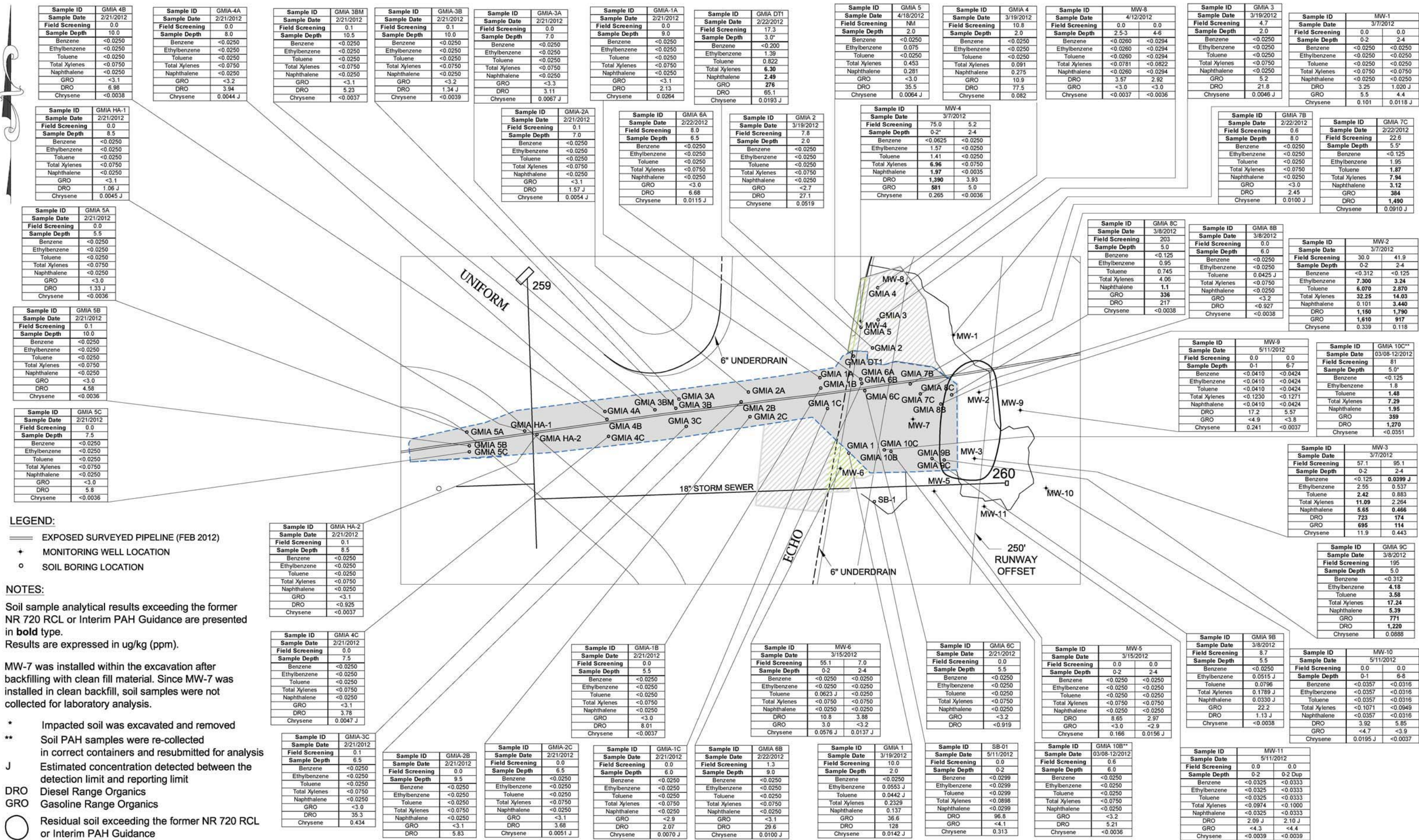
342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101

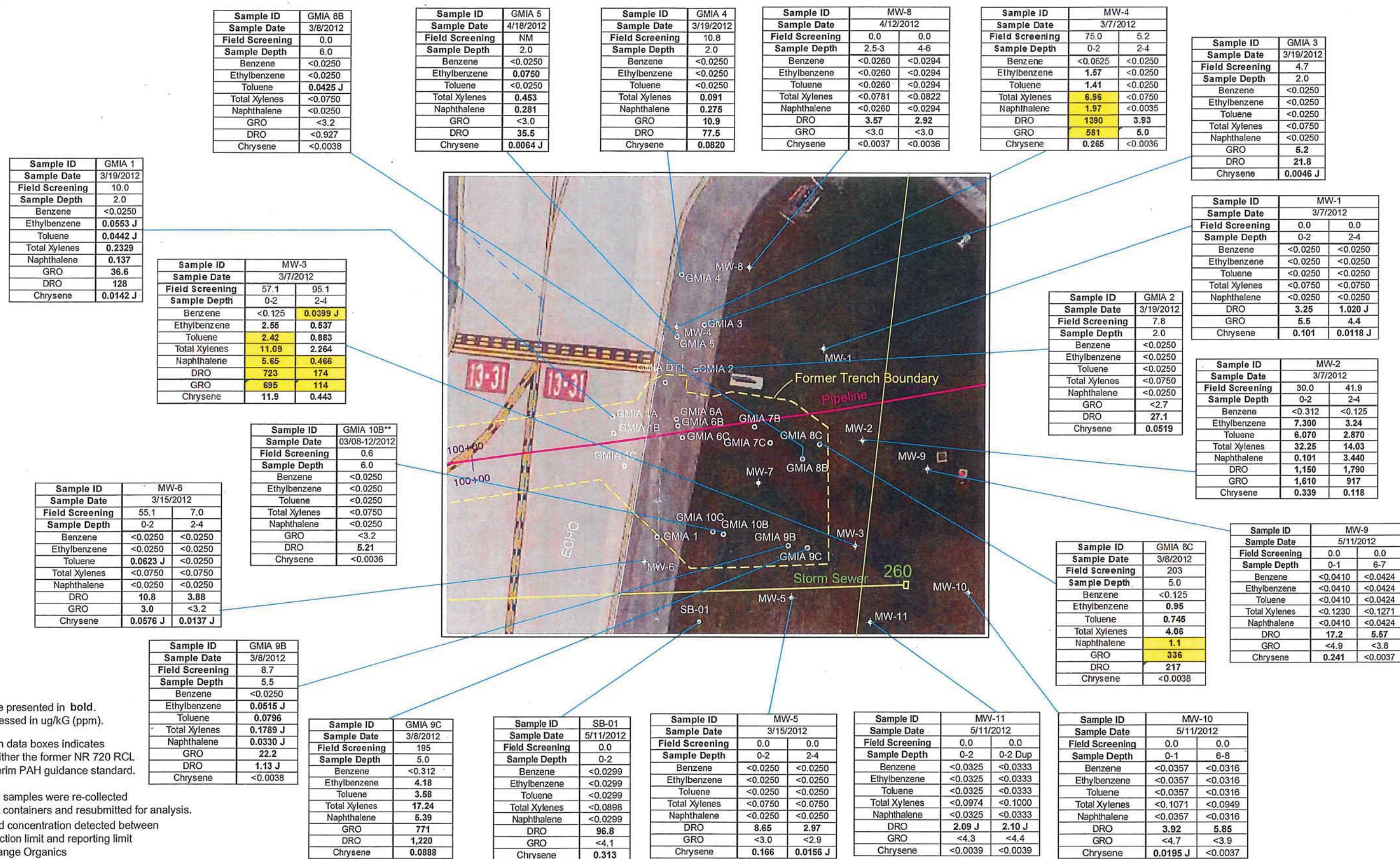
PREPARED FOR:

 **SHELL PIPELINE COMPANY LP**

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE B.1.b
SITE MAP





SCALE IN FEET
 40 0 40

Feb. 11, 2014
 JOB NO.: 49233474
 DRAWN BY: RF
 APPD BY: KDM
 SCALE: AS SHOWN

URS
 342 NORTH WATER STREET
 MILWAUKEE, WISCONSIN 53202
 (414) 831-4100 FAX (414) 831-4101

PREPARED FOR:

 SHELL
 PIPELINE
 COMPANY LP

GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin

FIGURE 1
 RESIDUAL SOIL SAMPLE ANALYTICAL
 RESULTS

MW-4

| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
|----------------------|-----------|-----------|----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | 2.2 | 1.9 | 1.5 | 0.91 J |
| Toluene | 0.83 J | <0.67 | 0.76 J | <0.44 |
| Total Xylenes | 6.1 | <2.63 | 5.7 | 3.0 J |
| 1,2,4-TMB | 11.5 | 6.9 | 6.8 | 10.9 |
| 1,3,5-TMB | 4.2 | 2.8 | 2.8 J | 3.5 J |
| Naphthalene | 1.7 J | 1.4 J | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0045 | 0.020 J | <0.0056 | <0.0054 |
| Benzo(b)fluoranthene | <0.0048 | 0.042 J | <0.0077 | <0.0074 |
| Chrysene | 0.0067 J | 0.024 J | <0.0070 | <0.0068 |
| DRO | 240 | 98 | 130 | 64 |
| GRO | 95.7 | 70.4 | 37.9 J | 55.6 |

MW-8

| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
|----------------------|-----------|-----------|----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0047 | <0.0057 | <0.0056 | <0.0050 |
| Benzo(b)fluoranthene | <0.0050 | <0.0077 | <0.0077 | <0.0069 |
| Chrysene | <0.0051 | <0.0071 | <0.0070 | <0.0063 |
| DRO | 180 | 84 | 49 | 44 J |
| GRO | <32.4 | 35.3 J | <32.4 | <34.9 |

MW-1

| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
|----------------------|-----------|-----------|-----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0048 | <0.0058 | <0.0055 | <0.0054 |
| Benzo(b)fluoranthene | <0.0051 | <0.0079 | <0.0075 | <0.0074 |
| Chrysene | <0.0052 | <0.0073 | <0.0069 | 0.11 J |
| DRO | 12 J | <11 | 57 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

MW-2

| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
|----------------------|-----------|-----------|-----------|----------|
| Benzene | 18.1 | <1.6 | <1.0 | 3.3 |
| Ethylbenzene | 203 | 68.1 | 31.7 | 31.7 |
| Toluene | <0.67 | <2.7 | <0.88 | <0.88 |
| Total Xylenes | 455.8 | 218.9 | 105.4 | 105.4 |
| 1,2,4-TMB | 604 | 431 | 188 | 256 |
| 1,3,5-TMB | 154 | 136 | 71 | 79.2 |
| Naphthalene | 92.4 | 59.0 | 29.9 | 29.9 |
| Benzo(a)pyrene | <0.54 | <0.56 | <0.22 | <0.55 |
| Benzo(b)fluoranthene | <0.58 | <0.77 | <0.30 | <0.75 |
| Chrysene | <0.59 | <0.70 | <0.28 | <0.69 |
| DRO | 2,100 | 2,700 | 2,300 | 3,900 |
| GRO | 3,720 | 2,170 | 1,960 | 1,550 |

MW-7

| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
|----------------------|-----------|-----------|-----------|----------|
| Benzene | <0.41 | <0.41 | <0.41 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.54 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.67 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <2.63 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.97 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <0.83 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <0.89 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0044 | <0.0055 | <0.0055 |
| Benzo(b)fluoranthene | <0.0047 | <0.0047 | <0.0075 | <0.0075 |
| Chrysene | <0.0048 | <0.0048 | <0.0069 | <0.0069 |
| DRO | 90 | 71 | 92 | 180 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

MW-6

| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
|----------------------|-----------|-----------|-----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0054 | <0.0057 | <0.0053 |
| Benzo(b)fluoranthene | <0.0046 | <0.0074 | <0.0077 | <0.0072 |
| Chrysene | <0.0047 | <0.0068 | <0.0071 | <0.0066 |
| DRO | 130 | 140 | 340 | 100 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

MW-5

| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
|----------------------|-----------|-----------|-----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0055 | <0.0055 | <0.0058 |
| Benzo(b)fluoranthene | <0.0047 | <0.0075 | <0.0075 | <0.0079 |
| Chrysene | <0.0048 | <0.0069 | <0.0069 | <0.0073 |
| DRO | <10 | <10 | 24 J | 80 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

MW-11

| Date | 8/1/2012 | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
|----------------------|----------|-----------|-----------|-----------|----------|
| Benzene | <0.41 | <0.41 | | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | | <2.5 | <2.5 |
| Benzo(a)pyrene | 0.0036 J | <0.0044 | | <0.0056 | <0.0055 |
| Benzo(b)fluoranthene | 0.0038 J | <0.0047 | | <0.0076 | <0.0075 |
| Chrysene | 0.0056 J | <0.0048 | | <0.0070 | <0.0069 |
| DRO | 36 J | 12 J | | 65 | 37 J |
| GRO | <32.4 | <32.4 | | <32.4 | <34.9 |

MW-9

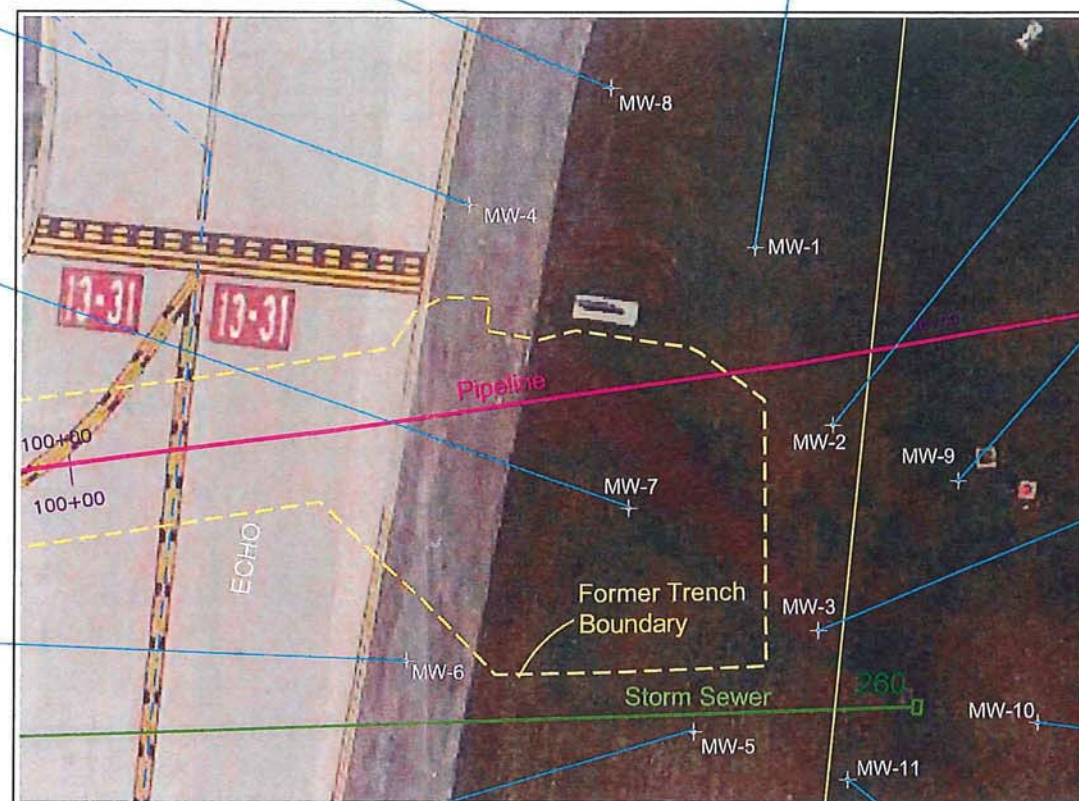
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
|----------------------|-----------|-----------|----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | 0.85 J | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | 0.0049 J | <0.0056 | <0.0056 | <0.0054 |
| Benzo(b)fluoranthene | 0.0061 J | <0.0076 | <0.0076 | <0.0074 |
| Chrysene | 0.0069 J | <0.0070 | <0.0070 | <0.0068 |
| DRO | 27 J | 70 | 120 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

MW-3

| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
|----------------------|-----------|-----------|----------|----------|
| Benzene | 0.95 J | <0.41 | 1.6 | 3.3 |
| Ethylbenzene | 3.8 | 6.5 | 4.9 | 4.7 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.88 |
| Total Xylenes | <2.63 | <2.63 | 13.6 | 12.9 |
| 1,2,4-TMB | 9.6 | 41.5 | 19.5 | 17.3 |
| 1,3,5-TMB | 4.6 | 15.6 | 6.8 | 6.1 |
| Naphthalene | 4.1 J | 8.5 | 4.2 J | 4.2 J |
| Benzo(a)pyrene | 0.22 | 0.90 | 0.062 J | 0.059 J |
| Benzo(b)fluoranthene | 0.21 | 1.1 | 0.064 J | 0.059 J |
| Chrysene | 0.26 | 0.89 | 0.10 | 0.088 J |
| DRO | 3,500 | 420 | 690 | 650 |
| GRO | 192 | 317 | 150 | 141 |

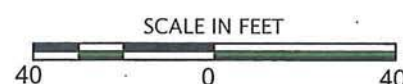
MW-10

| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
|----------------------|-----------|-----------|----------|----------|
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0045 | <0.0054 | <0.0057 | <0.0054 |
| Benzo(b)fluoranthene | <0.0048 | <0.0074 | <0.0078 | <0.0074 |
| Chrysene | <0.0049 | <0.0068 | <0.0072 | <0.0068 |
| DRO | 27 J | <11 | 75 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |



NOTES:
Detections presented in bold type indicate an exceedance of the NR 140 groundwater enforcement standard.
Results are expressed in ug/L (ppb).

J Estimated concentration detected between the detection limit and reporting limit
DRO Diesel Range Organics
GRO Gasoline Range Organics
1,2,4-TMB 1,2,4-Trimethylbenzene
1,3,5-TMB 1,3,5-Trimethylbenzene



Feb. 10, 2013
JOB NO.: 49233474
DRAWN BY: RF APP'D BY: KDM
SCALE: AS SHOWN

URS
342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101

PREPARED FOR:
SHELL PIPELINE COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE 2
GROUNDWATER ANALYTICAL RESULTS SUMMARY

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SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

Notice: Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided. Any section of the form not relevant to the case closure request must be fully filled out or explained on a separate page and attached to the relevant section of this form. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Site Information

| | | | |
|-----------------------------|----------------------|--------|----------|
| BRRTS No. | Parcel ID No. | | |
| 02-41-558334 | 640-9999-118 | | |
| BRRTS Activity (Site) Name | WTM Coordinates | | |
| Shell Pipeline at GMIA | X | Y | |
| | 691696 | 277576 | |
| Street Address | City | State | ZIP Code |
| 5300 S Howell Avenue | Milwaukee | WI | 53207 |
| Responsible Party (RP) Name | | | |
| John Robbins | | | |
| Company Name | | | |
| Shell Oil Products US | | | |
| Street Address | City | State | ZIP Code |
| 20945 S. Wilmington Avenue | Carson | CA | 90810 |
| Phone Number | Email | | |
| (815) 468-8824 | john.robbs@shell.com | | |

☐ Check here if the RP is the owner of the source property.

| | | | |
|-----------------------------------|---|-------|----------|
| Environmental Consultant Name | | | |
| Kurt McClung | | | |
| Consulting Firm | | | |
| URS Corporation | | | |
| Street Address | City | State | ZIP Code |
| 342 North Water Street, 7th Floor | Milwaukee | WI | 53202 |
| Phone Number | Email | | |
| (414) 831-4100 | kurt.mcclung@urs.com | | |
| Acres Ready For Use | Voluntary Party Liability Exemption Site? <input type="radio"/> Yes <input checked="" type="radio"/> No | | |
| 5 | | | |

Fees and Mailing of Closure Request

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

1. **Send a copy of page one** of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR regional Environmental Program Associate at <http://dnr.wi.gov/topic/Brownfields/Contact.html>. Check all fees that apply:

☒ \$1,050 Closure Fee

☒ \$300 Database Fee for Soil

☒ \$350 Database Fee for Groundwater or
Other Condition (MW Not Abandoned)

Total Amount of Payment \$ \$1,700.00

2. **Send one paper copy and one e-copy on compact disk of the entire closure package** to the Regional Project Manager assigned to your site. Submit as unbound, separate documents in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

Site Summary

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

1. General Site Information and Site History

- A. **Site Location:** Describe the physical location of the site, both generally and specific to its immediate surroundings.
The site is located at General Mitchell International Airport (GMIA) at the intersection of taxiways Echo and Uniform, adjacent to the main north-south runway.
- B. **Prior and current site usage:** Specifically describe the current and historic occupancy and types of use.
The site was developed as an airfield in 1920 and was purchased by Milwaukee County in 1926. The site is currently used as a municipal airport.
- C. Describe how and when site contamination was discovered.
Hydrocarbons were reportedly observed in Wilson Park Creek in late January 2012. Investigation to identify and locate the source indicated that jet fuel was emanating from an observation riser pipe in the pipeline. Jet fuel emanating from the riser pipe was flowing over the ground surface and into an adjacent storm sewer catch basin. The storm sewers at the site discharge to surface at the North West Outfall, located at the intersection of Layton and Howell Avenue in Milwaukee, at the northwest corner of GMIA.
- D. Describe the type(s) and source(s) or suspected source(s) of contamination.
The source of jet fuel was a leak from an underground pipeline. The leak has been repaired and the pipeline is currently in use.
- E. Other relevant site description information (or enter Not Applicable).
Not Applicable.
- F. List BRRTS activity site name and number for all other BRRTS activities at this property, including closed cases.
This closure request is for 02-41-558334 Shell Pipeline at Gen Mitchell Intern Airport.
Nearly 150 BRRTS numbers are listed at 5300 South Howell Avenue, Milwaukee.
- G. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to this site, and those impacted by contamination from this site.
No other sites are currently impacted by the pipeline release.
- H. **Current zoning** (e.g. industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
GMIA is owned by Milwaukee County and is zoned transportation.

2. General Site Conditions

- A. **Soil/Geology**
- Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
Soil consists of fill over sandy silt to the maximum depth excavated or investigated.
 - Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
GMIA was filled and extensively graded during the construction of the runways and taxiways, and during installation of the jet fuel pipeline. No waste deposits were encountered during pipeline repair activity.
 - Depth to bedrock, bedrock type, and whether or not it was encountered during the investigation.
Bedrock is estimated at greater than 50 feet below ground surface and consists of Silurian Dolomite. Bedrock was not encountered during the removal of impacted soil and pipeline repair activity (maximum depth of penetration is 20 feet). Well logs in the vicinity of GMIA indicate carbonate bedrock at approximately 100 feet below ground surface.
 - Describe the nature and locations of current surface cover(s) across the site (e.g. natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).
The area affected by the pipeline release is grass landscape, except for paved taxiways and runways.
- B. **Groundwater**
- Discuss depth to groundwater and piezometric elevations.** Describe and explain depth variations, and whether free product affects measurement or water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.
Shallow groundwater was observed at 2 to 4 feet below ground surface in monitoring wells during groundwater sampling events. A thin, intermittent apparent hydrocarbon film was observed on the water table at MW-2, however, groundwater sampling analytical results did not reveal hydrocarbon impact to groundwater that are indicative of liquid-

Save...

phase hydrocarbons.

- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.

Shallow groundwater flow is influenced by precipitation and artificial conveyances, however, groundwater flow interpreted from depth to groundwater measurements at monitoring wells during sampling events indicates flow is generally to the west.

- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.

Hydraulic conductivity testing was not completed because nearly all of the hydrocarbon impacted soil was excavated and removed as part of the response action, the groundwater hydrocarbon impacts are at relatively low concentrations, and the areal extent is relatively small. Since a consistent, persistent groundwater hydrocarbon plume is not present at the site exceeding the NR 140 Enforcement Standard and no receptors are threatened, estimated hydrocarbon migration rates in groundwater were not determined.

- iv. Identify and describe locations/distance of potable and/or municipal Wells within 1200 feet of the site.

The site is located near the center of GMIA in Milwaukee, Wisconsin. Milwaukee obtains potable water from Lake Michigan and no potable wells are known to exist within 1,200 feet of the groundwater impact at the site.

3. Site Investigation Summary

A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

The pipeline was shut-down upon discovery of the source of the release. The section of the pipeline that needed repair was exposed and replaced. Hydrocarbon-impacted soil was excavated from the vicinity of the pipeline and disposed of at the Orchard Ridge Landfill. The excavation was backfilled with compacted granular fill. A relatively small amount of hydrocarbon impacted soil was not excavated at the east end of the excavation due to the proximity of the 250-foot offset for the main north-south runway.

Groundwater monitoring wells were installed to evaluate hydrocarbon impact to groundwater as described in the March 2012 work plan. Additional wells were installed to define the extent of groundwater impact and quarterly groundwater monitoring indicates low-level intermittent detections of groundwater impact above the NR 140 Enforcement Standard.

Storm sewers, drain tile, and buried conduits have been investigated and cleaned under high pressure to remove residual hydrocarbons. Swab samples of the cleaned conduits have been analyzed to document successful cleaning.

Hard booms and sorbent booms were deployed upon discovery of the release at the North West Outfall, Wilson Park Creek, and the Kinnickinnic River to trap and recover free-phase hydrocarbons. The concrete lining and banks of the surface water bodies were pressure washed to allow sorbents to recover hydrocarbons and hydrocarbon-impacted vegetation was collected and disposed of at the Orchard Ridge Landfill.

A sediment sampling work plan was submitted in January 2013 and the work was completed in May 2013. A forensic evaluation of the detected analytes indicated the impacts are urban background and not a result of the pipeline release presented in this report.

- ii. Identify whether contamination extends beyond the source property boundary, describe the off-site media (e.g., soil, groundwater, etc.) impacted, and the vertical and horizontal extent of off-site impacts.
Soil and groundwater impact is within property boundaries. Off-site surface water impacts in the Kinnickinnic River exhibit historical background levels. Sediment sampling and forensic evaluation of detected analytes are indicative of urban background.

- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

The section of taxiway over the pipeline was removed, the pipeline replaced, and the soil adjacent to the pipeline was excavated and disposed of at Orchard Ridge Landfill except the small section described in Section 3Ai above.

B. Soil

- i. Describe degree and extent of **soil contamination** at and from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways.

Soil was excavated to expose the pipeline and soil samples were not collected to determine the extent of soil impact prior to excavating.

A relatively small amount of impacted soil was not excavated at the east end of the pipeline excavation due to the

proximity of the 250-foot offset for the main north-south runway.

- ii. Describe the level and types of **soil contaminants** found in the upper four feet of the soil column. Soil samples collected from MW-2 at depths less than 4 feet yielded DRO, GRO, ethylbenzene, toluene, xylenes, and naphthalene exceeding the former NR 720 Residual Contaminant Level (NR 720 RCL) or the former Interim PAH Guidance.

Soil samples collected from MW-3 at depths less than 4 feet yielded DRO, GRO, benzene, toluene, xylenes, and naphthalene exceeding the former NR 720 RCL or the former Interim PAH Guidance.

Although hydrocarbons were detected in soil, no exceedance of a direct contact standard was detected.

- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.

All of the soil excavated as part of the pipeline repair was disposed of at Orchard Ridge Landfill, including material that was not impacted with hydrocarbons. The reason for disposal of the soil at a landfill is because the soil could not be stockpiled on-site or used to backfill the pipeline excavation.

Soil cleanup standards were not established, however, the former NR 720 RCLs or the former Interim PAH Guidance for the protection of groundwater are presented on the summary tables.

C. Groundwater

- i. Describe degree and extent of groundwater contamination at or from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

Over the last four quarters of groundwater sampling, exceedances of the NR 140 Preventive Action Limit (NR 140 PAL) were observed at MW-2, -3, and -4; and low-level exceedances of the NR 140 Enforcement Standard (NR 140 ES) were observed at MW-2 and MW-3. No exceedance of the NR 140 ES was detected over the last two groundwater sampling events. Dissolved phase hydrocarbon concentrations exceeding the NR 140 ES over the four recent quarters of monitoring consist of benzene, trimethylbenzenes, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. A thin, intermittent apparent hydrocarbon film was observed on the water table at MW-2, however, groundwater sampling analytical results did not indicate the presence of hydrocarbon impact to groundwater that are indicative of liquid-phase hydrocarbons.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.

The vapor migration pathway was not assessed because no buildings are located in proximity to hydrocarbons detected in soil or groundwater.

- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both). Not applicable.

E. Surface Water and Sediment

- i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why. Surface water and sediment samples were collected from the Kinnickinnic River Watershed as part of this investigation. Detected impacts are categorized as urban background.

- ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.

The Milwaukee Metropolitan Sewerage District (MMSD) has been collecting surface water samples for decades prior to the pipeline jet fuel release. The results from the MMSD sampling in 2009 and 2010, which were collected prior to the pipeline release, revealed naphthalene and chrysene detections. Additionally, PAHs were detected in surface water samples (MKEREF100) collected up gradient of NWOFF. Naphthalene and chrysene are constituents found in jet fuel and other petroleum products, and were detected in groundwater near the pipeline point of release, however, the surface water sample analyses completed by MMSD indicate these hydrocarbons had been detected in surface water prior to the pipeline release and therefore are not associated with the release.

Naphthalene concentrations at these locations range from 0.0065 JB µg/L at MKEREF100 in May 2012 to 0.036 JB µg/L at the NWOFF in June 2012. Initially at MKESTR100, naphthalene was detected at a concentration of 3.2 µg/L on

February 2, 2012, indicating a reduction of two orders of magnitude in June 2012.

Chrysene concentrations at these locations range from approximately 0.0036 J µg/L at MKEREF100 in May 2012 to 0.020 JB µg/L at the NWOFF in June 2012. Chrysene was detected at MKESTR100 on February 2, 2012 at a concentration of 0.013 J µg/L, indicating that there is no significant reduction of chrysene in surface water. However, up-gradient samples collected at MKEREF100 detected chrysene ranging from 0.0036 J to 0.012 J µg/L in May and June 2012. This indicates chrysene detections in surface water are at background levels.

The results of the comparison indicate surface water sample results collected several weeks following response activity in the Kinnickinnic River Watershed are similar to surface water analytical results collected before the pipeline fuel release.

Sediment samples were collected for hydrocarbon forensic analysis. The forensic analysis determined the detections in sediment are primarily pyrogenic, predominantly urban background, and none of the heavy petroleum residual detected originated from jet fuel. See Shell's 9/23/13 Sediment Sample Report and the meeting notes dated 10/23/13.

4. Remedial Actions Implemented and Residual Levels at Closure

- A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

All of the soil excavated to expose the jet fuel pipeline was disposed of at Orchard Ridge Landfill. Additional soil that exhibited indication of jet fuel impact was also excavated and disposed of at Orchard Ridge Landfill.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
Not Applicable.

- C. Describe the *active* remedial actions taken at the site, including: type of remedial system(s) used for each media impacted; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.

The soil was excavated primarily to expose the pipeline and allow repairs. Additional soil was excavated to remove impacted soil that was the result of the pipeline release.

- D. Provide a discussion of the nature, degree and extent of residual contamination that will remain at the site or on off-site affected properties after case closure.

A relatively small amount of hydrocarbon impacted soil remains at the east end of the pipeline excavation. Excavation did not continue farther to the east because the 250-foot runway offset could not be safely breached.

- E. Describe the remaining soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds Residual Contaminant Levels established under s. NR 720. 12, the ch. NR720, Wis. Adm. Code, for protection of human health from direct contact.

No soil impacts remain at the site where concentrations exceed the NR 720 direct contact standard.

- F. Describe the remaining soil contamination in the vadose zone that attains or exceeds the soil standard(s) for the groundwater pathway.

The shallow water table results in a minimal vadose zone. Soil samples collected during monitoring well installation resulted in soil samples being collected within the smear zone. These soil samples are likely submerged, except during extended periods of dry weather.

- G. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.

The relatively small amount of residual hydrocarbon impacted soil is not accessible for excavating, does not threaten receptors, and the resulting groundwater impacts are not migrating beyond the location of residual impacted soil.

- H. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration, (e.g. stable or receding groundwater plume).

Nearly all of the hydrocarbon-impacted soil has been excavated and removed. Groundwater monitoring for nearly 8 quarters indicates decreasing dissolved-phase hydrocarbon impacts.

- I. Identify how all exposure pathways were removed and/or adequately addressed by immediate and/or remedial action(s) described above in paragraphs, B, C, D, E and F.

All of the accessible hydrocarbon-impacted soil has been excavated and removed from the site. Although a small amount of attenuating hydrocarbon-impacted groundwater is present, no receptors are at risk of impact.

- J. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
Not applicable.

- K. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.
- Exceedances of the NR 140 PAL were observed at MW-2, -3, and -4; and low-level exceedances of the NR 140 ES were observed at MW-2 and MW-3. Hydrocarbon concentrations exceeding the NR 140 ES were detected during two of the last four quarters of monitoring. Exceedances of the NR 140 ES consisted of benzene, trimethylbenzenes, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene. No exceedance of the NR 140 ES was detected over the last two groundwater sampling events.
- L. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.
- Not applicable.
- M. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.
- Comparison of surface water sample results collected several weeks following response activity in the Kinnickinnic River Watershed are similar to surface water analytical results collected before the pipeline fuel release, indicating surface water hydrocarbon impacts are at urban background levels and not associated with the pipeline release.
- Forensic analysis of sediment samples determined the detections are primarily pyrogenic, predominantly urban background, and none of the heavy petroleum residual detected originated from jet fuel. As a result, the sediment impacts are not the result of the pipeline release.

5. Continuing Obligations: Situations where a maintenance plan(s) and inclusion on DNR's GIS Registry are required.

Directions: Check all that apply to this case closure request:

| | This scenario Applies to this Case Closure | | Case Closure Scenario: Maintenance Plans and GIS Registry | Maintenance Plan (s) Required in Attachment D | GIS Registry Listing |
|------|--|--------------------------|--|---|----------------------------|
| | A. On-Site | B. Off-Site | | | |
| i. | <input type="checkbox"/> | <input type="checkbox"/> | Engineering Control/Barrier for Direct Contact | ✓ | ✓ |
| ii. | <input type="checkbox"/> | <input type="checkbox"/> | Engineering Control/Barrier for Groundwater Infiltration | ✓ | ✓ |
| iii. | <input type="checkbox"/> | <input type="checkbox"/> | Vapor Mitigation - post closure passive system | ✓ | ✓ |
| iv. | <input type="checkbox"/> | <input type="checkbox"/> | Vapor Mitigation - post closure active system | ✓ | ✓ |
| v. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | None of the above scenarios apply to this case closure | NA | NA |

6. Continuing Obligations: Situations where inclusion on DNR's GIS Registry is required.

Directions: Check all that apply to this case closure request:

| | This scenario Applies to this Case Closure | | Case Closure Scenario: GIS Registry Only | GIS Registry Listing |
|------|--|--------------------------|--|----------------------------|
| | A. On-Site | B. Off-Site | | |
| i. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Residual soil contamination exceeds ch. NR 720 generic or site-specific RCLs | ✓ |
| ii. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Sites with groundwater contamination equal to or greater than the ch. NR 140, enforcement standards (ES) | ✓ |
| iii. | <input type="checkbox"/> | <input type="checkbox"/> | Monitoring wells: lost, transferred or remaining in use | ✓ |
| iv. | <input type="checkbox"/> | <input type="checkbox"/> | Structural Impediment (not as a performance standard) | ✓ |
| v. | <input type="checkbox"/> | <input type="checkbox"/> | Residual soil contamination remaining at ch. NR 720 Industrial Use levels | ✓ |
| vi. | <input type="checkbox"/> | <input type="checkbox"/> | Vapor intrusion may be future, post-closure issue if building use or land use changes | ✓ |
| vii. | <input type="checkbox"/> | <input type="checkbox"/> | None of the above scenarios apply to this case closure | NA |

7. Underground Storage Tanks

- A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action? ☐ Yes ☒ No
- B. Do any upgraded tanks meeting the requirements of ch. SPS 310, Wis. Adm. Code, exist on the property? ☐ Yes ☐ No
- C. If the answer to question 7b is yes, is the leak detection system currently being monitored? ☐ Yes ☐ No

Data Tables (Attachment A)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General directions for Data Tables:

- Use bold and italics font on information of importance on tables and figures. Use **bold font** for ch. NR 140, Wis. Adm. Code, groundwater enforcement standard (ES) attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, groundwater preventive action limit (PAL) standard attainments or exceedances.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e. do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15 (3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Pre-remedial Soil Analytical Table, etc).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate PDF.

A. Data Tables

- A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates, for all groundwater sampling points e.g. monitoring wells, temporary wells, sumps, extraction wells, any potable wells and any other wells, extraction wells and any potable wells for which samples have been collected.
- A.2. **Pre-remedial Soil Analytical Table(s):** Table(s) showing the soil analytical results and collection dates - prior to conducting the interim and/or remedial action. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).
- A.3. **Post-remedial Soil Analytical Table(s):** Table(s) showing the post-remedial action soil analytical results and collection dates. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).
- A.4. **Pre and Post Remaining Soil Contamination Soil Analytical Table(s):** Table(s) showing only the pre and post remedial action soil analytical results that exceed a Residual Contaminate Level (RCL) or a Site-Specific Residual Level (SSRCL).
- A.5. **Vapor Analytical Table:** Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- A.6. **Other Media of Concern (e.g., sediment or surface water):** Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, time period for sample collection, method and results sampling.
- A.7. **Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- A.8. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

Maps and Figures (Attachment B)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions for all Maps and Figures:

- If any map or figure is not relevant to the case closure request, you must fully explain the reason(s) why and attach that explanation (properly labeled with the map/ figure title) in Attachment B.
- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11x17 inches, in a portable document format (pdf) readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions

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of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis Adm. Code.

- Do not use shading or highlights on any of the analytical tables.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc.,) should be a separate PDF.

B.1. Location Maps

- B.1.a. **Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all impacted and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. **Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for on-site and applicable off-site properties, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code.
- B.1.c. **RR Site Map:** From RR Sites Map ([http://dnrm.wi.gov/sl/?Viewer=RR Sites](http://dnrm.wi.gov/sl/?Viewer=RR%20Sites)) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

B.2. Soil Figures

- B.2.a. **Pre-remedial Soil Contamination:** Figure(s) showing the sample location of all pre-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeded a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code.
- B.2.b. **Post-remedial Soil Contamination :** Figure(s) showing the sample location of all post-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.
- B.2.c. **Pre/Post Remaining Soil Contamination:** Figure(s) showing the only location of all pre and post remedial residual soil sample location(s) where unsaturated contaminated soil remains after remediation and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.

B.3. Groundwater Figures

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
- Source location(s) and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).
 - Source location(s) and lateral and vertical extent if groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES)
 - Surface features, including buildings and basements, and show surface elevation changes.
 - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
 - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1b)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, Preventive Action Limit (PAL) and/or an Enforcement Standard (ES). Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been previously abandoned.

B.4. Vapor Maps and Other Media

- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway, in relation to remaining soil and groundwater contamination, including sub-slab, indoor air, soil vapor,

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ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.

B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.

B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank)

Documentation of Remedial Action (Attachment C)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc).
- If the documentation requested below is "not applicable" to the site-specific circumstances, include a brief explanation to support that conclusion.
- If the documentation requested below has already been submitted to the Department, please note the title and date of the report for that particular document requested.

- C.1. **Site investigation documentation**, that has not otherwise been previously submitted.
- C.2. **Investigative waste** disposal documentation.
- C.3. **Provide a description of the methodology used along with all supporting documentation if the Residual Contaminant Levels are different than those contained in the Department's RCL Spreadsheet available at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.**
- C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
- C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment upon receiving conditional closure.
- C.6. **Photos.** For sites or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system. Include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features should be visible and discernible. Photographs must be labeled with the site name, the features shown, location and the date on which the photograph was taken.
- C.7. **Other.** Include any other relevant documentation not otherwise noted above. (This section may remain blank)

Maintenance Plan(s) and Photographs (Attachment D)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

When one or more "maintenance plans" are required for a site closure, include in each maintenance plan all required information listed below, and attach the plan(s) in Attachment D. The following "model" maintenance plans can be located at: (1) Maintenance plan for a engineering control or cover: <http://dnr.wi.gov/topic/Brownfields/documents/maintenance-plan.pdf>; and (2) Maintenance plan for vapor intrusion: http://dnr.wi.gov/topic/Brownfields/documents/appendix5_606.pdf.

- D.1. **Location map(s)** which show(s): (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) all property boundaries.
- D.2. **Brief descriptions** of the type, depth and location of residual contamination.
- D.3. **Description of maintenance action(s)** required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter.
- D.5. **Contact information**, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.6. **Photographs**
 - D.6.a. For site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible.
 - D.6.b. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.

Monitoring Well Information (Attachment E)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

Attach monitoring well construction and development forms (DNR FORM 4400-113 A and B: http://dnr.wi.gov/topic/groundwater/documents/forms/4400_113_1_2.pdf) for all wells that will remain in-use, be transferred to another party or that could not be located. A figure of these wells should be included in Attachment B.3.d.

Select One:

- ☐ No monitoring wells were required as part of this response action.
- ☒ All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site
- ☐ **Select One or More:**
- ☐ Not all monitoring wells can be located, despite good faith efforts. Attachment E must include description of efforts made to locate the "lost" wells.
- ☐ One or more wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s).
- ☐ One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason(s) the well(s) will remain in use.

Notifications to Owners of Impacted Properties (Attachment F)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- State law requires that the responsible party provide a 30-day, written advance notice (i.e., a letter) to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned.
- Use of Form 4400-286, Notification of Residual Contamination and Continuing Obligations, is required under ch. NR 725 for notifying property owners and right-of-way holders about residual contamination affecting their properties, and of continuing obligations which may be imposed. This form can be downloaded at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>.

Check all that apply to the site-specific circumstances of this case closure:

| | A. Impacted Source Property and Owner is not Conducting Cleanup | B. Impacted Right of Way | C. Impacted Off-Site Property Owner | Impacted Property Notification Situations: Ch. NR 726 Appendix A Letter |
|----|---|--------------------------------|---|---|
| 1. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Residual groundwater contamination exceeds Ch. NR 140 Wis. Administrative Code enforcement standards. |
| 2. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Residual soil contamination that attains or exceeds standards is present after the remedial action is complete, and must be properly managed should it be excavated or removed. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | An engineered cover or a soil barrier (e.g. pavement) must be maintained over contaminated soil for direct contact or groundwater infiltration concerns. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Industrial land use soil standards were used for the clean-up standard. |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A vapor mitigation system (or other specific vapor protection) must be operated and maintained. |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Vapor assessment needed if use changes. |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Structural impediment. |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lost, transferred or open monitoring wells. |
| 9. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Not Applicable. |

If any of the previous boxes in rows 1 thru 8 were checked, include the following as part of Attachment F:

- FORM 4400-246;
- Copy of each letter sent, 30 days or more prior to requesting closure; and
- Proof of receipt for each letter.
- For this site closure, _____ (number) property (ies) has/have been impacted, the owners have been notified, and copies of the letters and receipts are included in Attachment F.

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Source Legal Documents (Attachment G)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Include all of the following documents, in this order, in Attachment G:

- G.1. **Deeds - Source Property and Other Impacted Properties:** The most recent deed with legal descriptions clearly labeled for (1) the **Source Property** (where the contamination originated) and (2) all **off-source** (off-site) properties where letters were required to be sent per the ch. NR 700, Wis. Adm. Code, rule series (e.g., off-site cover maintenance required, lost monitoring well, off-site cover property impacts to groundwater exceeding the ch. NR 140, Wis. Adm. Code).

Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*

- G.2. **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (Lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).
- G.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- G.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Check the correct box for this case closure request, and have either a professional engineer or a hydrogeologist, as defined in ch. NR 712, Wis. Adm. Code, sign this document.

- ☒ A response action(s) for this site addresses groundwater contamination (including natural attenuation remedies).
- ☒ The response action(s) for this site addresses media other than groundwater.

Engineering Certification

I _____ hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this case closure request has been prepared by me or prepared under my supervision in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Printed Name

Title

Signature

Date

P.E. Stamp and Number

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Hydrogeologist Certification

I, Kurt McClung hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this case closure request is correct and the document was prepared by me or prepared by me or prepared under my supervision and, in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Kurt McClung

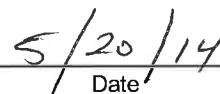
Senior Hydrogeologist

Printed Name

Title



Signature



Date

ATTACHMENT A

Data Tables

- A.1 Groundwater Analytical Table
- A.2.a Pre-Remedial Soil Analytical Table— Excavation
- A.2.b Pre-Remedial Soil Analytical Table— Monitoring Wells
- A.3 Post-Remedial Soil Analytical Table— **Not Applicable**
Excavation was to expose & repair the pipeline; see A.2.a for sample results
- A.4 Pre and Post Remaining Soil Contamination Soil Analytical Table
- A.5 Vapor Analytical Table— **Not Applicable**
No buildings are present near soil impacts; no vapor samples were collected
- A.6.a.1 Surface Water Sample Analytical Table (DRO, GRO, PVOcs)
- A.6.a.2 Surface Water Sample Analytical Table (PAH)
- A.6.b Sediment Sample Analytical Table
- A.7 Water Level Elevations
- A.8 Natural Attenuation Field Parameters Table

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TABLE A.1
Groundwater Analytical Results
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

| MW-1 Volatile Organic Compounds | | | | | | | | | | | | | |
|---------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 3/22/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 4/24/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/2/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/2/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/10/2013 | <32.4 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

| MW-2 Volatile Organic Compounds | | | | | | | | | | | | | |
|---------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 3/22/2012 | 3,270 | 243 | 143 | 22.0 | <0.24 | 84.7 | 16.3 | 227 | 491 | 31.5 | 20.5 | 8.8 | 46.4 |
| 4/23/2012 | 1,400 | 78.2 | 72.6 | 3.4 | <0.24 | 22.4 | 4.0 | 54.8 | 136.4 | 7.00 | 9.5 | 2.9 J | 11.8 |
| 8/2/2012 | 752 | 88.3 | 42.0 | 3.1 | <0.24 | 39.5 | 9.2 | 0.99 J | 64.6 | 16.8 | 15.7 | 5.8 | 17.0 |
| 11/2/2012 | 3,720 | 604 | 154 | 18.1 | <2.4 | 203 | 31.6 | <6.7 | 455.8 | 59.1 | 21.8 | 18.9 J | 92.4 |
| 2/21/2013 | 2,170 | 431 | 136 | <1.6 | <0.96 | 68.1 | 17.3 | <2.7 | 248.9 | 26.8 | 20.4 | 13.5 J | 59.0 |
| 5/10/2013 | 1,960 | 188 | 71.0 | <1.0 | <0.78 | 31.7 | 10.3 | <0.88 | 105.4 | 15.8 | 13.4 | 9.0 J | 29.9 |
| 8/1/2013 | 1,550 | 256 | 79.2 | 3.3 | <0.78 | 82.0 | 19.6 | <0.88 | 93.4 | 26.3 | 12.5 | 12.7 | 68.5 |

| MW-3 Volatile Organic Compounds | | | | | | | | | | | | | |
|---------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 3/22/2012 | 1,400 | 38.9 | 84.2 | 0.63 J | 0.41 J | 4.7 | 3.4 | 7.6 | 87.8 | 5.3 | 15.8 | 3.1 J | 4.6 J |
| 3/22/2012 D | 1,410 | 37.1 | 77.9 | <0.82 | <0.48 | 4.5 | 2.8 | 7.2 | 81.1 | 4.9 | 14.1 | 2.7 J | 4.7 J |
| 4/23/2012 | 1,190 | 56.2 | 50.5 | 0.88 J | <0.24 | 9.6 | 2.6 | 17.5 | 84.5 | 4.8 | 7.1 | 1.9 J | 9.0 |
| 8/1/2012 | 246 | 8.1 | 5.3 | 2.2 | <0.24 | 6.0 | 0.83 J | <0.67 | 9.4 | 1.8 | 1.1 | <0.89 | 3.0 J |
| 8/1/2012 D | 179 | 3.0 | 2.2 | 0.67 J | <0.24 | 1.8 | <0.59 | <0.67 | 3.2 J | <0.81 | <0.67 | <0.89 | 1.1 J |
| 11/1/2012 | 192 | 9.6 | 4.6 | 0.95 J | <0.24 | 3.8 | 0.92 J | <0.67 | <2.63 | 1.7 | 1.2 | <0.89 | 4.1 J |
| 2/21/2013 | 317 | 41.5 | 15.6 | <0.41 | <0.24 | 6.5 | 2.7 | <0.67 | 2.3 | 5.5 | 2.9 | 2.4 J | 8.5 |
| 5/9/2013 | 150 | 19.5 | 6.8 | 1.6 | <0.39 | 4.9 | 1.2 | <0.44 | 13.6 | 2.0 | 1.1 | 0.70 J | 4.2 J |
| 5/9/2013 D | 141 | 17.3 | 6.1 | 1.6 | <0.39 | 4.7 | 1.1 | <0.44 | 12.9 | 2.0 | 0.99 J | <0.60 | 4.2 J |
| 8/1/2013 | 36.5 J | 4.3 J | <2.5 | <0.50 | <0.39 | 0.57 J | <0.34 | <0.44 | <1.32 | 0.57 J | 0.51 J | <0.60 | <2.5 |

TABLE A.1
Groundwater Analytical Results
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

| MW-4 Volatile Organic Compounds | | | | | | | | | | | | | |
|---------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 3/22/2012 | 459 | 44 | 19.5 | 0.92 J | <0.24 | 13.9 | 2.4 | 17.9 | 50.6 | 4.5 | 3.4 | 1.6 J | 9.0 |
| 4/24/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/1/2012 | 41.0 J | 8.2 | 3.3 | <0.41 | <0.24 | 1.9 | <0.59 | 1.8 | 6.6 | 0.92 J | <0.67 | <0.89 | 1.3 J |
| 11/2/2012 | 95.7 | 11.5 | 4.2 | <0.41 | <0.24 | 2.2 | 0.70 J | 0.83 J | 6.1 | 1.4 | 1.0 | <0.89 | 1.7 J |
| 2/21/2013 | 70.4 | 6.9 | 2.8 | <0.41 | <0.24 | 1.9 | 0.66 J | <0.67 | <2.63 | 1.2 | <0.67 | <0.89 | 1.4 J |
| 5/9/2013 | 37.9 J | 6.8 | 2.8 J | <0.50 | <0.39 | 1.5 | 0.40 J | 0.76 J | 5.7 | 0.65 J | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | 55.6 | 10.9 | 3.5 J | <0.50 | <0.39 | 0.91 J | 0.55 J | <0.44 | 3.0 J | 1.3 | <0.40 | <0.60 | <2.5 |

| MW-5 Volatile Organic Compounds | | | | | | | | | | | | | |
|---------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 3/22/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 4/23/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 4/23/2012 D | <32.4 | <0.97 | <0.83 | <0.41 | 0.87 J | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | 0.49 J | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/10/2013 | <32.4 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

| MW-6 Volatile Organic Compounds | | | | | | | | | | | | | |
|---------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 3/22/2012 | 45.1 J | 3.6 | 1.1 | <0.41 | <0.24 | 0.70 J | <0.59 | 1.2 | 2.63 J | <0.81 | <0.67 | <0.89 | <0.89 |
| 4/24/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | 0.65 J | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/10/2013 | <32.4 | <0.57 | <2.5 | <0.50 | 0.52 J | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

TABLE A.1
Groundwater Analytical Results
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-7 Volatile Organic Compounds

| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
|-------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 4/23/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/2/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/1/2012 D | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 D | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/10/2013 | <32.4 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 D | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

MW-8 Volatile Organic Compounds

| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
|------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 4/24/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/2/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | 35.3 J | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/9/2013 | <32.4 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

MW-9 Volatile Organic Compounds

| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
|------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 5/16/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/2/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/9/2013 | <32.4 | 0.85 J | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

TABLE A.1
Groundwater Analytical Results
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

| MW-10 Volatile Organic Compounds | | | | | | | | | | | | | |
|----------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 5/16/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 5/9/2013 | <32.4 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

| MW-11 Volatile Organic Compounds | | | | | | | | | | | | | |
|----------------------------------|-------------|-------------------|-------------------|-----------------|-----------------------|----------------------|--------------------------------------|-----------------|--------------------------|-------------------------|----------------------------|--------------------------|---------------------|
| Date | GRO µg/L | 1,2,4-TMB µg/L | 1,3,5-TMB µg/L | Benzene µg/L | Chloromethane µg/L | Ethylbenzene µg/L | Isopropylbenzene (Cumene) µg/L | Toluene µg/L | Total Xylenes µg/L | n-Propylbenzene µg/L | p-Isopropyltoluene µg/L | sec-Butylbenzene µg/L | Naphthalene µg/L |
| NR 140 PAL | NS | 96 | | 0.5 | 3.0 | 140 | NS | 160 | 400 | NS | NS | NS | 10 |
| NR 140 ES | NS | 480 | | 5.0 | 30 | 700 | NS | 800 | 2,000 | NS | NS | NS | 100 |
| 5/16/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 8/1/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 11/2/2012 | <32.4 | <0.97 | <0.83 | <0.41 | <0.24 | <0.54 | <0.59 | <0.67 | <2.63 | <0.81 | <0.67 | <0.89 | <0.89 |
| 2/21/2013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 5/10/2013 | <32.4 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |
| 8/1/2013 | <34.9 | <0.57 | <2.5 | <0.50 | <0.39 | <0.50 | <0.34 | <0.44 | <1.32 | <0.50 | <0.40 | <0.60 | <2.5 |

Notes:

Exceedance of the Wisconsin Administrative Code Chapter NR 140 groundwater enforcement standard is depicted in **BOLD**.

Exceedance of the Wisconsin Administrative Code Chapter NR 140 groundwater preventive action limit is depicted in *italics*.

Results are expressed in µg/L (ppb).

J Estimated concentration detected between the detection limit and reporting limit.

D Duplicate sample.

NS No Standard

GRO Gasoline Range Organics

DRO Diesel Range Organics

1,2,4-TMB 1,2,4-Trimethylbenzene

1,3,5-TMB 1,3,5-Trimethylbenzene

NA Not Acquired- MW-11 was frozen during the 2/21/2013 sampling event.

TABLE A.1
Groundwater Analytical Results
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-1 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 3/22/2012 | 32 J | <0.0048 | <0.0038 | <0.0061 | <0.0038 | <0.0030 | <0.0036 | <0.0051 | <0.0046 | <0.0037 | <0.0047 | <0.0051 | <0.0050 | <0.0086 | <0.0050 |
| 4/24/2012 | 25 J | <0.0047 | <0.0037 | <0.0060 | <0.0038 | <0.0030 | 0.0044 J | <0.0050 | <0.0045 | 0.0049 J | 0.0071 J | <0.0050 | <0.0049 | <0.0084 | 0.0068 J |
| 8/2/2012 | 26 J | <0.0045 | <0.0036 | <0.0057 | <0.0036 | <0.0029 | <0.0034 | <0.0048 | <0.0044 | <0.0035 | <0.0044 | <0.0048 | <0.0047 | <0.0081 | <0.0047 |
| 11/3/2012 | 12 J | <0.0034 | <0.0034 | <0.0030 | <0.0048 | <0.0048 | <0.0051 | <0.0060 | <0.0054 | <0.0052 | <0.0037 | <0.0034 | <0.0059 | <0.0093 | <0.0047 |
| 2/21/2013 | <11 | 0.013 J | <0.0041 | 0.0079 J | <0.0056 | <0.0058 | <0.0079 | <0.0095 | <0.012 | <0.0073 | 0.018 J,B | 0.019 J | <0.0068 | 0.068 B | 0.014 J |
| 5/10/2013 | 57 | <0.0043 | <0.0039 | <0.0054 | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | <0.0058 | <0.0043 | <0.0065 | <0.0043 | <0.0059 |
| 8/1/2013 | <20 | <0.0042 | <0.0038 | 0.0056 J,B | 0.0095 J | <0.0054 | <0.0074 | <0.0088 | <0.011 | 0.011 J | 0.027 J | 0.0055 J | <0.0064 | 0.018 J,B | 0.025 J |

MW-2 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 3/22/2012 | 1,700 | 0.39 | 0.21 | 0.27 | 0.035 J | 0.0091 J | 0.011 J | <0.0050 | 0.012 J | 0.032 J | 0.4 | 0.76 | <0.0049 | 0.73 | 0.24 |
| 4/23/2012 | 1,400 | 0.41 | 0.068 J | 0.23 J | 0.28 | 0.13 J | 0.12 J | 0.050 J | 0.12 J | 0.28 | 1.2 | 0.43 | 0.035 J | 0.096 J | 1.0 |
| 8/2/2012 | 1,000 | <0.0046 | <0.0036 | <0.0058 | <0.0037 | <0.0029 | <0.0034 | <0.0049 | <0.0044 | <0.0035 | <0.0044 | <0.0048 | <0.0047 | <0.0082 | <0.0048 |
| 11/3/2012 | 2,100 | <0.38 | <0.38 | 0.39 J | <0.54 | <0.54 | <0.58 | <0.68 | <0.61 | <0.59 | 1.1 J | 0.78 J | <0.67 | 1.1 J | 0.91 J |
| 2/21/2013 | 2,700 | <0.44 | <0.40 | <0.55 | <0.54 | <0.56 | <0.77 | <0.92 | <1.2 | <0.70 | 1.4 J,B | 0.86 J | <0.66 | 1.3 J,B | 1.1 J,B |
| 5/10/2013 | 2,300 | 0.25 J | <0.16 | <0.22 | <0.21 | <0.22 | <0.30 | <0.36 | <0.46 | <0.28 | 0.59 J | 0.42 J | <0.26 | 0.35 J | 0.38 J |
| 8/1/2013 | 3,900 | <0.43 | <0.39 | <0.54 | <0.53 | <0.55 | <0.75 | <0.90 | <1.2 | <0.69 | <0.58 | 0.64 J | <0.65 | 0.56 J,B | <0.59 |

MW-3 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|-------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 3/22/2012 | 1,300 | 1.1 | 0.13 J | 1.2 | 0.24 J | 0.059 J | 0.071 J | <0.050 | 0.060 J | 0.25 J | 3.1 | 0.85 | <0.049 | <0.084 | 1.7 |
| 3/22/2012 D | 1,100 | 1.5 | 0.17 J | 1.2 | 0.21 J | 0.049 J | 0.053 J | <0.050 | 0.054 J | 0.19 J | 2.9 | 1.1 | <0.048 | <0.083 | 1.7 |
| 4/23/2012 | 1,800 | 1.4 | 0.11 J | 0.96 | 0.51 | 0.16 J | 0.14 J | 0.060 J | 0.17 J | 0.44 J | 4.0 | 1.0 | 0.055 J | <0.082 | 2.9 |
| 8/1/2012 | 4,300 | 0.058 J | 0.11 | 0.29 | 0.11 | 0.39 | 0.36 | 0.17 | 0.28 | 0.22 | 0.56 | 0.026 J | 0.15 | 0.023 J | 0.70 |
| 8/1/2012 D | 5,600 | 0.11 J | 0.14 J | 0.37 | 0.12 J | 0.32 | 0.29 | 0.17 J | 0.22 | 0.20 | 0.78 | 1.0 | 0.16 J | 0.037 J | 0.73 |
| 11/1/2012 | 3,500 | 0.071 | 0.016 J | 0.15 | 0.19 | 0.22 | 0.21 | 0.089 | 0.18 | 0.26 | 0.45 | 0.16 | 0.085 | 0.084 | 0.53 |
| 2/21/2013 | 420 | 0.71 | 0.14 J | 0.55 | 1.0 | 0.90 | 1.1 | 0.66 | 0.62 | 0.89 | 2.8 | 0.68 | 0.59 | 1.2 B | 2.3 |
| 5/9/2013 | 690 | 0.33 | 0.042 J | 0.088 J | 0.093 J | 0.062 J | 0.064 J | 0.021 J | 0.041 J | 0.10 | 0.65 | 0.27 | 0.016 J | 0.074 J,B | 0.54 |
| 5/9/2013 D | 650 | 0.30 | 0.037 J | 0.074 J | 0.079 J | 0.059 J | 0.059 J | 0.020 J | 0.038 J | 0.088 J | 0.56 | 0.25 | 0.015 J | 0.063 J | 0.46 |
| 8/1/2013 | 340 | 0.0062 J | 0.012 J | 0.033 J | 0.0074 J | 0.020 J | 0.023 J | 0.021 J | 0.012 J | 0.018 J | 0.015 J | 0.010 J | 0.014 J | 0.026 J | 0.016 J |

TABLE A.1
Groundwater Analytical Results
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-4 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 3/22/2012 | 300 | 0.084 | 0.017 J | 0.044 J | 0.026 J | 0.010 J | 0.0099 J | 0.0070 J | 0.013 J | 0.024 J | 0.15 | 0.038 J | 0.0055 J | <0.0084 | 0.1 |
| 4/24/2012 | 350 | 0.0050 J | 0.0058 J | 0.012 J | 0.017 J | 0.0056 J | 0.011 J | 0.0061 J | 0.0050 J | 0.012 J | 0.030 J | <0.0050 | 0.0061 J | 0.011 J | 0.075 |
| 8/1/2012 | 210 | <0.0046 | <0.0037 | <0.0058 | <0.0037 | <0.0029 | <0.0035 | <0.0049 | <0.0045 | <0.0035 | <0.0045 | <0.0049 | <0.0048 | <0.0082 | <0.0048 |
| 11/2/2012 | 240 | 0.019 J | 0.0038 J | 0.0068 J | 0.0047 J | <0.0045 | <0.0048 | <0.0057 | <0.0051 | 0.0067 J | 0.025 J | 0.017 J | <0.0056 | <0.0088 | 0.051 |
| 2/21/2013 | 98 | <0.0045 | <0.0041 | 0.0061 J | 0.016 J | 0.020 J | 0.042 J | 0.044 J | 0.019 J | 0.024 J | 0.045 J,B | 0.0088 J | 0.039 J | 0.058 B | 0.082 |
| 5/9/2013 | 130 | 0.017 J | <0.0040 | <0.0055 | <0.0054 | <0.0056 | <0.0077 | <0.0092 | <0.012 | <0.0070 | <0.0059 | 0.0096 J | <0.0066 | 0.013 J | 0.0080 J |
| 8/1/2013 | 64 | <0.0043 | <0.0039 | <0.0053 | <0.0052 | <0.0054 | <0.0074 | <0.0089 | <0.011 | <0.0068 | <0.0057 | <0.0043 | <0.0064 | 0.0076 J,B | 0.0098 J |

MW-5 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|-------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 3/22/2012 | 44 J | 0.012 J | <0.0038 | 0.0064 J | <0.0038 | <0.0030 | <0.0036 | <0.0050 | <0.0046 | <0.0037 | 0.0062 J | 0.011 J | <0.0049 | 0.030 J | <0.0050 |
| 4/23/2012 | 13 J | <0.0048 | <0.0038 | <0.0061 | <0.0038 | <0.0030 | <0.0036 | <0.0051 | <0.0046 | <0.0037 | 0.0077 J | <0.0051 | <0.0050 | <0.0086 | 0.010 J |
| 4/23/2012 D | 18 J | <0.0048 | <0.0038 | <0.0061 | <0.0038 | <0.0030 | <0.0036 | <0.0051 | <0.0046 | <0.0037 | <0.0047 | <0.0051 | <0.0050 | <0.0086 | 0.0059 J |
| 8/1/2012 | 38 J | 0.0053 J | <0.0040 | <0.0064 | <0.0040 | <0.0032 | <0.0038 | <0.0054 | <0.0049 | 0.0040 J | 0.0066 J | <0.0053 | <0.0052 | <0.0090 | <0.0053 |
| 11/1/2012 | <10 | 0.0037 J | <0.0031 | <0.0027 | <0.0044 | <0.0044 | <0.0047 | <0.0056 | <0.0050 | <0.0048 | 0.0094 J | 0.0036 J | <0.0055 | 0.019 J | 0.0071 J |
| 2/21/2013 | <10 | <0.0043 | <0.0039 | <0.0054 | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | 0.0090 J,B | 0.0072 J | <0.0065 | 0.019 J,B | 0.0013 J,B |
| 5/10/2013 | 24 J | <0.0043 | <0.0039 | <0.0054 | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | 0.0097 J | <0.0043 | <0.0065 | 0.011 J | 0.0089 J |
| 8/1/2013 | 80 | <0.0045 | <0.0041 | <0.0057 | <0.0056 | <0.0058 | <0.0079 | <0.0095 | <0.012 | <0.0073 | <0.0061 | 0.0055 J | <0.0068 | 0.0092 J,B | <0.0062 |

MW-6 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 3/22/2012 | 180 | 0.013 J | 0.0058 J | <0.0061 | <0.0039 | <0.0031 | <0.0036 | <0.0052 | <0.0047 | 0.0039 J | 0.013 J | 0.015 J | <0.0050 | 0.032 J | 0.0096 J |
| 4/24/2012 | 330 | <0.0048 | 0.0093 J | 0.019 J | 0.0050 J | 0.0036 J | 0.0051 J | <0.0052 | <0.0047 | 0.0053 J | 0.0095 J | <0.0051 | <0.0050 | 0.022 J | 0.036 J |
| 8/1/2012 | 430 | <0.0046 | <0.0037 | 0.0086 J | <0.0037 | <0.0029 | <0.0035 | <0.0049 | <0.0045 | <0.0035 | 0.0069 J | <0.0049 | <0.0048 | <0.0082 | 0.017 J |
| 11/1/2012 | 130 | 0.0056 J | <0.0031 | 0.0052 J | <0.0044 | <0.0044 | <0.0046 | <0.0055 | <0.0049 | <0.0047 | 0.0079 J | <0.0031 | <0.0054 | 0.011 J | 0.010 J |
| 2/21/2013 | 140 | 0.0062 J | <0.0038 | <0.0053 | <0.0052 | <0.0054 | <0.0074 | <0.0088 | <0.011 | <0.0068 | 0.0065 J,B | 0.0076 J | <0.0064 | 0.017 J,B | 0.011 J,B |
| 5/10/2013 | 340 | 0.0056 J | <0.0040 | <0.0056 | <0.0055 | <0.0057 | <0.0077 | <0.0093 | <0.012 | <0.0071 | 0.0099 J | <0.0044 | <0.0067 | 0.012 J | 0.015 J |
| 8/1/2013 | 100 | 0.0083 J | <0.0038 | <0.0052 | <0.0051 | <0.0053 | <0.0072 | <0.0087 | <0.011 | <0.0066 | <0.0056 | 0.0046 J | <0.0062 | 0.010 J,B | 0.0071 J |

TABLE A.1
Groundwater Analytical Results
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-7 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|-------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 4/23/2012 | 87 | <0.0046 | <0.0036 | <0.0058 | <0.0037 | <0.0029 | <0.0034 | <0.0049 | <0.0044 | <0.0035 | <0.0044 | <0.0048 | <0.0047 | <0.0082 | <0.0048 |
| 8/2/2012 | 65 | <0.0046 | <0.0036 | <0.0058 | 0.013 J | 0.0090 J | 0.012 J | 0.0083 J | 0.013 J | 0.018 J | 0.0073 J | <0.0048 | 0.0089 J | <0.0082 | 0.0072 J |
| 11/1/2012 | 90 | <0.0031 | <0.0031 | 0.0032 J | <0.0044 | <0.0044 | <0.0047 | <0.0055 | <0.0050 | <0.0048 | 0.0068 J | <0.0031 | <0.0054 | 0.016 J | 0.0058 J |
| 11/1/2012 D | 71 | <0.0031 | <0.0031 | <0.0027 | <0.0044 | <0.0044 | <0.0047 | <0.0056 | <0.0050 | <0.0048 | 0.0069 J | <0.0031 | <0.0055 | 0.018 J | 0.0058 J |
| 2/21/2013 | 92 | <0.0043 | <0.0039 | <0.0054 | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | 0.0091 J,B | <0.0043 | <0.0065 | 0.0092 J,B | 0.010 J,B |
| 2/21/2013 D | 90 | <0.0043 | <0.0039 | <0.0053 | <0.0052 | <0.0054 | <0.0074 | <0.0089 | <0.011 | <0.0068 | <0.0057 | <0.0043 | <0.0064 | 0.0066 J,B | <0.0058 |
| 5/10/2013 | 180 | <0.0043 | <0.0039 | <0.0054 | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | 0.0096 J | <0.0043 | <0.0065 | 0.0071 J | 0.0080 J |
| 8/1/2013 | 85 | 0.0060 J | <0.0039 | 0.0083 J | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | 0.012 J | 0.013 J | <0.0065 | 0.038 J,B | 0.011 J |
| 8/1/2013 D | 64 | <0.0046 | <0.0041 | <0.0057 | <0.0056 | <0.0059 | <0.0080 | <0.0096 | <0.012 | <0.0073 | 0.012 J | 0.0070 J | <0.0069 | 0.015 J,B | 0.011 J |

MW-8 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 4/24/2012 | 31 J | <0.0047 | <0.0037 | <0.0060 | 0.0097 J | 0.0050 J | 0.0094 J | 0.0066 J | 0.0080 J | 0.012 J | 0.0097 J | <0.0050 | 0.0063 J | <0.0084 | 0.0096 J |
| 8/1/2012 | 81 | <0.0046 | <0.0036 | 0.0066 J | <0.0037 | <0.0029 | <0.0034 | <0.0049 | <0.0044 | 0.0039 J | <0.0044 | <0.0048 | <0.0047 | <0.0082 | 0.034 J |
| 11/2/2012 | 180 | <0.0033 | <0.0033 | <0.0029 | <0.0047 | <0.0047 | <0.0050 | <0.0059 | <0.0053 | <0.0051 | <0.0036 | <0.0033 | <0.0058 | <0.0091 | <0.0046 |
| 2/21/2013 | 84 | <0.0044 | <0.0040 | <0.0056 | <0.0055 | <0.0057 | <0.0077 | <0.0093 | <0.012 | <0.0071 | <0.0060 | <0.0044 | <0.0067 | 0.0060 J,B | <0.0061 |
| 5/9/2013 | 49 | <0.0044 | <0.0040 | <0.0055 | <0.0054 | <0.0056 | <0.0077 | <0.0092 | <0.012 | <0.0070 | <0.0059 | <0.0044 | <0.0066 | <0.0044 | <0.0060 |
| 8/1/2013 | 44 J | <0.0039 | <0.0036 | <0.0050 | <0.0049 | <0.0050 | <0.0069 | <0.0083 | <0.011 | <0.0063 | <0.0053 | <0.0039 | <0.0060 | 0.0072 J,B | <0.0054 |

MW-9 Polynuclear Aromatic Hydrocarbons

| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
|------------|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 5/16/2012 | 60 | <0.0048 | <0.0038 | <0.0061 | <0.0038 | <0.0030 | <0.0036 | <0.0051 | <0.0046 | <0.0037 | <0.0047 | <0.0051 | <0.0050 | <0.0086 | <0.0050 |
| 8/2/2012 | 59 | <0.0046 | <0.0036 | <0.0058 | <0.0037 | <0.0029 | <0.0034 | <0.0049 | <0.0044 | <0.0035 | <0.0044 | <0.0048 | <0.0047 | <0.0082 | <0.0048 |
| 11/1/2012 | 27 J | <0.0031 | <0.0031 | 0.0033 J | 0.0067 J | 0.0049 J | 0.0061 J | <0.0056 | 0.0066 J | 0.0069 J | 0.010 J | <0.0031 | <0.0055 | 0.012 J | 0.0096 J |
| 2/21/2013 | 70 | <0.0043 | <0.0039 | <0.0055 | <0.0054 | <0.0056 | <0.0076 | <0.0091 | <0.012 | <0.0070 | 0.0060 J,B | <0.0043 | <0.0066 | 0.0081 J,B | 0.0073 J,B |
| 5/9/2013 | 120 | <0.0043 | <0.0039 | <0.0055 | <0.0054 | <0.0056 | <0.0076 | <0.0091 | <0.012 | <0.0070 | <0.0059 | 0.0047 J | <0.0066 | 0.0049 J | 0.0080 J |
| 8/1/2013 | <20 | <0.0042 | <0.0038 | <0.0053 | <0.0052 | <0.0054 | <0.0074 | <0.0088 | <0.011 | <0.0068 | <0.0057 | <0.0042 | <0.0064 | 0.0077 J,B | <0.0058 |

TABLE A.1
Groundwater Analytical Results
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

| MW-10 Polynuclear Aromatic Hydrocarbons | | | | | | | | | | | | | | | |
|---|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 5/16/2012 | 31 J | 0.0077 J | <0.0039 | <0.0063 | <0.0040 | <0.0031 | <0.0037 | <0.0053 | <0.0048 | 0.0039 J | 0.012 J | 0.0088 J | <0.0051 | 0.016 J | 0.0093 J |
| 8/1/2012 | 42 J | <0.0048 | <0.0038 | <0.0061 | <0.0038 | <0.0030 | <0.0036 | <0.0051 | <0.0046 | 0.0052 J | <0.0047 | <0.0051 | <0.0050 | <0.0086 | <0.0050 |
| 11/1/2012 | 27 J | 0.0045 J | <0.0032 | <0.0028 | <0.0045 | <0.0045 | <0.0048 | <0.0057 | <0.0051 | <0.0049 | 0.0050 J | 0.0033 J | <0.0056 | 0.013 J | <0.0044 |
| 2/21/2013 | <11 | <0.0043 | <0.0039 | <0.0053 | <0.0052 | <0.0054 | <0.0074 | <0.0089 | <0.011 | <0.0068 | <0.0057 | <0.0043 | <0.0064 | 0.0058 J,B | <0.0058 |
| 5/9/2013 | 75 | 0.0058 J | <0.0041 | <0.0056 | <0.0055 | <0.0057 | <0.0078 | <0.0094 | <0.012 | <0.0072 | 0.0086 J | <0.0045 | <0.0068 | 0.0093 J | 0.022 J |
| 8/1/2013 | <20 | <0.0042 | <0.0038 | <0.0053 | <0.0052 | <0.0054 | <0.0074 | <0.0088 | <0.011 | <0.0068 | <0.0057 | <0.0042 | <0.0064 | 0.010 J,B | <0.0058 |

| MW-11 Polynuclear Aromatic Hydrocarbons | | | | | | | | | | | | | | | |
|---|-------------|----------------------|------------------------|--------------------|--------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|------------------|----------------------|------------------|------------------------------------|----------------------|----------------|
| Date | DRO µg/L | Acenaphthene µg/L | Acenaphthylene µg/L | Anthracene µg/L | Benzo(a) anthracene µg/L | Benzo(a) pyrene µg/L | Benzo(b) fluoranthene µg/L | Benzo(g,h,i) perylene µg/L | Benzo(k) fluoranthene µg/L | Chrysene µg/L | Fluoranthene µg/L | Fluorene µg/L | Indeno(1,2,3-cd) pyrene µg/L | Phenanthrene µg/L | Pyrene µg/L |
| NR 140 PAL | NS | NS | NS | 600 | NS | 0.02 | 0.02 | NS | NS | 0.02 | 80 | 80 | NS | NS | 50 |
| NR 140 ES | NS | NS | NS | 3,000 | NS | 0.2 | 0.2 | NS | NS | 0.2 | 400 | 400 | NS | NS | 250 |
| 5/16/2012 | 28 J | <0.0048 | <0.0038 | <0.0061 | <0.0038 | <0.0030 | <0.0036 | <0.0051 | <0.0046 | <0.0037 | <0.0047 | 0.0055 J | <0.0050 | 0.011 J | <0.0050 |
| 8/1/2012 | 36 J | <0.0045 | <0.0036 | <0.0057 | <0.0036 | 0.0036 J | 0.0038 J | <0.0048 | 0.0050 J | 0.0056 J | 0.010 J | <0.0048 | <0.0047 | <0.0081 | 0.0078 J |
| 11/2/2012 | 12 J | <0.0031 | <0.0031 | <0.0027 | <0.0044 | <0.0044 | <0.0047 | <0.0056 | <0.0050 | <0.0048 | <0.0034 | <0.0031 | <0.0055 | <0.0086 | <0.0043 |
| 2/21/2013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 5/10/2013 | 65 | <0.0043 | <0.0039 | <0.0055 | <0.0054 | <0.0056 | <0.0076 | <0.0091 | <0.012 | <0.0070 | 0.018 J | <0.0043 | <0.0066 | 0.0091 J | 0.014 J |
| 8/1/2013 | 37 J | <0.0043 | <0.0039 | <0.0054 | <0.0053 | <0.0055 | <0.0075 | <0.0090 | <0.012 | <0.0069 | 0.0067 J | <0.0043 | <0.0065 | 0.011 J,B | 0.0063 J |

Notes:

Exceedance of the Wisconsin Administrative Code Chapter NR 140 groundwater enforcement standard is depicted in **BOLD**.

Exceedance of the Wisconsin Administrative Code Chapter NR 140 groundwater preventive action limit is depicted in *italics*.

Results are expressed in µg/L (ppb).

J Estimated concentration detected between the detection limit and reporting limit.

D Duplicate sample.

NS No Standard

GRO

Gasoline Range Organics

DRO

Diesel Range Organics

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

NA

Not Acquired- MW-11 was frozen during the 2/21/2013 sampling event.

TABLE A.2.a
Pre Remedial Soil Analytical Table- Excavation
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

Volatile Organic Compounds

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | GRO mg/kg 250 mg/kg | 1,2,4-TMB mg/kg No Standard | 1,3,5-TMB mg/kg No Standard | Ethylbenzene mg/kg 2.9 mg/kg | Isopropylbenzene (Cumene) mg/kg No Standard | Methylene Chloride mg/kg No Standard | Toluene mg/kg 1.5 mg/kg | Total Xylenes mg/kg 4.1 mg/kg | n-Butylbenzene mg/kg No Standard | n-Propylbenzene mg/kg No Standard | p-Isopropyltoluene mg/kg No Standard | sec-Butylbenzene mg/kg No Standard | Naphthalene mg/kg 0.4 mg/kg |
|-------------------|---------------|--------------------|---------------------|------------------------|--------------------------------|--------------------------------|---------------------------------|--|---|----------------------------|----------------------------------|-------------------------------------|--------------------------------------|---|---------------------------------------|--------------------------------|
| Former NR 720 RCL | | | | | | | | | | | | | | | | |
| GMIA 1A | 2/21/2012 | 0.0 | 9.0 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 1B | 2/21/2012 | 0.0 | 5.5 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 1C | 2/21/2012 | 0.0 | 6.0 | <2.9 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 2A | 2/21/2012 | 0.1 | 7.0 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 2B | 2/21/2012 | 0.0 | 9.5 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0326 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 2C | 2/21/2012 | 0.0 | 6.5 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0320 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 3A | 2/21/2012 | 0.0 | 7.0 | <3.3 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 3B | 2/21/2012 | 0.1 | 10.0 | <3.2 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0442 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 3BM | 2/21/2012 | 0.1 | 10.5 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0765 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 3C | 2/21/2012 | 0.1 | 6.5 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0505 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 4A | 2/21/2012 | 0.0 | 8.0 | <3.2 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0495 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 4B | 2/21/2012 | 0.0 | 10.0 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0463 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 4C | 2/21/2012 | 0.0 | 7.5 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0698 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 5A | 2/21/2012 | 0.0 | 5.5 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0678 J | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 5B | 2/21/2012 | 0.1 | 10.0 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.1 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 5C | 2/21/2012 | 0.0 | 7.5 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0936 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA HA-1 | 2/21/2012 | 0.0 | 8.5 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.112 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA HA-2 | 2/21/2012 | 0.1 | 8.5 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.114 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 6A | 2/22/2012 | 8.0 | 6.5 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 6B | 2/22/2012 | 1.3 | 9.0 | <3.1 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 6C | 2/21/2012 | 0.0 | 5.5 | <3.2 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.113 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA DT1 | 2/22/2012 | 17.3 | 3.0 | 276 | 14.6 | 4.21 | 1.39 | 0.774 | <0.200 | 0.822 | 6.30 | 3.16 | 2.14 | 1.46 | 1.68 | 2.49 |
| GMIA 7B | 2/22/2012 | 0.6 | 8.0 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 7C | 2/22/2012 | 22.6 | 5.5 | 384 | 15.8 | 4.27 | 1.95 | 0.8 | <0.125 | 1.87 | 7.94 | 2.88 | 2.27 | 1.35 | 1.48 | 3.12 |
| GMIA 8B | 3/8/2012 | 0.0 | 6.0 | <3.2 | 0.0465 J | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0425 J | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 8C | 3/8/2012 | 203 | 5.0 | 336 | 8.52 | 2.51 | 0.95 | 0.505 | <0.125 | 0.745 | 4.06 | 2.12 | 1.41 | 0.919 | 1.06 | 1.1 |
| GMIA 9B | 3/8/2012 | 8.7 | 5.5 | 22.2 | 0.24 | 0.0725 J | 0.0515 J | <0.0250 | <0.0250 | 0.0796 | 0.1789 J | <0.0404 | 0.0396 J | <0.0250 | <0.0250 | 0.0330 J |
| GMIA 9C | 3/8/2012 | 195 | 5.0 | 771 | 35.2 | 10.5 | 4.18 | 1.95 | <0.312 | 3.58 | 17.24 | 8.49 | 5.79 | 3.58 | 4.22 | 5.39 |
| GMIA 10B** | 03/08-12/2012 | 0.6 | 6.0 | <3.2 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 10C** | 03/08-12/2012 | 81 | 5.0 | 359 | 15 | 4.36 | 1.8 | 0.881 | <0.125 | 1.48 | 7.29 | 3.71 | 2.42 | 1.59 | 1.85 | 1.95 |
| GMIA 1 | 3/19/2012 | 10.0 | 2.0 | 36.6 | 0.527 | 0.159 | 0.0553 J | 0.0317 J | <0.0250 | 0.0442 J | 0.2329 | 0.165 | 0.0774 | 0.0615 J | 0.0689 J | 0.137 |
| GMIA 2 | 3/19/2012 | 7.8 | 2.0 | <2.7 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 3 | 3/19/2012 | 4.7 | 2.0 | 5.2 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| GMIA 4 | 3/19/2012 | 10.8 | 2.0 | 10.9 | 0.294 | 0.0883 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.091 | 0.0847 | 0.0483 J | 0.0378 J | 0.0444 J | 0.275 |
| GMIA 5 | 4/18/2012 | NM | 2.0 | <3.0 | 2.02 | 0.565 | 0.075 | 0.0788 | <0.0250 | <0.0250 | 0.453 | 0.581 | 0.245 | 0.227 | 0.247 | 0.281 |

Polynuclear Aromatic Hydrocarbons (also known as Polycyclic Aromatic Hydrocarbons)

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | DRO mg/kg | Acenaphthene mg/kg | Acenaphthylene mg/kg | Anthracene mg/kg | Benzo(a) anthracene mg/kg | Benzo(a)pyrene mg/kg | Benzo(b) fluoranthene mg/kg | Benzo(g,h,i)perylene mg/kg |
|--|---------------|--------------------|---------------------|-----------|--------------------|----------------------|------------------|---------------------------|----------------------|-----------------------------|----------------------------|
| Former NR 720 RCL or PAH Interim Guidance RCL for Protection of GW | | | | 250 mg/kg | 38 mg/kg | 0.7 mg/kg | 3,000 mg/kg | 17 mg/kg | 48 mg/kg | 360 mg/kg | 6,800 mg/kg |
| GMIA 1A | 2/21/2012 | 0.0 | 9.0 | 2.13 | <0.0029 | <0.0033 | 0.0112 J | 0.0229 | 0.0207 J | 0.0174 J | 0.0143 J |
| GMIA 1B | 2/21/2012 | 0.0 | 5.5 | 8.01 | <0.0029 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| GMIA 1C | 2/21/2012 | 0.0 | 6.0 | 2.07 | <0.0028 | <0.0031 | <0.0046 | 0.0064 J | 0.0054 J | 0.0047 J | 0.0031 J |
| GMIA 2A | 2/21/2012 | 0.1 | 7.0 | 1.57 J | <0.0029 | <0.0033 | <0.0049 | 0.0034 J | <0.0034 | <0.0036 | 0.0030 J |
| GMIA 2B | 2/21/2012 | 0.0 | 9.5 | 5.83 | <0.0029 | <0.0033 | <0.0048 | <0.0029 | <0.0034 | <0.0036 | <0.0027 |
| GMIA 2C | 2/21/2012 | 0.0 | 6.5 | 3.68 | <0.0029 | <0.0033 | <0.0048 | 0.0041 J | 0.0039 J | <0.0036 | <0.0027 |
| GMIA 3A | 2/21/2012 | 0.0 | 7.0 | 3.11 | <0.0031 | <0.0035 | <0.0051 | 0.0050 J | 0.0046 J | 0.0045 J | 0.0037 J |
| GMIA 3B | 2/21/2012 | 0.1 | 10.0 | 1.34 J | <0.0030 | <0.0034 | <0.0050 | <0.0030 | <0.0035 | <0.0037 | <0.0028 |
| GMIA 3BM | 2/21/2012 | 0.1 | 10.5 | 5.23 | <0.0029 | <0.0033 | <0.0048 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| GMIA 3C | 2/21/2012 | 0.1 | 6.5 | 35.3 | 0.0188 J | 0.0943 | 0.146 | 0.388 | 0.443 | 0.443 | 0.311 |
| GMIA 4A | 2/21/2012 | 0.0 | 8.0 | 3.94 | <0.0030 | <0.0034 | <0.0049 | <0.0030 | <0.0035 | <0.0037 | <0.0028 |
| GMIA 4B | 2/21/2012 | 0.0 | 10.0 | 6.98 | <0.0029 | <0.0033 | <0.0049 | <0.0030 | <0.0034 | <0.0036 | <0.0028 |
| GMIA 4C | 2/21/2012 | 0.0 | 7.5 | 3.78 | <0.0029 | <0.0033 | <0.0049 | <0.0030 | <0.0034 | <0.0036 | <0.0028 |
| GMIA 5A | 2/21/2012 | 0.0 | 5.5 | 1.33 J | <0.0028 | <0.0032 | <0.0047 | <0.0028 | <0.0033 | <0.0035 | <0.0026 |
| GMIA 5B | 2/21/2012 | 0.1 | 10.0 | 4.58 | <0.0028 | <0.0031 | <0.0046 | <0.0028 | <0.0032 | <0.0034 | <0.0026 |
| GMIA 5C | 2/21/2012 | 0.0 | 7.5 | 5.8 | <0.0028 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| GMIA HA-1 | 2/21/2012 | 0.0 | 8.5 | 1.06 J | <0.0029 | <0.0033 | <0.0049 | 0.0036 J | <0.0034 | <0.0036 | <0.0028 |
| GMIA HA-2 | 2/21/2012 | 0.1 | 8.5 | <0.925 | <0.0029 | <0.0033 | <0.0048 | <0.0029 | <0.0034 | <0.0036 | <0.0027 |
| GMIA 6A | 2/22/2012 | 8.0 | 6.5 | 6.68 | <0.0028 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | 0.0046 J |
| GMIA 6B | 2/22/2012 | 1.3 | 9.0 | 29.6 | <0.0029 | <0.0033 | <0.0048 | <0.0029 | <0.0034 | <0.0036 | 0.0056 J |
| GMIA 6C | 2/21/2012 | 0.0 | 5.5 | <0.919 | <0.0030 | <0.0034 | <0.0050 | <0.0030 | <0.0035 | <0.0037 | <0.0028 |
| GMIA DT1 | 2/22/2012 | 17.3 | 3.0 | 65.1 | 0.0157 J | 0.0116 J | <0.0047 | 0.0157 J | 0.0137 J | 0.0124 J | 0.0107 J |
| GMIA 7B | 2/22/2012 | 0.6 | 8.0 | 2.45 | <0.0028 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | 0.0046 J |
| GMIA 7C | 2/22/2012 | 22.6 | 5.5 | 1,490 | 0.201 J | <0.0346 | <0.0506 | 0.108 J | 0.0638 J | 0.0441 J | 0.0308 J |
| GMIA 8B | 3/8/2012 | 0.0 | 6.0 | <0.927 | <0.0030 | <0.0034 | <0.0049 | <0.0030 | <0.0035 | <0.0037 | <0.0028 |
| GMIA 8C | 3/8/2012 | 203 | 5.0 | 217 | <0.0029 | <0.0033 | <0.0048 | <0.0029 | <0.0034 | <0.0036 | <0.0027 |
| GMIA 9B | 3/8/2012 | 8.7 | 5.5 | 1.13 | <0.0030 | <0.0034 | <0.0049 | <0.0030 | <0.0035 | <0.0037 | <0.0028 |
| GMIA 9C | 3/8/2012 | 195 | 5.0 | 1,220 | 0.0445 J | 0.0237 J | 0.0509 J | 0.0992 | 0.0671 J | 0.0833 | 0.0298 J |
| GMIA 10B** | 03/08-12/2012 | 0.6 | 6.0 | 5.21 | <0.0032 | <0.0047 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| GMIA 10C** | 03/08-12/2012 | 81 | 5.0 | 1,270 | 0.125 J | 0.031 J | <0.045 | <0.0275 | <0.0317 | <0.0335 | <0.0255 |
| GMIA 1 | 3/19/2012 | 10.0 | 2.0 | 128 | <0.0028 | <0.0032 | <0.0047 | 0.0113 J | 0.0110 J | 0.0152 J | 0.0088 J |
| GMIA 2 | 3/19/2012 | 7.8 | 2.0 | 27.1 | 0.0069 J | <0.0029 | 0.0157 J | 0.0438 | 0.0455 | 0.0516 | 0.0299 |
| GMIA 3 | 3/19/2012 | 4.7 | 2.0 | 21.8 | <0.0027 | <0.0031 | <0.0046 | <0.0028 | <0.0032 | <0.0034 | <0.0026 |
| GMIA 4 | 3/19/2012 | 10.8 | 2.0 | 77.5 | 0.0153 J | 0.0055 J | 0.0186 J | 0.072 | 0.0679 | 0.0777 | 0.0459 |
| GMIA 5 | 4/18/2012 | NM | 2.0 | 35.5 | <0.0028 | <0.0032 | <0.0047 | 0.0048 J | 0.0054 J | 0.0044 J | <0.0026 |

TABLE A.2.a
Pre Remedial Soil Analytical Table- Excavation
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | Benzo(k) fluoranthene mg/kg | Chrysene mg/kg | Dibenz(a,h) anthracene mg/kg | Fluoranthene mg/kg | Fluorene mg/kg | Indeno(1,2,3-cd) pyrene mg/kg | Naphthalene mg/kg | Phenanthrene mg/kg | Pyrene mg/kg |
|--|---------------|-----------------------|------------------------|--------------------------------|-------------------|---------------------------------|-----------------------|-------------------|----------------------------------|----------------------|-----------------------|-----------------|
| Former PAH Interim Guidance RCL for Protection of GW | | | | 870 mg/kg | 37 mg/kg | 38 mg/kg | 500 mg/kg | 100 mg/kg | 680 mg/kg | 0.4 mg/kg | 1.8 mg/kg | 8,700 mg/kg |
| GMIA 1A | 2/21/2012 | 0.0 | 9.0 | 0.0190 J | 0.0264 | <0.0057 | 0.056 | <0.0052 | 0.0116 J | <0.0037 | 0.0368 | 0.0479 |
| GMIA 1B | 2/21/2012 | 0.0 | 5.5 | <0.0038 | <0.0037 | <0.0055 | <0.0101 | <0.0050 | <0.0029 | <0.0036 | <0.0045 | <0.0037 |
| GMIA 1C | 2/21/2012 | 0.0 | 6.0 | 0.0045 J | 0.0070 J | <0.0053 | 0.0121 J | <0.0049 | 0.0029 J | <0.0034 | <0.0043 | 0.0108 J |
| GMIA 2A | 2/21/2012 | 0.1 | 7.0 | <0.0039 | 0.0054 J | <0.0057 | <0.0105 | <0.0052 | <0.0030 | <0.0037 | <0.0046 | 0.0074 J |
| GMIA 2B | 2/21/2012 | 0.0 | 9.5 | <0.0038 | <0.0037 | <0.0056 | <0.0103 | <0.0051 | <0.0029 | <0.0036 | <0.0045 | <0.0038 |
| GMIA 2C | 2/21/2012 | 0.0 | 6.5 | <0.0039 | 0.0051 J | <0.0057 | <0.0104 | <0.0052 | <0.0030 | 0.0105J | 0.0112 J | 0.0082 J |
| GMIA 3A | 2/21/2012 | 0.0 | 7.0 | 0.0043 J | 0.0067 J | <0.0060 | <0.0110 | <0.0055 | <0.0031 | <0.0039 | 0.0074 J | 0.0103 J |
| GMIA 3B | 2/21/2012 | 0.1 | 10.0 | <0.0040 | <0.0039 | <0.0058 | <0.0107 | <0.0053 | <0.0030 | 0.0044J | <0.0047 | <0.0039 |
| GMIA 3BM | 2/21/2012 | 0.1 | 10.5 | <0.0038 | <0.0037 | <0.0056 | <0.0102 | <0.0051 | <0.0029 | <0.0036 | <0.0045 | <0.0037 |
| GMIA 3C | 2/21/2012 | 0.1 | 6.5 | 0.362 | 0.434 | 0.101 | 0.569 | 0.0235 | 0.27 | 0.0362 | 0.26 | 0.552 |
| GMIA 4A | 2/21/2012 | 0.0 | 8.0 | <0.0039 | 0.0044 J | <0.0058 | <0.0106 | <0.0053 | <0.0030 | <0.0037 | <0.0047 | <0.0039 |
| GMIA 4B | 2/21/2012 | 0.0 | 10.0 | <0.0039 | <0.0038 | <0.0057 | <0.0105 | <0.0052 | <0.0030 | <0.0037 | <0.0046 | <0.0038 |
| GMIA 4C | 2/21/2012 | 0.0 | 7.5 | <0.0039 | 0.0047 J | <0.0057 | <0.0105 | <0.0052 | <0.0030 | 0.0061J | <0.0046 | 0.0040 J |
| GMIA 5A | 2/21/2012 | 0.0 | 5.5 | <0.0037 | <0.0036 | <0.0054 | <0.0100 | <0.0050 | <0.0028 | <0.0035 | <0.0044 | <0.0037 |
| GMIA 5B | 2/21/2012 | 0.1 | 10.0 | <0.0037 | <0.0036 | <0.0054 | <0.0098 | <0.0049 | <0.0028 | <0.0034 | <0.0043 | <0.0036 |
| GMIA 5C | 2/21/2012 | 0.0 | 7.5 | <0.0037 | <0.0036 | <0.0055 | <0.0100 | <0.0050 | <0.0029 | <0.0035 | <0.0044 | <0.0037 |
| GMIA HA-1 | 2/21/2012 | 0.0 | 8.5 | <0.0039 | 0.0045 J | <0.0057 | <0.0105 | <0.0052 | <0.0030 | <0.0037 | <0.0046 | 0.0057 J |
| GMIA HA-2 | 2/21/2012 | 0.1 | 8.5 | <0.0038 | <0.0037 | <0.0056 | <0.0103 | <0.0051 | <0.0029 | <0.0036 | <0.0045 | <0.0038 |
| GMIA 6A | 2/22/2012 | 8.0 | 6.5 | <0.0038 | 0.0115 J | <0.0055 | <0.0101 | <0.0050 | <0.0029 | <0.0250 | <0.0044 | 0.0064 J |
| GMIA 6B | 2/22/2012 | 1.3 | 9.0 | <0.0038 | 0.0100 J | <0.0056 | <0.0104 | <0.0052 | <0.0029 | <0.0250 | 0.0048 J | <0.0038 |
| GMIA 6C | 2/21/2012 | 0.0 | 5.5 | <0.0040 | <0.0039 | <0.0058 | <0.0107 | <0.0053 | <0.0030 | 0.0056J | <0.0047 | 0.0043 J |
| GMIA DT1 | 2/22/2012 | 17.3 | 3.0 | 0.0156 J | 0.0193 J | <0.0055 | 0.0345 | 0.0196 J | 0.0078 J | 2.49 | 0.0171 J | 0.0334 |
| GMIA 7B | 2/22/2012 | 0.6 | 8.0 | <0.0037 | 0.0100 J | <0.0055 | <0.0101 | <0.0050 | <0.0029 | <0.0250 | 0.0061 J | 0.0073 J |
| GMIA 7C | 2/22/2012 | 22.6 | 5.5 | 0.0794 J | 0.0910 J | <0.0592 | 0.247 | 0.0985 J | <0.0309 | 3.12 | 0.170 J | 0.169 J |
| GMIA 8B | 3/8/2012 | 0.0 | 6.0 | <0.0039 | <0.0038 | <0.0058 | <0.0106 | <0.0053 | <0.0030 | 0.0060 J | <0.0047 | <0.0039 |
| GMIA 8C | 3/8/2012 | 203 | 5.0 | <0.0038 | <0.0038 | <0.0056 | <0.0104 | <0.0052 | <0.0029 | <0.0036 | <0.0046 | <0.0038 |
| GMIA 9B | 3/8/2012 | 8.7 | 5.5 | <0.0039 | <0.0038 | <0.0058 | <0.0106 | <0.0053 | <0.0030 | 0.0095 J | <0.0047 | <0.0039 |
| GMIA 9C | 3/8/2012 | 195 | 5.0 | 0.0468 J | 0.0888 | <0.0224 | 0.237 | 0.0595 J | 0.0246 J | 0.861 | 0.146 | 0.169 |
| GMIA 10B** | 03/08-12/2012 | 0.6 | 6.0 | <0.0037 | <0.0036 | <0.0055 | <0.0101 | <0.0050 | <0.0029 | 4.4 J | <0.0044 | <0.0037 |
| GMIA 10C** | 03/08-12/2012 | 81 | 5.0 | <0.0359 | <0.0351 | <0.0526 | <0.0967 | 0.116 J | <0.0275 | 2.68 | <0.0425 | <0.0354 |
| GMIA 1 | 3/19/2012 | 10.0 | 2.0 | 0.0063 J | 0.0142 J | <0.0054 | 0.0207 | 0.0065 J | 0.0059 J | NA | 0.0073 J | 0.0239 |
| GMIA 2 | 3/19/2012 | 7.8 | 2.0 | 0.0354 | 0.0519 | 0.0082 J | 0.108 | 0.0082 J | 0.0247 | NA | 0.0609 | 0.1 |
| GMIA 3 | 3/19/2012 | 4.7 | 2.0 | <0.0036 | 0.0046 J | <0.0053 | <0.0098 | <0.0049 | <0.0028 | NA | <0.0043 | <0.0036 |
| GMIA 4 | 3/19/2012 | 10.8 | 2.0 | 0.0469 | 0.082 | 0.0117 J | 0.17 | 0.0216 | 0.0339 | NA | 0.0511 | 0.155 |
| GMIA 5 | 4/18/2012 | NM | 2.0 | 0.0059 J | 0.0064 J | <0.0054 | 0.0114 J | <0.0050 | 0.0034 J | NA | 0.0057 J | 0.0086 J |

Notes:

All detections presented in **bold** type indicates an exceedance of the former NR 720 RCL or PAH Interim Guidance RCL for the Protection of Groundwater.

Results are reported on a dry weight basis.

IU Instrument units; photoionization detector was field-calibrated to 100 parts per million isobutylene span gas.

mg/kg milligrams per kilogram, approximately equivalent to parts per million

** Soil PAH samples collected were originally collected in incorrect containers. Soil samples were collected in correct containers and resubmitted for analysis.

TMB Trimethylbenzene

J Estimated concentration detected between the detection limit and reporting limit.

NM Not Measured

TABLE A.2.b
Pre Remedial Soil Analytical Table- Monitoring Wells
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

Volatile Organic Compounds

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | GRO mg/kg | 1,2,4-TMB mg/kg | 1,3,5-TMB mg/kg | Benzene mg/kg | Ethylbenzene mg/kg | Isopropylbenzene (Cumene) mg/kg | Toluene mg/kg | Total Xylenes mg/kg | n-Butylbenzene mg/kg | n-Propylbenzene mg/kg | p-Isopropyl toluene mg/kg | sec-Butylbenzene mg/kg | Naphthalene mg/kg |
|-------------------|-------------|--------------------|---------------------|-----------|-----------------|-----------------|---------------|--------------------|---------------------------------|---------------|---------------------|----------------------|-----------------------|---------------------------|------------------------|-------------------|
| Former NR 720 RCL | | | | 250 mg/kg | No Standard | No Standard | 0.0055 mg/kg | 2.9 mg/kg | No Standard | 1.5 mg/kg | 4.1 mg/kg | No Standard | No Standard | No Standard | No Standard | 0.4 mg/kg |
| MW-1 | 3/7/2012 | 0.0 | 0-2 | 5.5 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| | | 0.0 | 2-4 | 4.4 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0250 |
| MW-2 | 3/7/2012 | 30.0 | 0-2 | 1,610 | 64.2 | 18.4 | <0.312 | 7,300 | 3,410 | 6,070 | 32.25 | 12.900 | 9.370 | 6.230 | 6.95 | 10.0 |
| | | 41.9 | 2-4 | 917 | 26.2 | 7.65 | <0.125 | 3.24 | 1.48 | 2,870 | 14.03 | 5.38 | 3.77 | 2.61 | 2.910 | 3.440 |
| MW-3 | 3/7/2012 | 57.1 | 0-2 | 695 | 20.30 | 5.78 | <0.125 | 2.55 | 1.12 | 2.42 | 11.09 | 4.000 | 2.98 | 1.89 | 2.1 | 3.06 |
| | | 95.1 | 2-4 | 114 | 2.93 | 0.845 | 0.0399 J | 0.537 | 0.169 | 0.883 | 2.264 | 0.546 | 0.427 | 0.256 | 0.291 | 0.466 |
| MW-4 | 3/7/2012 | 75.0 | 0-2 | 581 | 15 | 4.24 | <0.0625 | 1.57 | 0.802 | 1.41 | 6.96 | 3.2 | 2.1 | 1.5 | 1.67 | 1.97 |
| | | 5.2 | 2-4 | 5.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0250 | <0.0035 |
| MW-5 | 3/15/2012 | 0.0 | 0-2 | <3.0 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0404 | <0.0250 |
| | | 0.0 | 2-4 | <2.9 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0404 | <0.0250 |
| MW-6 | 3/15/2012 | 55.1 | 0-2 | 3.0 | 0.0375 J | <0.0250 | <0.0250 | <0.0250 | <0.0250 | 0.0623 J | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0404 | <0.0250 |
| | | 7.0 | 2-4 | <3.2 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0250 | <0.0750 | <0.0404 | <0.0250 | <0.0250 | <0.0404 | <0.0250 |
| MW-8 | 4/12/2012 | 0.0 | 2.5-3 | <3.0 | <0.0260 | <0.0260 | <0.0260 | <0.0260 | <0.0260 | <0.0260 | <0.0781 | <0.0421 | <0.0260 | <0.0260 | <0.0260 | <0.0260 |
| | | 0.0 | 4-6 | <3.0 | <0.0294 | <0.0294 | <0.0294 | <0.0294 | <0.0294 | <0.0294 | <0.0822 | <0.0475 | <0.0294 | <0.0294 | <0.0294 | <0.0294 |
| MW-9 | 5/11/2012 | 0.0 | 0-1 | <4.9 | <0.0410 | <0.0410 | <0.0410 | <0.0410 | <0.0410 | <0.0410 | <0.1230 | <0.0662 | <0.0410 | <0.0410 | <0.0410 | <0.0410 |
| | | 0.0 | 6-7 | <3.8 | <0.0424 | <0.0424 | <0.0424 | <0.0424 | <0.0424 | <0.0424 | <0.1271 | <0.0685 | <0.0424 | <0.0424 | <0.0424 | <0.0424 |
| MW-10 | 5/11/2012 | 0.0 | 0-1 | <4.7 | <0.0357 | <0.0357 | <0.0357 | <0.0357 | <0.0357 | <0.0357 | <0.1071 | <0.0577 | <0.0357 | <0.0357 | <0.0357 | <0.0357 |
| | | 0.0 | 6-8 | <3.9 | <0.0316 | <0.0316 | <0.0316 | <0.0316 | <0.0316 | <0.0316 | <0.0949 | <0.0511 | <0.0316 | <0.0316 | <0.0316 | <0.0316 |
| MW-11 | 5/11/2012 | 0.0 | 0-2 | <4.3 | <0.0325 | <0.0325 | <0.0325 | <0.0325 | <0.0325 | <0.0325 | <0.0974 | <0.0525 | <0.0325 | <0.0325 | <0.0325 | <0.0325 |
| | | | 0-2 Dup | <4.4 | <0.0333 | <0.0333 | <0.0333 | <0.0333 | <0.0333 | <0.0333 | <0.100 | <0.0539 | <0.0333 | <0.0333 | <0.0333 | <0.0333 |
| SB-01 | 5/11/2012 | 0.0 | 0-2 | <4.1 | <0.0299 | <0.0299 | <0.0299 | <0.0299 | <0.0299 | <0.0299 | <0.0898 | <0.0484 | <0.0299 | <0.0299 | <0.0299 | <0.0299 |

Polynuclear Aromatic Hydrocarbons (also known as Polycyclic Aromatic Hydrocarbons)

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | DRO mg/kg | Acenaphthene mg/kg | Acenaphthylene mg/kg | Anthracene mg/kg | Benzo(a)anthracene mg/kg | Benzo(a)pyrene mg/kg | Benzo(b) fluoranthene mg/kg | Benzo(g,h,i) perylene mg/kg |
|-----------------------------|-------------|--------------------|---------------------|-----------|--------------------|----------------------|------------------|--------------------------|----------------------|-----------------------------|-----------------------------|
| Former PAH Interim Guidance | | | | 250 mg/kg | 38 mg/kg | 0.7 mg/kg | 3,000 mg/kg | 17 mg/kg | 48 mg/kg | 360 mg/kg | 6,800 mg/kg |
| MW-1 | 3/7/2012 | 0.0 | 0-2 | 3.25 | 0.0121 J | 0.0056 J | 0.0263 | 0.0800 | 0.0942 | 0.0936 | 0.0654 |
| | | 0.0 | 2-4 | 1,020 J | 0.0041 J | <0.0033 | 0.0080 J | 0.0086 J | 0.0082 J | 0.0117 J | 0.0084 J |
| MW-2 | 3/7/2012 | 30.0 | 0-2 | 1,150 | 0.669 | 0.0040 J | 0.108 | 0.288 | 0.324 | 0.397 | 0.221 |
| | | 41.9 | 2-4 | 1,790 | 0.0530 J | 0.0337 J | 0.648 J | 0.132 | 0.0883 J | 0.0902 J | 0.0450 J |
| MW-3 | 3/7/2012 | 57.1 | 0-2 | 723 | 1.970 J | 0.926 J | 8.6 | 11.5 | 9.08 | 8.55 | 4.98 |
| | | 95.1 | 2-4 | 174 | 0.0876 | 0.0369 J | 0.325 | 0.422 | 0.353 | 0.452 | 0.195 |
| MW-4 | 3/7/2012 | 75.0 | 0-2 | 1,390 | 0.102 | 0.0235 J | 0.178 | 0.253 | 0.219 | 0.247 | 0.134 |
| | | 5.2 | 2-4 | 3.93 | <0.0028 | <0.0032 | <0.0046 | <0.0028 | <0.0033 | <0.0035 | <0.0026 |
| MW-5 | 3/15/2012 | 0.0 | 0-2 | 8.65 | 0.0125 J | 0.0159 J | 0.0577 | 0.141 | 0.139 | 0.153 | 0.0897 |
| | | 0.0 | 2-4 | 2.97 | <0.0028 | <0.0031 | 0.0065 J | 0.0131 J | 0.0104 J | 0.0134 J | 0.0069 J |
| MW-6 | 3/15/2012 | 55.1 | 0-2 | 10.8 | 0.124 J | 0.0499 J | <0.0581 | 0.0420 J | <0.0409 | 0.0520 J | <0.0330 |
| | | 7.0 | 2-4 | 3.88 | <0.0030 | <0.0034 | 0.0055 J | 0.0113 J | 0.0096 J | 0.0123 J | 0.0067 J |
| MW-8 | 4/12/2012 | 0.0 | 2.5-3 | 3.57 | <0.0029 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| | | 0.0 | 4-6 | 2.92 | <0.0028 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| MW-9 | 5/11/2012 | 0.0 | 0-1 | 17.2 | 0.0267 | 0.0071 J | 0.0682 | 0.194 | 0.201 | 0.199 | 0.0955 |
| | | 0.0 | 6-7 | 5.57 | <0.0028 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| MW-10 | 5/11/2012 | 0.0 | 0-1 | 3.92 | <0.0032 | <0.0036 | <0.0052 | 0.0152 J | 0.0137 J | 0.0144 J | 0.0054 J |
| | | 0.0 | 6-8 | 5.85 | <0.0029 | <0.0032 | <0.0047 | <0.0029 | <0.0033 | <0.0035 | <0.0027 |
| MW-11 | 5/11/2012 | 0.0 | 0-2 | 2.09 J | <0.0030 | <0.0035 | <0.0050 | <0.0031 | <0.0035 | <0.0037 | <0.0029 |
| | | | 0-2 Dup | 2.10 J | <0.0031 | <0.0035 | <0.0051 | <0.0031 | <0.0036 | <0.0038 | <0.0029 |
| SB-01 | 5/11/2012 | 0.0 | 0-2 | 96.8 | 0.0376 | 0.0178 J | 0.0206 | 0.0304 | 0.243 | 0.043 | 0.0983 |

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | Benzo(k) fluoranthene mg/kg | Chrysene mg/kg | Dibenz(a,h) anthracene mg/kg | Fluoranthene mg/kg | Fluorene mg/kg | Indeno(1,2,3-cd) pyrene mg/kg | Phenanthrene mg/kg | Pyrene mg/kg |
|-----------------------------|-------------|--------------------|---------------------|-----------------------------|----------------|------------------------------|--------------------|----------------|-------------------------------|--------------------|--------------|
| Former PAH Interim Guidance | | | | 870 mg/kg | 37 mg/kg | 38 mg/kg | 500 mg/kg | 100 mg/kg | 680 mg/kg | 1.8 mg/kg | 8,700 mg/kg |
| MW-1 | 3/7/2012 | 0.0 | 0-2 | 0.087 | 0.101 | 0.0188 J | 0.233 | 0.0098 J | 0.0556 | 0.118 | 0.159 |
| | | 0.0 | 2-4 | 0.0085 J | 0.0118 J | <0.0056 | 0.0211 | 0.0071 J | 0.0063 J | 0.0242 | 0.0128 J |
| MW-2 | 3/7/2012 | 30.0 | 0-2 | 0.318 | 0.339 | 0.0691 | 0.932 | 0.436 | 0.199 | 0.506 | 0.664 |
| | | 41.9 | 2-4 | 0.0766 J | 0.118 | <0.0272 | 0.314 | 0.0774 J | 0.0404 J | 0.219 | 0.222 |
| MW-3 | 3/7/2012 | 57.1 | 0-2 | 7.73 | 11.9 | 1.930 J | 28.3 | 3.56 | 4.56 | 24.1 | 19.9 |
| | | 95.1 | 2-4 | 0.196 | 0.443 | 0.0668 | 1.11 | 0.124 | 0.176 | 0.876 | 0.721 |
| MW-4 | 3/7/2012 | 75.0 | 0-2 | 0.156 | 0.265 | 0.0437 J | 0.731 | 0.102 | 0.119 | 0.579 | 0.459 |
| | | 5.2 | 2-4 | <0.0037 | <0.0036 | <0.0054 | <0.0100 | <0.0050 | <0.0028 | <0.0044 | <0.0037 |
| MW-5 | 3/15/2012 | 0.0 | 0-2 | 0.109 | 0.166 | 0.0275 | 0.337 | 0.0141 J | 0.0735 | 0.185 | 0.231 |
| | | 0.0 | 2-4 | 0.0074 J | 0.0156 J | <0.0053 | 0.0244 | <0.0049 | 0.0045 J | 0.0134 J | 0.0189 J |
| MW-6 | 3/15/2012 | 55.1 | 0-2 | <0.0464 | 0.0576 J | <0.0680 | 0.126 J | 0.176 J | <0.0355 | 0.0889 J | 0.0994 J |
| | | 7.0 | 2-4 | 0.0063 J | 0.0137 J | <0.0058 | 0.0308 | <0.0053 | 0.0045 J | 0.0217 | 0.0227 |
| MW-8 | 4/12/2012 | 0.0 | 2.5-3 | <0.0038 | <0.0037 | <0.0055 | <0.0101 | <0.0050 | <0.0029 | <0.0045 | <0.0037 |
| | | 0.0 | 4-6 | <0.0037 | <0.0036 | <0.0055 | <0.0101 | <0.0050 | <0.0029 | <0.0044 | <0.0037 |
| MW-9 | 5/11/2012 | 0.0 | 0-1 | 0.210 | 0.241 | 0.0335 | 0.524 | 0.0218 | 0.0895 | 0.300 | 0.423 |
| | | 0.0 | 6-7 | <0.0037 | <0.0037 | <0.0055 | <0.0101 | <0.0050 | <0.0029 | <0.0044 | 0.0046 J |
| MW-10 | 5/11/2012 | 0.0 | 0-1 | 0.0176 J | 0.0195 J | <0.0061 | 0.0349 | <0.0056 | 0.0050 J | 0.0208 J | 0.0277 |
| | | 0.0 | 6-8 | <0.0038 | <0.0037 | <0.0055 | <0.0102 | <0.0051 | <0.0029 | <0.0045 | <0.0037 |
| MW-11 | 5/11/2012 | 0.0 | 0-2 | <0.0040 | <0.0039 | <0.0059 | <0.0108 | <0.0054 | <0.0031 | <0.0048 | 0.0045 J |
| | | | 0-2 Dup | <0.0040 | <0.0039 | <0.0059 | <0.0109 | <0.0054 | <0.0031 | <0.0048 | <0.0040 |
| SB-01 | 5/11/2012 | 0.0 | 0-2 | 0.241 | 0.313 | 0.0426 | 0.644 | 0.0507 | 0.0976 | 0.467 | 0.523 |

Notes:
Exceedance of the former NR 720 RCL or the former Interim PAH Guidance RCL for the protection of groundwater is depicted in **BOLD** type.
Results are reported on a dry weight basis.
IU Instrument units; photoionization detector was field-calibrated to 100 parts per million isobutylene span gas.
mg/kg milligrams per kilogram, approximately equivalent to parts per million

GRO
DRO
TMB
J
Gasoline Range Organics
Diesel Range Organics
Trimethylbenzene
Estimated concentration detected between the detection limit and reporting limit.

TABLE A.4
Pre and Post Remaining Soil Contamination Soil Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

Volatile Organic Compounds

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | GRO mg/kg | 1,2,4-TMB mg/kg | 1,3,5-TMB mg/kg | Benzene mg/kg | Ethylbenzene mg/kg | Isopropylbenzene (Cumene) mg/kg | Toluene mg/kg | Total Xylenes mg/kg | n-Butylbenzene mg/kg | n-Propylbenzene mg/kg | p-Isopropyltoluene mg/kg | sec-Butylbenzene mg/kg | Naphthalene mg/kg |
|-------------------|-------------|--------------------|---------------------|-----------|-----------------|-----------------|---------------|--------------------|---------------------------------|---------------|---------------------|----------------------|-----------------------|--------------------------|------------------------|-------------------|
| Former NR 720 RCL | | | | 250 mg/kg | No Standard | No Standard | 0.0055 mg/kg | 2.9 mg/kg | No Standard | 1.5 mg/kg | 4.1 mg/kg | No Standard | No Standard | No Standard | No Standard | 0.4 mg/kg |
| GMIA 8C | 3/8/2012 | 203 | 5.0 | 336 | 8.52 | 2.51 | <0.125 | 0.95 | 0.505 | 0.745 | 4.06 | 2.12 | 1.41 | 0.919 | 1.06 | 1.1 |
| GMIA 9C | 3/8/2012 | 195 | 5.0 | 771 | 35.2 | 10.5 | <0.312 | 4.18 | 1.95 | 3.58 | 17.24 | 8.49 | 5.79 | 3.58 | 4.22 | 5.39 |
| MW-2 | 3/7/2012 | 30.0 | 0-2 | 1,610 | 64.2 | 18.4 | <0.312 | 7.300 | 3.410 | 6.070 | 32.25 | 12.900 | 9.370 | 6.230 | 6.95 | 10.0 |
| | | 41.9 | 2-4 | 917 | 26.2 | 7.65 | <0.125 | 3.24 | 1.48 | 2.870 | 14.03 | 5.38 | 3.77 | 2.61 | 2.910 | 3.440 |
| MW-3 | 3/7/2012 | 57.1 | 0-2 | 695 | 20.30 | 5.78 | <0.125 | 2.55 | 1.12 | 2.42 | 11.09 | 4.000 | 2.98 | 1.89 | 2.1 | 3.06 |
| | | 95.1 | 2-4 | 114 | 2.93 | 0.845 | 0.0399 J | 0.537 | 0.169 | 0.883 | 2.264 | 0.546 | 0.427 | 0.256 | 0.291 | 0.466 |

Polynuclear Aromatic Hydrocarbons (also known as Polycyclic Aromatic Hydrocarbons)

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | DRO mg/kg | Acenaphthene mg/kg | Acenaphthylene mg/kg | Anthracene mg/kg | Benzo(a) anthracene mg/kg | Benzo(a)pyrene mg/kg | Benzo(b) fluoranthene mg/kg | Benzo(g,h,i)perylene mg/kg |
|--|-------------|--------------------|---------------------|-----------|--------------------|----------------------|------------------|---------------------------|----------------------|-----------------------------|----------------------------|
| Former NR 720 RCL or PAH Interim Guidance RCL for Protection of GW | | | | 250 mg/kg | 38 mg/kg | 0.7 mg/kg | 3,000 mg/kg | 17 mg/kg | 48 mg/kg | 360 mg/kg | 6,800 mg/kg |
| GMIA 8C | 3/8/2012 | 203 | 5.0 | 217 | <0.0029 | <0.0033 | <0.0048 | <0.0029 | <0.0034 | <0.0036 | <0.0027 |
| GMIA 9C | 3/8/2012 | 195 | 5.0 | 1,220 | 0.0445 J | 0.0237 J | 0.0509 J | 0.0992 | 0.0671 J | 0.0833 | 0.0298 J |
| MW-2 | 3/7/2012 | 30.0 | 0-2 | 1,150 | 0.669 | 0.0040 J | 0.108 | 0.288 | 0.324 | 0.397 | 0.221 |
| | | 41.9 | 2-4 | 1,790 | 0.0530 J | 0.0337 J | 0.648 J | 0.132 | 0.0883 J | 0.0902 J | 0.0450 J |
| MW-3 | 3/7/2012 | 57.1 | 0-2 | 723 | 1.970 J | 0.926 J | 8.6 | 11.5 | 9.08 | 8.55 | 4.98 |
| | | 95.1 | 2-4 | 174 | 0.0876 | 0.0369 J | 0.325 | 0.422 | 0.353 | 0.452 | 0.195 |

| Sample Location | Sample Date | Field Screening IU | Depth Interval feet | Benzo(k) fluoranthene mg/kg | Chrysene mg/kg | Dibenz(a,h) anthracene mg/kg | Fluoranthene mg/kg | Fluorene mg/kg | Indeno(1,2,3-cd) pyrene mg/kg | Naphthalene mg/kg | Phenanthrene mg/kg | Pyrene mg/kg |
|--|-------------|--------------------|---------------------|-----------------------------|----------------|------------------------------|--------------------|----------------|-------------------------------|-------------------|--------------------|--------------|
| Former PAH Interim Guidance RCL for Protection of GW | | | | 870 mg/kg | 37 mg/kg | 38 mg/kg | 500 mg/kg | 100 mg/kg | 680 mg/kg | 0.4 mg/kg | 1.8 mg/kg | 8,700 mg/kg |
| GMIA 8C | 3/8/2012 | 203 | 5.0 | <0.0038 | <0.0038 | <0.0056 | <0.0104 | <0.0052 | <0.0029 | <0.0036 | <0.0046 | <0.0038 |
| GMIA 9C | 3/8/2012 | 195 | 5.0 | 0.0468 J | 0.0888 | <0.0224 | 0.237 | 0.0595 J | 0.0246 J | 0.861 | 0.146 | 0.169 |
| MW-2 | 3/7/2012 | 30.0 | 0-2 | 0.318 | 0.339 | 0.0691 | 0.932 | 0.436 | 0.199 | 0.101 | 0.506 | 0.664 |
| | | 41.9 | 2-4 | 0.0766 J | 0.118 | <0.0272 | 0.314 | 0.0774 J | 0.0404 J | 1.02 | 0.219 | 0.222 |
| MW-3 | 3/7/2012 | 57.1 | 0-2 | 7.73 | 11.9 | 1.930 J | 28.3 | 3.56 | 4.56 | 5.65 | 24.1 | 19.9 |
| | | 95.1 | 2-4 | 0.196 | 0.443 | 0.0668 | 1.11 | 0.124 | 0.176 | 0.284 | 0.876 | 0.721 |

Notes:

All detections presented in **bold** type indicates an exceedance of the former NR 720 RCL or PAH Interim Guidance RCL for the Protection of Groundwater.

Results are reported on a dry weight basis.

IU Instrument units; photoionization detector was field-calibrated to 100 parts per million isobutylene span gas.

mg/kg milligrams per kilogram, approximately equivalent to parts per million

TMB Trimethylbenzene

J Estimated concentration detected between the detection limit and reporting limit.

NM Not Measured

TABLE A.6.a.1
Surface Water Sample Analytical Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRS 02-41-558334

MKREF100

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|------------|---------|--------------|-------------|---------|---------------|-------------|-------|
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.4 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.4 | <32.4 |
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/8/2012 D | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/16/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 209 | <32.4 |
| 2/28/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 25 J | <32.4 |
| 3/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 43 J | <32.4 |
| 3/13/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 41 J | <32.4 |
| 3/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 40 J | <32.4 |
| 3/30/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 280 | <32.4 |
| 4/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | <10 | <32.4 |
| 4/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | <32.4 | <11 |
| 4/19/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10 | <32.4 |
| 4/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 25 J | <32.4 |
| 5/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 47 J | <32.4 |
| 5/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 93 | <32.4 |
| 5/14/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 37 J | <32.4 |
| 5/22/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 23 J | <32.4 |
| 5/30/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 40 J | <32.4 |
| 6/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 50 | <32.4 |
| 6/12/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 29 J | <32.4 |
| 6/19/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 57 | <32.4 |
| 6/27/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 13 J | <32.4 |
| 7/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 47 J | <32.4 |
| 7/12/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 16 J | <32.4 |

MKREF100T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|-----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/16/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKREF200

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|---------------|-------|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 23.1 J | <32.4 |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 30.4 J | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 22.0 J | <32.4 |

MKREF200T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKREF300

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|----------------|---------|---------------|-------------|-------|
| 2/3/2012 | <0.41 | <0.54 | 0.028 J | <0.67 | <2.63 | 65.4 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 72.5 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 64.9 | <32.4 |

MKREF300T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

TABLE A.6.a.1
Surface Water Sample Analytical Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

MKERE400

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/4/2012 | <4.1 | <5.4 | <8.9 | <6.7 | <26.3 | 245 | 105 |

MKERE400T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKERE500

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|--------|-------|
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 15.1 J | <32.4 |

MKERE500T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

NWOF

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|-------------|---------|--------------|-------------|---------|---------------|-----|--------|
| 2/24/2012 | <0.41 | 0.87 J | 11.4 | 0.94 J | 7.3 | 101 | 499 |
| 2/29/2012 | <0.41 | 0.71 J | 1.6 J | 1.1 | 3.50 J | 270 | 41.4 J |
| 3/2/2012 | <0.41 | 0.79 J | 4.5 J | 0.92 J | 3.5 | 120 | 128 |
| 3/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 310 | <32.4 |
| 3/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 130 | <32.4 |
| 3/12/2012 | <0.82 | <1.1 | <1.8 | <1.3 | <5.30 | 360 | <32.4 |
| 3/14/2012 | <0.41 | <0.54 | 1.1 J | <0.67 | <2.63 | 230 | <32.4 |
| 3/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 610 | 40.1 J |
| 3/30/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 590 | <32.4 |
| 4/15/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 250 | <32.4 |
| 4/19/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 150 | <32.4 |
| 4/19/2012 D | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 390 | <32.4 |
| 4/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 290 | <32.4 |
| 5/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 390 | <32.4 |
| 5/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 210 | <32.4 |
| 5/14/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 180 | <32.4 |
| 5/22/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 420 | <32.4 |
| 5/30/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 190 | <32.4 |
| 6/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 290 | <32.4 |
| 6/12/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 510 | <32.4 |
| 6/19/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 250 | <32.4 |
| 6/27/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 330 | <32.4 |
| 7/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 200 | <32.4 |
| 7/12/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 320 | <32.4 |

MKESTR100-BEFORE

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|------------|---------|--------------|-------------|---------|---------------|-----|-------|
| 2/6/2012 | <0.41 | <0.54 | 1.2 J | <0.67 | <2.63 | 277 | <32.4 |
| 2/6/2012 D | <0.41 | <0.54 | 1.2 J | <0.67 | <2.63 | 145 | <32.4 |

MKESTR100-DURING

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-------|
| 2/6/2012 | <0.41 | <0.54 | 1.3 J | <0.67 | <2.63 | 169 | <32.4 |

MKESTR100-AFTER

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|------|
| 2/6/2012 | <0.41 | <0.54 | 3.1 J | <0.67 | 2.9 | 211 | 53.6 |

TABLE A.6.a.1
Surface Water Sample Analytical Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

MKESTR100

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|-------------|---------|--------------|-------------|---------|---------------|------|--------|
| 2/2/2012 | <0.41 | <0.54 | 2.8 J | <0.67 | <2.63 | 382 | 68.1 |
| 2/3/2012 | <0.41 | 0.58 J | 2.6 J | 0.71 J | 2.72 J | 151 | 61.9 |
| 2/4/2012 | <0.41 | 0.98 J | 9.3 | <0.67 | 5.9 | 277 | 162 |
| 2/4/2012 D | <0.41 | 1.1 | 9.7 | <0.67 | 5.2 | 307 | 169 |
| 2/5/2012 | <0.41 | <0.54 | 1.4 J | <0.67 | <2.63 | 226 | <32.4 |
| 2/8/2012 | <0.41 | <0.54 | 2.1 J | <0.67 | <2.63 | 149 | 41.7 J |
| 2/9/2012 | <0.41 | <0.54 | 2.5 J | <0.67 | <2.63 | 106 | 43.3 J |
| 2/16/2012 | <4.1 | <5.4 | <8.9 | <6.7 | <26.3 | 440 | 151 |
| 2/28/2012 | <0.41 | <0.54 | 1.7 J | <0.67 | <2.63 | 57.3 | 280 |
| 3/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 55.4 | 230 |
| 3/13/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 150 | <32.4 |
| 3/13/2012 D | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 130 | <32.4 |
| 3/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 540 | <32.4 |
| 3/30/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 400 | <32.4 |
| 4/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 86 | <32.4 |
| 4/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 84 | <32.4 |
| 4/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 150 | <32.4 |
| 5/22/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 130 | <32.4 |
| 6/27/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 52 | <32.4 |

MKESTR100T-BEFORE

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR100T-DURING

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR100T-AFTER

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR100T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR200

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-------|
| 2/2/2012 | <0.41 | <0.54 | 1.0 J | <0.67 | <2.63 | 175 | <32.4 |
| 2/3/2012 | <0.41 | <0.54 | 1.2 J | <0.67 | <2.63 | 195 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | 1.2 J | <0.67 | <2.63 | 116 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | 0.93 J | <0.67 | <2.63 | 152 | <32.4 |

MKESTR200T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

TABLE A.6.a.1
Surface Water Sample Analytical Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

MKESTR300

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|------------|---------|--------------|-------------|---------|---------------|--------|-------|
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 214 | <32.4 |
| 2/3/2012 D | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 464 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 117 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 90.7 | <32.4 |
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 1,060 | <32.4 |
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 97.8 | <32.4 |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 40.7 J | <32.4 |
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 128 | <32.4 |
| 2/16/2012 | <0.82 | <1.1 | <1.8 | <1.3 | <5.3 | 273 | <32.4 |
| 2/28/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 210 | <32.4 |
| 3/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 120 | <32.4 |
| 3/13/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 86 | <32.4 |
| 3/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 1,100 | <32.4 |
| 3/30/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 2,300 | <32.4 |
| 4/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 84 | <32.4 |
| 4/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 40 J | <32.4 |
| 4/19/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 100 | <32.4 |
| 4/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 110 | <32.4 |
| 5/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 310 | <32.4 |
| 5/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 420 | <32.4 |
| 5/14/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 51 | <32.4 |
| 5/22/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 110 | <32.4 |
| 5/30/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 180 | <32.4 |
| 6/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 120 | <32.4 |
| 6/12/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 36 J | <32.4 |
| 6/19/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 130 | <32.4 |
| 6/27/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 66 | <32.4 |
| 7/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 36 J | <32.4 |
| 7/12/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 92 | <32.4 |

MKESTR300T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR400

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|------------|---------|--------------|-------------|---------|---------------|-----|-------|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 165 | <32.4 |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 140 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 138 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 189 | <32.4 |
| 2/5/2012 D | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 214 | <32.4 |

MKESTR400T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

TABLE A.6.a.1
Surface Water Sample Analytical Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRS 02-41-558334

MKESTR450

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|-----------|---------|--------------|-------------|---------|---------------|------|-------|
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 176 | <32.4 |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 266 | <32.4 |
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 210 | <32.4 |
| 2/16/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 226 | <32.4 |
| 2/28/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 550 | <32.4 |
| 3/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 220 | <32.4 |
| 3/13/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 120 | <32.4 |
| 3/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 980 | <32.4 |
| 3/30/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 810 | <32.4 |
| 4/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 55 | <32.4 |
| 4/9/2012 | <0.41 | <0.54 | NA | 1.5 | <2.63 | 95 | <32.4 |
| 4/23/2012 | <0.41 | <0.54 | <0.89 | 0.95 J | <2.63 | 120 | <32.4 |
| 5/22/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 43 J | <32.4 |
| 6/27/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 65 | <32.4 |

MKESTR450T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|-----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/16/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR500

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-------|
| 2/2/2012 | <0.41 | <0.54 | 2.4 J | <0.67 | <2.63 | 311 | 51.9 |
| 2/3/2012 | <0.41 | <0.54 | 1.6 J | 0.68 J | <2.63 | 228 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | 1.1 J | <0.67 | <2.63 | 162 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 131 | <32.4 |

MKESTR500T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR600

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|-----------|---------|--------------|-------------|---------|---------------|--------|-------|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.6 | <32.4 |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.3 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.2 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 22.7 J | <32.4 |
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 17.3 J | <32.4 |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 192 | <32.4 |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 119 | <32.4 |
| 2/9/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 153 | <32.4 |
| 2/16/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 33.3 J | <32.4 |
| 2/28/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 48 J | <32.4 |
| 3/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 18 J | <32.4 |
| 3/13/2012 | <0.41 | <0.54 | <0.89 | 0.82 J | <2.63 | 59 | <32.4 |
| 3/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 130 | <32.4 |
| 3/30/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 100 | <32.4 |
| 4/3/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 18 J | <32.4 |
| 4/9/2012 | <0.41 | <0.54 | NA | <0.67 | <2.63 | 19 J | <32.4 |
| 4/23/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 91 | <32.4 |
| 5/22/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 92 | <32.4 |
| 6/27/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | 25 J | <32.4 |

TABLE A.6.a.1
Surface Water Sample Analytical Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRS 02-41-558334

MKESTR600T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/6/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/7/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/8/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

MKESTR700

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-------|-------|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.4 | <32.4 |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.3 | <32.4 |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.4 | <32.4 |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | <10.1 | <32.4 |

MKESTR700T

| Date | Benzene | Ethylbenzene | Naphthalene | Toluene | Total Xylenes | DRO | GRO |
|----------|---------|--------------|-------------|---------|---------------|-----|-----|
| 2/2/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/3/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/4/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |
| 2/5/2012 | <0.41 | <0.54 | <0.89 | <0.67 | <2.63 | NA | NA |

Notes:

All detections are presented in **bold** type.

Results are expressed in µg/L (ppb).

D Duplicate sample

NS No Standard

GRO Gasoline Range Organics

DRO Diesel Range Organics

1,2,4-TMB 1,2,4-Trimethylbenzene

1,3,5-TMB 1,3,5-Trimethylbenzene

J Estimated concentration detected between the detection limit and reporting limit.

TABLE A.6.a.2
Surface Water Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/3/2012 | 0 | 0.039 J | <0.021 | <0.021 | <0.021 | <0.021 | <0.021 | <0.021 | <0.021 | <0.021 | NA | <0.021 | <0.021 | <0.021 | <0.021 | <0.021 | <0.021 |
| 5/22/2012 | 0 | 0.0065 JB | <0.0036 | <0.0046 | <0.0048 | <0.0082 | <0.0058 | 0.0099 J | 0.0057 J | <0.0037 | 0.0036 J | <0.0044 | <0.0034 | <0.0029 | <0.0049 | 0.0032 | <0.0047 |
| 6/27/2012 | 0 | 0.0077 JB | <0.0038 | <0.0048 | <0.0051 | <0.0086 | <0.0061 | 0.019 J | 0.014 J | 0.0068 J | 0.012 J | 0.012 J | 0.0090 J | 0.0090 J | 0.0098 J | <0.0034 | 0.0073 J |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 5/22/2012 | 0 | 0.044 JB | 0.0063 J | 0.012 J | 0.011 J | 0.020 J | 0.014 J | 0.036 J | 0.020 J | <0.0036 | 0.0069 J | <0.0044 | 0.0036 J | <0.0029 | <0.0048 | <0.0032 | <0.0047 |
| 6/27/2012 | 0 | 0.036 JB | 0.017 J | 0.011 J | 0.014 J | 0.034 J | 0.011 J | 0.042 J | 0.045 J | 0.015 J | 0.020 J | 0.015 J | 0.016 J | 0.013 J | 0.011 J | 0.0046 J | 0.010 J |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 3.2 | 0.042 J | 0.053 | 0.30 | 0.091 | 0.0097 J | 0.069 | 0.040 J | 0.0050 J | 0.013 J | 0.0080 J | 0.0073 J | 0.0047 J | <0.022 | <0.022 | <0.022 |
| 2/3/2012 | 0 | 2.7 | <0.020 | 0.17 | 0.19 | 0.058 | <0.020 | 0.046 | 0.026 J | <0.020 | NA | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 J |
| 5/22/2012 | 0 | 0.018 JB | <0.0036 | 0.0051 J | 0.0067 J | 0.015 J | 0.0071 J | 0.026 J | 0.014 J | <0.0037 | 0.0065 J | <0.0044 | 0.0038 J | <0.0029 | <0.0049 | <0.0032 | <0.0047 |
| 6/27/2012 | 0 | 0.0072 JB | <0.0038 | <0.0048 | <0.0051 | 0.015 J | <0.0061 | 0.037 J | 0.023 J | 0.0055 J | 0.014 J | 0.0097 J | 0.0092 J | 0.0052 J | 0.0072 J | <0.0034 | 0.0060 J |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 0.17 | <0.020 | 0.031 J | 0.028 J | 0.062 | 0.0080 J | 0.22 | 0.11 | 0.0084 J | 0.032 J | 0.014 J | <0.020 | 0.0084 J | 0.010 J | <0.0039 | 0.0077 J |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 1.0 | 0.017 J | 0.036 J | 0.15 | 0.18 | 0.016 J | 0.24 | 0.12 | 0.028 J | 0.035 J | 0.020 J | 0.018 J | 0.012 J | 0.013 J | 0.0036 J | 0.010 J |
| 2/3/2012 | 0 | 1.2 | <0.020 | 0.11 | 0.12 | 0.14 | <0.020 | 0.18 | 0.091 | 0.021 J | NA | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 0.026 J |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/3/2012 | 0 | <0.89 | <0.022 | <0.022 | <0.022 | 0.049 | <0.022 | 0.12 | 0.066 | <0.022 | NA | <0.022 | <0.022 | <0.022 | <0.022 | <0.022 | 0.025 J |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/3/2012 | 0 | 0.55 | 0.033 J | 0.078 | 0.11 | 0.25 | 0.031 J | 0.47 | 0.26 | 0.082 | NA | 0.064 | 0.028 J | 0.092 | 0.088 | <0.020 | 0.085 |
| 2/3/2012 | 0 | 0.60 | 0.040 J | 0.11 | 0.14 | 0.33 | 0.043 | 0.71 | 0.42 | 0.15 | NA | 0.11 | 0.050 | 0.18 | 0.16 | <0.021 | 0.15 |
| 5/22/2012 | 0 | 0.0086 JB | <0.0038 | <0.0048 | <0.0051 | 0.013J | 0.0070 J | 0.023 J | 0.011 J | <0.0038 | 0.0062 J | <0.0046 | <0.0036 | <0.0030 | <0.0051 | <0.0034 | <0.0050 |
| 6/27/2012 | 0 | 0.0082 JB | <0.0037 | <0.0046 | <0.0049 | 0.012 J | <0.0058 | 0.020 J | 0.011 J | 0.0044 J | 0.0075 J | 0.0056 J | 0.0046 J | 0.0038 J | <0.0049 | <0.0033 | <0.0048 |

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 0.84 | 0.015 J | 0.026 J | 0.15 | 0.17 | 0.017 J | 0.25 | 0.13 | 0.032 J | 0.035 J | 0.020 J | 0.016 J | 0.011 J | 0.012 J | <0.021 | 0.0094 J |
| 2/3/2012 | 0 | 0.41 | <0.020 | 0.074 | 0.10 | 0.14 | <0.020 | 0.23 | 0.12 | 0.025 J | NA | <0.020 | <0.020 | 0.022 J | <0.020 | <0.020 | 0.031 J |

TABLE A.6.a.2
Surface Water Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

RI-12S

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 5/18/2000 | 0.2 | ND | ND | ND | ND | 0.42 | ND | 1.4 | 0.49 | 0.22 | 0.35 | 0.22 | 0.5 | 0.33 | 0.36 | 0.21 | 0.36 |
| 8/17/2000 | 0.4 | ND | ND | ND | ND | 0.2 | ND | 0.34 | 0.13 | 0.093 | 0.09 | 0.073 | 0.12 | 0.092 | 0.096 | ND | 0.062 |
| 10/1/2000 | 0.1 | ND | ND | ND | ND | ND | ND | 0.034 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/15/2001 | 0.1 | ND | ND | ND | ND | ND | ND | 0.098 | ND | ND | ND | ND | ND | 0.051 | ND | ND | ND |
| 6/13/2001 | 0.2 | 0.15 | ND | ND | 0.15 | 0.21 | ND | 0.069 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 6/28/2001 | 0.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/18/2001 | 0.2 | ND | ND | ND | ND | 0.15 | ND | 0.14 | ND | ND | 0.028 | ND | 0.031 | 0.086 | ND | ND | ND |
| 7/8/2002 | 0.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/9/2002 | 0.2 | ND | ND | 6.6 | ND | ND | ND | 0.14 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 8/13/2002 | 0.1 | ND | 0.54 | ND | 0.067 | 0.16 | 0.017 | 0.22 | 0.15 | 0.045 | 0.057 | 0.034 | 0.075 | 0.058 | ND | ND | 0.096 |
| 6/18/2003 | 0.1 | ND | 0.29 | ND | ND | 0.032 | ND | 0.069 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/25/2003 | 0.2 | ND | ND | ND | ND | 0.073 | 0.013 | 0.14 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/14/2004 | 0.1 | 0.39 | 0.55 | ND | ND | 0.098 | 0.016 | 0.23 | 0.23 | 0.088 | 0.12 | 0.026 | 0.093 | 0.084 | ND | ND | 0.084 |
| 5/22/2004 | 0.1 | ND | ND | ND | ND | 0.1 | 0.019 | 0.26 | ND | 0.06 | 0.11 | 0.053 | 0.11 | 0.086 | ND | ND | 0.071 |
| 7/29/2004 | 0.1 | ND | ND | ND | ND | 0.025 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/24/2004 | 0.1 | ND | ND | ND | ND | 0.032 | ND | 0.086 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 6/23/2005 | 0.1 | ND | ND | ND | ND | 0.038 | ND | 0.057 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 9/26/2005 | 0.1 | ND | ND | ND | ND | 0.064 | ND | 0.17 | 0.13 | 0.032 | 0.052 | 0.025 | 0.054 | 0.044 | ND | ND | 0.04 |
| 10/24/2005 | 0.4 | ND | ND | ND | ND | 0.08 | ND | 0.21 | 0.13 | 0.023 | 0.061 | 0.029 | 0.07 | 0.041 | ND | ND | 0.054 |
| 3/13/2006 | 0.83 | ND | ND | ND | ND | 0.17 | ND | 0.39 | 0.31 | 0.082 | 0.15 | 0.068 | 0.16 | 0.12 | 0.099 | ND | 0.13 |
| 7/20/2006 | 0.23 | ND | 0.35 | ND | ND | 0.096 | 0.026 | 0.23 | 0.14 | 0.032 | 0.05 | 0.021 | 0.042 | 0.027 | ND | ND | ND |
| 8/17/2006 | 0.14 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4/3/2007 | 0.2 | 0.022 | 0.024 | 0.017 | 0.017 | 0.18 | 0.047 | 0.47 | 0.35 | 0.15 | 0.22 | 0.24 | 0.36 | 0.26 | 0.24 | 0.062 | 0.21 |
| 7/24/2007 | 0.37 | ND | ND | ND | ND | 0.02 | ND | 0.025 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 8/20/2007 | 0.2 | 0.013 | ND | 0.025 | 0.023 | 0.1 | 0.049 | 0.28 | 0.18 | 0.064 | 0.1 | 0.084 | 0.13 | 0.084 | 0.075 | 0.021 | 0.058 |
| 12/2/2007 | 0.67 | 0.7 | ND | ND | ND | 3.2 | 0.57 | 6.8 | 4.5 | 1.3 | 3.6 | 2.6 | 2.7 | 1.8 | 1.9 | ND | 1.5 |
| 4/11/2008 | 0.05 | 0.038 | 0.014 | 0.016 | 0.015 | 0.12 | 0.028 | 0.4 | 0.26 | 0.08 | 0.19 | 0.15 | 0.15 | 0.11 | 0.12 | 0.026 | 0.098 |
| 6/8/2008 | 0.1 | ND | 0.0086 | 0.011 | 0.011 | 0.055 | 0.021 | 0.19 | 0.17 | 0.081 | 0.092 | 0.08 | 0.11 | 0.082 | 0.072 | 0.014 | 0.06 |
| 7/29/2008 | 0.22 | ND | ND | ND | ND | 0.014 | ND | 0.018 | 0.0096 | ND | ND | ND | ND | ND | ND | ND | ND |
| 11/25/2008 | 0.48 | ND | 0.25 | ND | 0.04 | 0.25 | 0.18 | 0.76 | 0.71 | 0.42 | 0.52 | 0.61 | 0.64 | 0.71 | 0.61 | 0.13 | 0.5 |
| 4/27/2009 | 0.6 | 0.029 | 0.012 | 0.017 | 0.016 | 0.046 | 0.026 | 0.14 | 0.11 | 0.038 | 0.064 | 0.052 | 0.061 | 0.048 | 0.049 | 0.011 | 0.039 |
| 6/19/2009 | 0.98 | 0.013 | 0.014 | 0.022 | 0.018 | 0.1 | 0.043 | 0.38 | 0.26 | 0.11 | 0.16 | 0.12 | 0.19 | 0.14 | 0.11 | 0.029 | 0.094 |
| 7/9/2009 | 0.27 | 0.012 | 0.021 | 0.014 | 0.013 | 0.024 | 0.017 | 0.081 | 0.037 | 0.009 | 0.013 | ND | 0.0071 | 0.0035 | ND | ND | ND |
| 8/26/2009 | 0.6 | 0.015 | ND | 0.0084 | 0.011 | 0.046 | 0.03 | 0.14 | 0.083 | 0.024 | 0.049 | 0.032 | 0.038 | 0.03 | 0.028 | 0.0065 | 0.023 |
| 6/16/2010 | 0.34 | 0.028 | 0.0038 | 0.014 | 0.01 | 0.038 | 0.021 | 0.11 | 0.073 | 0.023 | 0.047 | 0.036 | 0.046 | 0.03 | 0.031 | 0.0074 | 0.025 |
| 7/15/2010 | 0.87 | 0.019 | 0.013 | 0.014 | 0.012 | 0.076 | 0.045 | 0.28 | 0.22 | 0.091 | 0.15 | 0.14 | 0.13 | 0.12 | 0.11 | 0.033 | 0.085 |
| 8/30/2010 | 0.36 | 0.0084 | ND | ND | ND | 0.012 | ND | 0.029 | 0.024 | 0.0063 | 0.015 | 0.0087 | 0.0093 | 0.0063 | 0.006 | ND | ND |

TABLE A.6.a.2
Surface Water Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

RI-13S

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 5/18/2000 | 0.2 | ND | ND | ND | ND | 0.54 | 0.1 | 1.3 | 0.53 | 0.25 | 0.36 | 0.23 | 0.51 | 0.35 | 0.36 | 0.22 | 0.36 |
| 8/17/2000 | 0.1 | ND | ND | ND | ND | 0.19 | ND | 0.29 | 0.13 | 0.089 | 0.09 | 0.075 | 0.12 | 0.088 | 0.097 | ND | 0.061 |
| 10/1/2000 | 0.0 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/15/2001 | 0.1 | ND | ND | ND | ND | ND | ND | 0.092 | ND | ND | ND | ND | ND | 0.053 | ND | ND | ND |
| 6/13/2001 | 0.2 | 0.31 | ND | ND | ND | 0.2 | ND | 0.066 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 6/28/2001 | 0.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/18/2001 | 0.2 | ND | ND | ND | ND | ND | ND | 0.17 | 0.71 | ND | ND | ND | ND | 0.15 | ND | ND | ND |
| 7/8/2002 | 0.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/9/2002 | 0.1 | ND | ND | ND | ND | ND | ND | 0.11 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 8/13/2002 | 0.1 | ND | ND | ND | ND | 0.19 | 0.022 | 0.27 | 0.22 | 0.057 | 0.093 | 0.042 | 0.088 | 0.087 | 0.087 | 0.11 | 0.1 |
| 6/18/2003 | 0.1 | ND | ND | ND | ND | 0.03 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/25/2003 | 0.2 | ND | ND | ND | ND | 0.094 | 0.013 | 0.14 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/14/2004 | 0.1 | ND | 0.51 | ND | ND | 0.12 | 0.019 | 0.4 | 0.36 | 0.088 | 0.18 | 0.079 | 0.16 | 0.14 | 0.11 | ND | 0.11 |
| 5/22/2004 | 0.1 | ND | ND | ND | ND | 0.1 | 0.018 | 0.21 | ND | 0.046 | 0.084 | 0.038 | 0.08 | 0.062 | ND | ND | 0.051 |
| 7/29/2004 | 0.1 | ND | ND | ND | ND | 0.025 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/24/2004 | 0.1 | ND | ND | ND | ND | 0.028 | ND | 0.077 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 6/23/2005 | 0.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 9/26/2005 | 0.1 | ND | ND | ND | ND | 0.062 | ND | 0.16 | 0.12 | 0.029 | 0.052 | 0.022 | 0.05 | 0.041 | ND | ND | 0.037 |
| 10/24/2005 | 0.2 | ND | ND | ND | ND | 0.08 | ND | 0.2 | 0.12 | 0.019 | 0.049 | ND | 0.05 | 0.029 | ND | ND | 0.038 |
| 3/13/2006 | 0.21 | ND | ND | ND | ND | 0.16 | ND | 0.35 | 0.27 | 0.072 | 0.13 | 0.06 | 0.14 | 0.1 | 0.09 | ND | 0.11 |
| 7/20/2006 | 0.16 | ND | 0.36 | ND | ND | 0.095 | 0.027 | 0.24 | 0.14 | 0.03 | 0.051 | ND | 0.045 | 0.032 | ND | ND | ND |
| 8/17/2006 | 0.07 | ND | ND | ND | ND | 0.032 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4/3/2007 | 0.3 | 0.03 | 0.027 | 0.02 | 0.021 | 0.2 | 0.053 | 0.52 | 0.39 | 0.17 | 0.23 | 0.26 | 0.41 | 0.28 | 0.26 | 0.07 | 0.23 |
| 7/24/2007 | 0.3 | ND | ND | ND | ND | 0.02 | ND | 0.021 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 8/20/2007 | 0.4 | ND | 0.011 | 0.028 | 0.03 | 0.13 | 0.059 | 0.36 | 0.25 | 0.092 | 0.14 | 0.11 | 0.15 | 0.12 | 0.1 | 0.027 | 0.078 |
| 12/2/2007 | 0.21 | ND | ND | ND | ND | 1.1 | 0.22 | 2.9 | 1.9 | 0.59 | 1.6 | 1.2 | 1.2 | 0.88 | 0.9 | ND | 0.74 |
| 4/11/2008 | 0.01 | 0.032 | 0.013 | 0.017 | 0.019 | 0.13 | 0.038 | 0.43 | 0.29 | 0.093 | 0.21 | 0.16 | 0.16 | 0.12 | 0.13 | 0.028 | 0.1 |
| 6/8/2008 | 0.1 | ND | 0.0074 | 0.014 | 0.013 | 0.075 | 0.03 | 0.22 | 0.18 | 0.076 | 0.088 | 0.077 | 0.099 | 0.079 | 0.069 | 0.013 | 0.055 |
| 7/29/2008 | 0.1 | ND | ND | ND | ND | 0.016 | ND | 0.013 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 11/25/2008 | 0.28 | ND | ND | ND | 0.0078 | 0.082 | 0.022 | 0.13 | 0.076 | 0.019 | 0.043 | 0.022 | 0.032 | 0.013 | 0.022 | 0.0052 | 0.018 |
| 4/27/2009 | 0.25 | 0.028 | 0.007 | 0.016 | 0.013 | 0.039 | 0.022 | 0.12 | 0.088 | 0.032 | 0.054 | 0.042 | 0.048 | 0.04 | 0.037 | 0.0075 | 0.031 |
| 6/19/2009 | 0.2 | 0.014 | 0.02 | 0.021 | 0.027 | 0.16 | 0.072 | 0.64 | 0.44 | 0.19 | 0.27 | 0.22 | 0.29 | 0.23 | 0.19 | 0.053 | 0.16 |
| 7/9/2009 | 0.27 | 0.013 | 0.018 | 0.02 | 0.016 | 0.039 | 0.018 | 0.061 | 0.022 | 0.0052 | 0.0068 | ND | ND | ND | ND | ND | ND |
| 8/26/2009 | 0.34 | 0.0096 | 0.0039 | 0.0059 | 0.0085 | 0.05 | 0.044 | 0.17 | 0.094 | 0.031 | 0.058 | 0.029 | 0.052 | 0.029 | 0.033 | 0.0087 | 0.027 |
| 6/16/2010 | 0.15 | 0.022 | ND | 0.018 | 0.011 | 0.042 | 0.019 | 0.096 | 0.051 | 0.012 | 0.029 | 0.096 | 0.02 | 0.012 | 0.012 | ND | 0.0096 |
| 7/15/2010 | 0.58 | 0.02 | 0.013 | 0.018 | 0.019 | 0.087 | 0.05 | 0.27 | 0.21 | 0.091 | 0.13 | 0.12 | 0.11 | 0.11 | 0.096 | 0.027 | 0.078 |
| 8/30/2010 | 0.33 | 0.011 | ND | 0.0055 | ND | 0.011 | ND | 0.017 | 0.0094 | ND | 0.0071 | ND | 0.0043 | ND | ND | ND | ND |

MKESTR450

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 5/22/2012 | 0 | 0.010 JB | <0.0036 | 0.0089 J | 0.0068 J | 0.021 J | 0.0083 J | 0.045 J | 0.021 J | <0.0036 | 0.012 J | 0.0055 J | 0.0063 J | <0.0029 | <0.0048 | <0.0032 | <0.0047 |
| 6/27/2012 | 0 | 0.0082 JB | <0.0037 | 0.0079 J | <0.0050 | 0.023 J | 0.0082 J | 0.072 | 0.054 J | 0.014 J | 0.026 J | 0.019 J | 0.021 J | 0.015 J | 0.015 J | 0.0050 J | 0.012 J |

MKESTR500

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 1.9 | 0.047 J | 0.063 | 0.27 | 0.22 | 0.032 J | 0.30 | 0.18 | 0.064 | 0.11 | 0.081 | 0.082 | 0.063 | 0.061 | 0.018 J | 0.051 |
| 2/3/2012 | 0 | 1.5 | <0.021 | 0.18 | 0.21 | 0.15 | <0.021 | 0.22 | 0.12 | 0.032 J | NA | 0.024 J | <0.021 | 0.032 J | 0.029 J | <0.021 | 0.042 |

RI-14M

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 6/16/2010 | 3.06 | 0.028 | 0.0066 | 0.044 | 0.029 | 0.088 | 0.043 | 0.26 | 0.16 | 0.046 | 0.084 | 0.057 | 0.07 | 0.049 | 0.038 | 0.0097 | 0.029 |
| 7/15/2010 | 3.25 | 0.04 | 0.0078 | 0.03 | 0.028 | 0.073 | 0.051 | 0.19 | 0.13 | 0.042 | 0.062 | 0.13 | 0.048 | 0.043 | 0.041 | 0.01 | 0.032 |
| 8/30/2010 | 3.01 | 0.0071 | ND | ND | ND | 0.013 | 0.0083 | 0.054 | 0.13 | 0.019 | 0.038 | 0.029 | 0.032 | 0.024 | 0.024 | 0.0045 | 0.016 |

TABLE A.6.a.2
Surface Water Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

RI-14S

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------------|-------------------|-----------------------|--------------------------|------------------------|--------------------|------------------------|----------------------|------------------------|------------------|------------------------------|--------------------|--------------------------------|--------------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|
| 5/18/2000 | 1.000 | ND | ND | 0.11 | 0.13 | 1.4 | 0.29 | 2.9 | 1.1 | 0.19 | 0.8 | 0.5 | 1.2 | 0.79 | 0.76 | 0.67 | 0.86 |
| 8/17/2000 | 1.000 | ND | ND | ND | ND | 0.19 | ND | 0.79 | 0.39 | 0.16 | 0.15 | 0.1 | 0.2 | 0.13 | 0.14 | ND | 0.097 |
| 10/1/2000 | 1.000 | ND | ND | ND | ND | ND | ND | 0.089 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/15/2001 | 1.000 | ND | ND | ND | ND | 0.4 | ND | 1.2 | 0.93 | 0.22 | 0.4 | 0.2 | 0.52 | 0.39 | 0.37 | 0.17 | 0.32 |
| 6/13/2001 | 1.000 | ND | ND | ND | ND | ND | ND | 0.51 | 0.44 | 0.058 | 0.11 | 0.054 | 0.14 | 0.077 | ND | ND | 0.081 |
| 6/28/2001 | 1.000 | ND | ND | ND | ND | 0.13 | ND | 0.33 | 0.27 | 0.043 | 0.1 | 0.049 | 0.13 | 0.052 | ND | ND | 0.075 |
| 7/18/2001 | 1.000 | ND | ND | ND | ND | ND | ND | 0.37 | 0.31 | 0.041 | 0.068 | ND | 0.074 | 0.09 | ND | ND | ND |
| 7/8/2002 | 1.1 | ND | ND | ND | ND | 0.082 | 0.013 | 0.27 | 0.32 | 0.045 | 0.14 | 0.05 | 0.14 | 0.12 | ND | ND | 0.095 |
| 7/9/2002 | 1.000 | ND | ND | ND | ND | 0.16 | 0.022 | 0.6 | 0.4 | 0.12 | 0.25 | 0.11 | 0.23 | 0.19 | 0.1 | 0.14 | 0.18 |
| 8/13/2002 | 1.000 | ND | ND | ND | 0.085 | 0.17 | 0.024 | 0.36 | 0.23 | 0.054 | 0.092 | 0.041 | 0.087 | 0.069 | 0.081 | ND | 0.072 |
| 6/18/2003 | 1.000 | ND | ND | ND | ND | 0.068 | 0.017 | 0.27 | 0.34 | 0.061 | 0.096 | 0.045 | 0.1 | 0.098 | 0.13 | 0.16 | 0.071 |
| 10/25/2003 | 1.000 | ND | ND | ND | ND | 0.24 | 0.063 | 0.75 | 0.48 | 0.13 | 0.28 | 0.12 | 0.27 | 0.25 | 0.16 | ND | 0.22 |
| 5/14/2004 | 1.000 | ND | 0.29 | ND | ND | 0.12 | 0.028 | 0.51 | 0.36 | 0.088 | 0.17 | 0.088 | 0.2 | 0.13 | ND | ND | 0.12 |
| 5/22/2004 | 1.000 | ND | ND | ND | ND | 0.31 | 0.057 | 0.84 | 0.55 | 0.21 | 0.35 | 0.18 | 0.37 | 0.3 | 0.2 | ND | 0.25 |
| 7/29/2004 | 1.000 | ND | ND | ND | ND | 0.078 | 0.016 | 0.25 | ND | 0.055 | 0.087 | 0.032 | 0.095 | 0.06 | ND | ND | 0.07 |
| 10/24/2004 | 1.000 | ND | ND | ND | ND | 0.031 | 0.015 | 0.16 | ND | 0.038 | 0.059 | 0.028 | 0.063 | 0.039 | ND | ND | 0.044 |
| 6/23/2005 | 1.000 | ND | ND | ND | ND | 0.066 | 0.039 | 0.33 | 0.28 | 0.085 | 0.13 | 0.074 | 0.13 | 0.1 | 0.11 | ND | 0.11 |
| 9/26/2005 | 1.000 | ND | ND | ND | 0.059 | 0.18 | 0.05 | 0.35 | 0.24 | 0.05 | 0.082 | 0.037 | 0.082 | 0.065 | ND | ND | 0.06 |
| 10/24/2005 | 1.000 | ND | ND | ND | ND | 0.062 | ND | 0.16 | 0.12 | 0.027 | 0.055 | 0.025 | 0.057 | 0.041 | ND | ND | 0.043 |
| 3/13/2006 | 1.04 | ND | ND | ND | 0.065 | 0.29 | 0.059 | 0.53 | 0.4 | 0.11 | 0.18 | 0.084 | 0.18 | 0.15 | 0.12 | 0.092 | 0.14 |
| 7/20/2006 | 1.000 | ND | 0.48 | ND | 0.087 | 0.2 | 0.064 | 0.35 | 0.21 | 0.038 | 0.066 | 0.024 | 0.053 | 0.04 | ND | ND | 0.035 |
| 8/17/2006 | 1.1 | ND | ND | ND | ND | 0.1 | 0.043 | 0.54 | 0.37 | 0.097 | 0.15 | 0.06 | 0.13 | 0.11 | 0.084 | ND | 0.1 |
| 4/3/2007 | 1.18 | 0.089 | 0.054 | 0.052 | 0.063 | 0.85 | 0.15 | 2.3 | 1.5 | 0.64 | 0.98 | 1.1 | 1.2 | 1.1 | 0.88 | 0.26 | 0.77 |
| 7/24/2007 | 1.01 | ND | 0.012 | ND | ND | 0.092 | 0.023 | 0.43 | 0.42 | 0.11 | 0.2 | 0.16 | 0.29 | 0.19 | 0.18 | 0.048 | 0.14 |
| 8/20/2007 | 1.05 | 0.031 | 0.014 | 0.086 | 0.095 | 0.34 | 0.14 | 0.67 | 0.45 | 0.18 | 0.24 | 0.22 | 0.31 | 0.23 | 0.18 | 0.045 | 0.14 |
| 12/2/2007 | 1.03 | ND | 0.049 | ND | ND | 0.36 | 0.13 | 1.9 | 1.3 | 0.53 | 1 | 0.79 | 0.75 | 0.71 | 0.65 | 0.15 | 0.51 |
| 4/11/2008 | 0.97 | 0.036 | 0.021 | 0.026 | 0.024 | 0.2 | 0.054 | 0.66 | 0.45 | 0.16 | 0.31 | 0.24 | 0.26 | 0.22 | 0.22 | 0.048 | 0.18 |
| 6/8/2008 | 0.96 | ND | ND | 0.044 | 0.045 | 0.2 | 0.066 | 0.59 | 0.47 | 0.19 | 0.21 | 0.17 | 0.21 | 0.18 | 0.15 | 0.031 | 0.12 |
| 7/29/2008 | 1.03 | ND | 0.013 | ND | ND | 0.074 | 0.027 | 0.34 | 0.49 | 0.14 | 0.19 | 0.14 | 0.23 | 0.16 | 0.16 | 0.04 | 0.12 |
| 11/25/2008 | 1.04 | ND | 0.016 | 0.026 | 0.018 | 0.066 | 0.03 | 0.42 | 0.3 | 0.082 | 0.14 | 0.088 | 0.12 | 0.077 | 0.087 | 0.02 | 0.063 |
| 4/27/2009 | 0.98 | 0.019 | 0.016 | 0.02 | 0.021 | 0.12 | 0.044 | 0.4 | 0.31 | 0.11 | 0.18 | 0.13 | 0.18 | 0.14 | 0.12 | 0.031 | 0.1 |
| 6/19/2009 | 0.32 | 0.026 | 0.02 | 0.023 | 0.038 | 0.15 | 0.065 | 0.48 | 0.35 | 0.16 | 0.2 | 0.15 | 0.24 | 0.19 | 0.14 | 0.04 | 0.12 |
| 7/9/2009 | 1.17 | 0.0089 | 0.013 | 0.0071 | 0.0085 | 0.068 | 0.034 | 0.32 | 0.52 | 0.095 | 0.13 | 0.097 | 0.15 | 0.12 | 0.1 | 0.02 | 0.075 |
| 8/26/2009 | 1.39 | 0.0082 | 0.011 | ND | 0.0064 | 0.081 | 0.06 | 0.39 | 0.34 | 0.12 | 0.2 | 0.13 | 0.24 | 0.16 | 0.14 | 0.033 | 0.12 |

TABLE A.6.a.2
Surface Water Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

RI-18M

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 5/18/2000 | 4.5 | ND | ND | ND | ND | 0.29 | 0.11 | 1.4 | 0.51 | 0.28 | 0.28 | 0.19 | 0.41 | 0.31 | 0.32 | 0.19 | 0.28 |
| 8/17/2000 | 4.000 | ND | ND | ND | ND | ND | ND | ND | 0.13 | 0.049 | 0.028 | 0.037 | 0.031 | 0.037 | ND | ND | ND |
| 10/1/2000 | 4.1 | ND | ND | ND | ND | ND | ND | 0.051 | 0.14 | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/15/2001 | 4.6 | ND | ND | ND | ND | ND | ND | 0.073 | ND | ND | 0.027 | ND | ND | 0.073 | ND | ND | ND |
| 6/13/2001 | 4.5 | ND | ND | ND | ND | ND | ND | 0.082 | ND | ND | 0.024 | ND | 0.054 | 0.035 | ND | ND | ND |
| 6/28/2001 | 4.5 | 0.098 | ND | ND | ND | 0.3 | 0.11 | 0.76 | 0.64 | 0.23 | 0.31 | 0.19 | 0.39 | 0.22 | 0.31 | 0.3 | 0.23 |
| 7/18/2001 | 4.5 | ND | ND | ND | ND | ND | ND | 0.06 | 0.11 | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/8/2002 | 4.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/9/2002 | 4.5 | ND | ND | ND | ND | ND | ND | 0.1 | 0.12 | 0.029 | 0.052 | ND | 0.054 | 0.047 | ND | ND | 0.028 |
| 8/13/2002 | 4.5 | ND | ND | ND | ND | ND | ND | 0.14 | 0.13 | ND | 0.038 | ND | ND | ND | ND | ND | ND |
| 6/18/2003 | 4.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/25/2003 | 4.000 | ND | ND | ND | ND | 0.018 | 0.0098 | 0.06 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/14/2004 | 4.5 | 0.37 | 0.6 | ND | ND | 0.03 | 0.0092 | 0.087 | ND | 0.037 | 0.041 | 0.019 | 0.04 | 0.049 | ND | ND | 0.036 |
| 5/22/2004 | 4.5 | ND | ND | ND | ND | 0.065 | 0.021 | 0.22 | 0.2 | 0.059 | 0.094 | 0.051 | 0.11 | 0.09 | ND | ND | 0.069 |
| 7/29/2004 | 4.5 | ND | ND | ND | ND | 0.016 | 0.0076 | 0.055 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/24/2004 | 4.5 | ND | ND | ND | ND | 0.016 | 0.01 | 0.075 | ND | 0.022 | 0.027 | ND | 0.035 | ND | ND | ND | ND |
| 6/23/2005 | 4.5 | ND | ND | ND | ND | ND | ND | 0.097 | 0.092 | 0.02 | 0.026 | ND | 0.027 | 0.021 | ND | ND | ND |
| 9/26/2005 | 4.2 | ND | ND | ND | ND | 0.044 | 0.039 | 0.39 | 0.29 | 0.048 | 0.08 | 0.029 | 0.066 | 0.052 | ND | ND | 0.042 |
| 10/24/2005 | 4.6 | ND | ND | ND | ND | 0.04 | ND | 0.13 | 0.2 | 0.055 | 0.073 | 0.034 | 0.074 | 0.069 | ND | ND | 0.055 |
| 3/13/2006 | 5.51 | ND | 0.19 | ND | 0.037 | 0.16 | 0.029 | 0.4 | 0.27 | 0.048 | 0.099 | 0.043 | 0.096 | 0.066 | ND | ND | 0.071 |
| 7/20/2006 | 4.62 | ND | ND | ND | ND | ND | ND | 0.11 | 0.15 | 0.031 | 0.046 | ND | 0.046 | 0.034 | ND | ND | ND |
| 8/17/2006 | 4.55 | ND | ND | ND | ND | ND | ND | 0.11 | 0.12 | 0.025 | 0.036 | ND | 0.035 | 0.026 | ND | ND | ND |
| 4/3/2007 | 4.5 | 0.022 | 0.019 | 0.025 | 0.026 | 0.19 | 0.043 | 0.55 | 0.37 | 0.14 | 0.23 | 0.23 | 0.35 | 0.24 | 0.22 | 0.057 | 0.19 |
| 7/24/2007 | 4.37 | ND | ND | ND | ND | 0.014 | ND | 0.078 | 0.077 | ND | 0.029 | 0.022 | 0.031 | 0.023 | ND | ND | ND |
| 8/20/2007 | 4.4 | ND | ND | ND | ND | 0.06 | 0.023 | 0.22 | 0.23 | 0.081 | 0.098 | 0.07 | 0.14 | 0.098 | 0.076 | 0.02 | 0.058 |
| 12/2/2007 | 4.61 | 0.014 | 0.012 | ND | ND | 0.036 | 0.017 | 0.13 | 0.14 | 0.044 | 0.076 | 0.058 | 0.054 | 0.055 | 0.043 | ND | 0.032 |
| 4/11/2008 | 4.6 | 0.029 | 0.025 | 0.034 | 0.03 | 0.26 | 0.068 | 0.92 | 0.61 | 0.21 | 0.43 | 0.32 | 0.36 | 0.28 | 0.28 | 0.071 | 0.22 |
| 6/8/2008 | 4.1 | ND | ND | 0.1 | 0.087 | 0.21 | 0.097 | 0.96 | 0.66 | 0.17 | 0.24 | 0.15 | 0.2 | 0.13 | 0.14 | 0.028 | 0.11 |
| 7/29/2008 | 4.69 | ND | ND | ND | ND | 0.012 | ND | 0.039 | 0.11 | 0.016 | 0.031 | 0.019 | 0.03 | 0.016 | 0.019 | ND | 0.014 |
| 11/25/2008 | 4.7 | ND | ND | ND | ND | 0.016 | 0.0078 | 0.069 | 0.076 | 0.022 | 0.036 | 0.026 | 0.028 | 0.024 | 0.022 | 0.005 | 0.017 |
| 4/27/2009 | 4.63 | 0.029 | 0.019 | 0.029 | 0.032 | 0.17 | 0.05 | 0.55 | 0.4 | 0.14 | 0.23 | 0.16 | 0.24 | 0.16 | 0.16 | 0.039 | 0.13 |
| 6/19/2009 | 5.08 | 0.04 | 0.025 | 0.067 | 0.066 | 0.2 | 0.089 | 0.73 | 0.51 | 0.2 | 0.25 | 0.19 | 0.25 | 0.22 | 0.17 | 0.046 | 0.14 |
| 7/9/2009 | 4.86 | 0.011 | 0.0077 | ND | 0.0063 | 0.028 | 0.012 | 0.12 | 0.14 | 0.036 | 0.05 | 0.035 | 0.057 | 0.045 | 0.034 | 0.0064 | 0.026 |
| 8/26/2009 | 4.98 | 0.0068 | ND | ND | ND | 0.018 | 0.0081 | 0.062 | 0.12 | 0.022 | 0.04 | 0.034 | 0.044 | 0.027 | 0.029 | 0.0072 | 0.022 |
| 6/16/2010 | 4.68 | 0.025 | 0.016 | 0.0062 | 0.0093 | 0.06 | 0.034 | 0.26 | 0.24 | 0.094 | 0.15 | 0.11 | 0.16 | 0.12 | 0.11 | 0.027 | 0.088 |
| 7/15/2010 | 4.52 | 0.018 | 0.0082 | 0.025 | 0.021 | 0.092 | 0.043 | 0.32 | 0.26 | 0.067 | 0.1 | 0.068 | 0.11 | 0.072 | 0.064 | 0.016 | 0.052 |
| 8/30/2010 | 4.61 | 0.013 | 0.0085 | ND | 0.0064 | 0.022 | 0.012 | 0.1 | 0.13 | 0.046 | 0.072 | 0.054 | 0.058 | 0.051 | 0.041 | 0.0086 | 0.03 |

TABLE A.6.a.2
Surface Water Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRTS 02-41-558334

RI-19M

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 5/18/2000 | 4.1 | ND | ND | ND | ND | 0.2 | 0.21 | 0.87 | 0.54 | 0.16 | 0.18 | 0.12 | 0.26 | 0.21 | ND | 0.13 | 0.2 |
| 8/17/2000 | 5.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/1/2000 | 4.000 | ND | ND | ND | ND | ND | ND | 0.033 | 0.12 | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/15/2001 | 5.3 | ND | ND | ND | ND | ND | ND | 0.14 | 0.13 | ND | ND | ND | ND | ND | ND | ND | ND |
| 6/13/2001 | 4.5 | ND | ND | ND | ND | ND | ND | 0.084 | ND | ND | ND | ND | 0.032 | 0.065 | ND | ND | ND |
| 6/28/2001 | 4.000 | ND | ND | ND | ND | ND | ND | 0.048 | ND | ND | ND | ND | 0.022 | 0.041 | ND | ND | ND |
| 7/18/2001 | 4.9 | ND | ND | ND | ND | ND | ND | 0.053 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 7/8/2002 | 4.5 | ND | ND | ND | ND | 0.06 | ND | ND | ND | ND | 0.055 | ND | ND | ND | ND | ND | ND |
| 7/9/2002 | 5.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.032 | ND | ND | 0.033 | ND | ND | 0.025 |
| 8/13/2002 | 5.000 | ND | ND | ND | ND | ND | ND | 0.12 | 0.13 | 0.029 | 0.052 | ND | 0.039 | 0.039 | ND | ND | 0.058 |
| 6/18/2003 | 4.000 | ND | ND | ND | ND | ND | ND | 0.052 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/25/2003 | 5.5 | ND | ND | ND | ND | 0.017 | 0.01 | 0.061 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 5/14/2004 | 5.000 | 0.4 | 0.55 | ND | ND | 0.043 | 0.011 | 0.16 | ND | 0.043 | 0.063 | 0.024 | 0.068 | 0.042 | ND | ND | 0.057 |
| 5/22/2004 | 4.6 | ND | ND | ND | ND | 0.062 | 0.015 | 0.15 | ND | 0.033 | 0.057 | 0.027 | 0.055 | 0.046 | ND | ND | 0.037 |
| 7/29/2004 | 5.6 | ND | ND | ND | ND | 0.018 | 0.0072 | 0.054 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 10/24/2004 | 5.5 | ND | ND | ND | ND | 0.022 | 0.011 | 0.081 | ND | 0.024 | 0.03 | ND | 0.037 | ND | ND | ND | ND |
| 6/23/2005 | 4.9 | ND | ND | ND | ND | ND | ND | 0.08 | 0.073 | ND | 0.028 | ND | 0.025 | 0.02 | ND | ND | ND |
| 9/26/2005 | 4.3 | ND | ND | ND | ND | 0.044 | 0.036 | 0.35 | 0.27 | 0.048 | 0.075 | 0.029 | 0.063 | 0.054 | ND | ND | 0.045 |
| 10/24/2005 | 5.1 | ND | ND | ND | ND | ND | ND | 0.1 | 0.15 | 0.039 | 0.054 | 0.024 | 0.054 | 0.048 | ND | ND | 0.042 |
| 3/13/2006 | 4.55 | ND | 0.17 | ND | 0.051 | 0.26 | 0.045 | 0.43 | 0.36 | 0.061 | 0.12 | 0.054 | 0.12 | 0.086 | ND | ND | 0.094 |
| 7/20/2006 | 4.48 | ND | ND | ND | ND | 0.046 | ND | 0.17 | 0.18 | 0.046 | 0.067 | 0.024 | 0.072 | 0.059 | ND | ND | 0.054 |
| 8/17/2006 | 5.5 | ND | ND | ND | ND | ND | ND | 0.079 | 0.081 | ND | 0.029 | ND | ND | 0.019 | ND | ND | ND |
| 4/3/2007 | 5.000 | ND | ND | 0.0087 | ND | 0.038 | ND | 0.13 | 0.091 | 0.028 | 0.047 | 0.045 | 0.068 | 0.044 | 0.039 | ND | 0.034 |
| 7/24/2007 | 5.32 | ND | ND | ND | ND | 0.023 | ND | 0.076 | 0.075 | 0.018 | 0.032 | 0.028 | 0.036 | 0.022 | 0.024 | ND | ND |
| 8/20/2007 | 5.4 | 0.02 | ND | ND | ND | 0.043 | 0.019 | 0.15 | 0.15 | 0.059 | 0.073 | 0.053 | 0.095 | 0.072 | 0.06 | ND | 0.046 |
| 12/2/2007 | 5.12 | ND | ND | ND | ND | 0.033 | 0.013 | 0.11 | 0.1 | 0.035 | 0.068 | 0.054 | 0.05 | 0.044 | 0.042 | ND | 0.031 |
| 4/11/2008 | 4.6 | 0.02 | 0.025 | 0.028 | 0.026 | 0.26 | 0.07 | 1.1 | 0.65 | 0.22 | 0.49 | 0.36 | 0.41 | 0.31 | 0.31 | 0.08 | 0.26 |
| 6/8/2008 | 5.5 | ND | ND | 0.078 | 0.067 | 0.23 | 0.074 | 0.66 | 0.47 | 0.14 | 0.18 | 0.13 | 0.16 | 0.13 | 0.12 | 0.029 | 0.093 |
| 7/29/2008 | 5.1 | ND | ND | ND | ND | 0.011 | ND | 0.034 | 0.088 | 0.013 | 0.025 | 0.017 | 0.022 | 0.012 | 0.016 | ND | 0.011 |
| 11/25/2008 | 4.89 | ND | ND | ND | ND | 0.012 | 0.0078 | 0.047 | 0.054 | 0.014 | 0.024 | 0.017 | 0.016 | 0.012 | 0.015 | ND | 0.011 |
| 4/27/2009 | 4.73 | 0.026 | 0.012 | 0.019 | 0.021 | 0.11 | 0.033 | 0.34 | 0.25 | 0.081 | 0.15 | 0.1 | 0.14 | 0.099 | 0.099 | 0.021 | 0.08 |
| 6/19/2009 | 5 | 0.026 | 0.015 | 0.046 | 0.039 | 0.13 | 0.055 | 0.53 | 0.37 | 0.13 | 0.18 | 0.13 | 0.2 | 0.16 | 0.12 | 0.032 | 0.097 |
| 7/9/2009 | 4.51 | 0.011 | ND | ND | ND | 0.016 | ND | 0.061 | 0.072 | 0.017 | 0.028 | 0.022 | 0.031 | 0.023 | 0.02 | ND | 0.015 |
| 8/26/2009 | 4.42 | 0.0051 | ND | ND | ND | 0.017 | 0.0066 | 0.074 | 0.082 | 0.02 | 0.037 | 0.032 | 0.034 | 0.029 | 0.029 | 0.0075 | 0.022 |
| 7/15/2010 | 5.24 | 0.014 | 0.012 | 0.011 | 0.014 | 0.088 | 0.047 | 0.36 | 0.32 | 0.12 | 0.18 | 0.16 | 0.15 | 0.14 | 0.13 | 0.036 | 0.11 |
| 8/30/2010 | 5.11 | 0.013 | 0.0048 | ND | ND | 0.017 | 0.0091 | 0.067 | 0.11 | 0.024 | 0.041 | 0.028 | 0.031 | 0.025 | 0.022 | 0.0043 | 0.015 |

MKESTR600

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 0.19 | <0.021 | 0.0057 J | 0.024 J | 0.048 | <0.021 | 0.064 | 0.040 J | 0.0066 J | 0.015 J | 0.0085 J | 0.0096 J | 0.0065 J | 0.0073 J | <0.021 | 0.0054 J |
| 2/3/2012 | 0 | 0.29 | 0.025 J | 0.057 | 0.087 | 0.053 | <0.020 | 0.042 | <0.020 | <0.020 | NA | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 0.021 J |
| 5/22/2012 | 0 | 0.056 B | 0.0054 J | <0.0045 | 0.0049 J | 0.024 J | <0.0057 | 0.063 | 0.049 | 0.013 J | 0.027 J | 0.025 J | 0.021 J | 0.016 J | 0.016 J | 0.0036 J | 0.012 J |
| 6/27/2012 | 0 | 0.0059 JB | <0.0046 | <0.0037 | <0.0049 | 0.011 J | <0.0058 | 0.021 J | 0.034 J | 0.0068 J | 0.016 J | 0.013 J | 0.011 J | 0.0079 J | 0.011 J | 0.0038 J | 0.0084 J |

MKESTR700

| Sample Collection Date | Depth (meters) | Naphthalene (ug/L) | Acenaphthylene (ug/L) | Acenaphthene (ug/L) | Fluorene (ug/L) | Phenanthrene (ug/L) | Anthracene (ug/L) | Fluoranthene (ug/L) | Pyrene (ug/L) | Benzo(a)Anthracene (ug/L) | Chrysene (ug/L) | Benzo(k)Fluoranthene (ug/L) | Benzo(b)Fluoranthene (ug/L) | Benzo(a)Pyrene (ug/L) | Benzo(g,h,i)Perylene (ug/L) | Dibenzo(a,h)Anthracene (ug/L) | Indeno(1,2,3-cd)Pyrene (ug/L) |
|------------------------|----------------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|-------------------------------|
| 2/2/2012 | 0 | 0.14 | <0.022 | <0.022 | 0.023 J | 0.023 J | <0.022 | <0.022 | 0.0054 J | <0.022 | 0.0039 J | <0.022 | <0.022 | <0.022 | <0.022 | <0.022 | <0.022 |
| 2/3/2012 | 0 | 0.037 J | <0.020 | <0.020 | <0.020 | 0.025 J | <0.020 | 0.022 J | <0.020 | <0.020 | NA | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 0.021 J |

All detections are presented in **bold** type.
Results are expressed in µg/L (ppb).
D Duplicate sample
ND Not Detected
J Estimated concentration detected between the detection limit and reporting limit.

TABLE A.6.b
Sediment Sample Analytical Table
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRS 02-41-558334

| Sample Location | Date Sampled | Field Screening IU | GRO mg/kg | Benzene mg/kg | Ethylbenzene mg/kg | Toluene mg/kg | Xylenes mg/kg | Naphthalene mg/kg |
|------------------|--------------|--------------------|-----------|---------------|--------------------|---------------|---------------|-------------------|
| MKE-HOC-SD01 | 4/8/2013 | 15.0 | <3.7 | 0.112 J | 0.009 J | 0.054 J | 0.049 J | 0.070 |
| MKE-KKR-SD01 | 4/8/2013 | 1.1 | <3.6 | 0.09 J | 0.01 J | 0.04 J | 0.093 J | 0.02 |
| MKE-KKR-SD02 | 4/8/2013 | 2.0 | <3.3 | <0.080 J | 0.010 J | 0.094 J | 0.116 J | 0.065 |
| MKE-KKR-SD03 | 4/10/2013 | 0.4 | <3.9 | 0.074 B | 0.009 | 0.046 B | 0.058 | 0.090 |
| MKE-KKR-SD04 | 4/9/2013 | 16.7 | 12.8 | 0.359 J | 0.077 J | 1.25 J | 1.24 J | 0.297 |
| MKE-KKR-SD04 Dup | | | 15.7 | 0.215 J | 0.046 J | 0.966 J | 1.093 J | 0.220 |
| MKE-KKR-SD05 | 4/9/2013 | 34.3 | <5.8 | 0.495 J | 0.065 J | 1.51 J | 1.131 J | 0.423 |
| MKE-UNC-SD01 | 4/8/2013 | 1.0 | <3.6 | <0.088 J | 0.006 J | 0.086 B,J | 0.269 J | 0.026 |
| MKE-VMC-SD01 | 4/8/2013 | 0.9 | <2.9 | <0.078 J | <0.009 J | 0.041 J | 0.036 J | 0.063 |
| MKE-WPC-SD01 | 4/8/2013 | 3.6 | <3.5 | 0.276 J | 0.078 J | 0.174 J | 0.241 J | 0.054 |
| MKE-WPC-SD02 | 4/8/2013 | 2.9 | <5.9 | 0.518 J | 0.089 J | 0.467 J | 1.00 J | 2.36 |
| MKE-WPC-SD03 | 4/8/2013 | 1.4 | <3.6 | <0.079 B,J | 0.012 J | 0.103 J | 0.200 J | 0.358 |
| MKE-WPC-SD04 | 4/8/2013 | 0.4 | <3.1 | <0.088 J | 0.007 J | <0.035 J | 0.068 J | 0.122 |
| MKE-WPC-SD04 Dup | | | <3.0 | <0.042 J | 0.005 J | <0.032 J | 0.025 J | 0.026 |
| MKE-WPC-SD05 | 4/8/2013 | 0.5 | <3.2 | 0.122 J | 0.013 J | 0.052 J | 0.095 J | 0.016 |

| Sample Location | Date Sampled | Field Screening IU | DRO mg/kg | Oil & Grease mg/kg | Organic Carbon mg/kg | Acenaphthene mg/kg | Acenaphthylene mg/kg | Anthracene mg/kg | Benz(a) anthracene mg/kg | Benzo(a) pyrene mg/kg | Benzo(b) fluoranthene mg/kg | Benzo(e) pyrene mg/kg | Benzo(g,h,i) perylene mg/kg | Benzo(j/k) fluoranthene mg/kg | Chrysene mg/kg | Dibenz(a,h) anthracene mg/kg | Fluoranthene mg/kg | Fluorene mg/kg | Indeno(1,2,3-cd) pyrene mg/kg | 2-Methyl naphthalene mg/kg | Phenanthrene mg/kg | Pyrene mg/kg | Total PAH (16) mg/kg | Total PAH (42) mg/kg |
|------------------|--------------|--------------------|-----------|--------------------|----------------------|--------------------|----------------------|------------------|--------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|-------------------------------|----------------|------------------------------|--------------------|----------------|-------------------------------|----------------------------|--------------------|--------------|----------------------|----------------------|
| MKE-HOC-SD01 | 4/8/2013 | 15.0 | 211 | 2,870 | 31,200 | 0.334 | 0.876 | 1.89 J | 9.24 J | 12.0 J | 12.7 J | 10.4 J | 11.3 J | 10.3 J | 12.0 J | 2.97 B | 23.9 J | 0.664 | 9.88 J | 0.056 | 10.3 J | 18.4 J | 137 | 176 |
| MKE-KKR-SD01 | 4/8/2013 | 1.1 | 9.41 | 476 | 25,200 | 0.07 | 0.12 | 0.26 J | 0.96 J | 1.26 J | 1.29 J | 1.09 J | 1.10 J | 1.10 J | 1.28 J | 0.28 B | 2.49 J | 0.08 | 0.97 J | 0.02 | 1.12 J | 1.96 J | 14.4 | 18.8 |
| MKE-KKR-SD02 | 4/8/2013 | 2.0 | 128 | 1,140 | 46,100 | 0.051 | 0.08 | 0.187 J | 0.773 | 1.11 | 1.31 | 1.1 | 1.17 | 1.08 | 1.19 | 0.286 B | 2.19 J | 0.066 | 0.998 J | 0.069 | 1.02 B | 1.71 J | 13.3 | 17.9 |
| MKE-KKR-SD03 | 4/10/2013 | 0.4 | 117 | 249 J | 31,900 | 0.370 | 0.258 | 1.240 | 3.970 | 4.660 | 4.710 | 4.040 | 4.070 | 3.940 | 4.780 | 1.060 | 10.500 | 0.434 | 3.450 | 0.060 | 5.520 | 8.250 | 57.3 | 75.4 |
| MKE-KKR-SD04 | 4/9/2013 | 16.7 | 66 | 701 | 71,900 | 1.02 | 0.735 | 2.93 J | 8.78 J | 11.4 J | 12.4 J | 10.2 J | 10.3 J | 10.2 J | 12.7 J | 2.82 B | 24.4 J | 1.54 | 9.09 J | 0.523 | 13.8 J | 19.2 J | 142 | 202 |
| MKE-KKR-SD04 Dup | | | 132 | 751 | 63,700 | 0.711 | 0.559 | 2.09 J | 6.38 J | 8.51 J | 9.49 J | 7.76 J | 7.82 J | 8.17 J | 9.49 J | 2.14 B | 18.0 J | 1.08 | 6.84 J | 0.381 | 9.96 J | 13.8 J | 105 | 150 |
| MKE-KKR-SD05 | 4/9/2013 | 34.3 | 22 | 1,660 | 67,400 | 0.527 | 0.791 | 1.79 | 4.9 J | 6.07 J | 6.83 J | 5.65 J | 5.46 J | 5.56 J | 7.15 J | 1.52 B | 13.4 | 0.801 | 4.8 J | 0.282 | 7.56 | 10.6 | 78.2 | 113 |
| MKE-UNC-SD01 | 4/8/2013 | 1.0 | 16.6 | 287 J | 26,000 | 0.068 | 0.102 | 0.265 J | 1.01 J | 1.41 J | 1.5 J | 1.27 J | 1.38 J | 1.24 J | 1.46 J | 0.335 | 2.76 J | 0.097 | 1.17 J | 0.017 | 1.33 J | 2.16 J | 16.3 | 21.2 |
| MKE-VMC-SD01 | 4/8/2013 | 0.9 | 304 | 4,640 | 32,100 | 0.319 | 0.536 | 1.15 J | 7.17 J | 8.81 J | 9.35 J | 7.56 J | 7.84 B | 7.83 J | 9.14 J | 2.07 | 18.8 J | 0.425 | 6.8 J | 0.046 | 8.6 J | 15.4 J | 104 | 136 |
| MKE-WPC-SD01 | 4/8/2013 | 3.6 | 22 | 281 J | 40,800 | 0.112 | 0.188 | 0.364 J | 1.42 J | 1.99 J | 2.19 J | 1.98 J | 2.02 J | 1.87 J | 2.0 J | 0.510 B | 3.76 J | 0.127 | 1.72 J | 0.040 | 1.5 J | 2.95 J | 22.8 | 30.8 |
| MKE-WPC-SD02 | 4/8/2013 | 2.9 | 45 | 1,170 | 83,600 | 0.988 | 0.619 | 1.96 J | 6.38 J | 9.16 J | 10.5 J | 8.8 J | 9.13 J | 8.67 J | 9.76 J | 2.24 | 18.8 J | 1.22 | 7.94 J | 1.19 | 12.2 J | 14.4 J | 116 | 154 |
| MKE-WPC-SD03 | 4/8/2013 | 1.4 | 158 | 531 | 40,000 | 0.778 | 0.559 | 2.11 J | 8.83 | 12.3 | 13.4 | 11.1 | 11.6 | 10.5 | 12.2 | 3.06 B | 23.7 J | 1.0 | 10.2 | 0.192 | 13.5 J | 18.6 J | 147 | 191 |
| MKE-WPC-SD04 | 4/8/2013 | 0.4 | 251 | 1,120 | 13,600 | 0.36 | 0.567 | 1.15 J | 6.75 | 12.8 D,J | 10.9 J | 9.52 J | 9.74 J | 9.02 J | 8.04 | 2.87 B | 13.1 D,J | 0.43 | 8.96 | 0.068 | 3.96 J | 15 D,J | 104 | 136 |
| MKE-WPC-SD04 Dup | | | 159 | 3,130 | 18,400 | 0.185 | 0.134 | 0.562 J | 2.31 | 2.95 | 2.96 | 2.5 | 2.63 | 2.5 | 3.07 | 0.676 B | 6.53 J | 0.247 | 2.28 | 0.027 | 3.96 J | 5.09 J | 36.1 | 48.4 |
| MKE-WPC-SD05 | 4/8/2013 | 0.5 | 241 | 2,770 | 15,400 | 0.069 | 0.099 | 0.387 J | 1.33 J | 1.62 J | 1.6 J | 1.39 J | 1.41 J | 1.39 J | 1.6 J | 0.381 B | 3.25 J | 0.091 | 1.23 J | 0.016 | 1.41 J | 2.55 J | 18.4 | 24.6 |

Notes

The laboratory results on this table were evaluated using a Level II data validation protocol. See Attachment 2 for the Data Assessment Report.

Conentrations are expressed in milligrams per kilogram, dry weight equivalent to parts per million

GRO Gasoline Range Organics
DRO Diesel Range Organics
PAH Polynuclear Aromatic Hydrocarbons
IU Instrument Units
mg/kg milligrams per kilogram

Data Qualifiers

Triphenylene is known to coelute with chrysene. The reported concentration of chrysene includes triphenylene.
B Analyte was detected in the method blank
D Analyte was reported from a diluted extract
J Estimated concentration detected between the Reporting Limit and the Estimated Detection Level
Dup Duplicate sample collected in the field
NS No standard

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TABLE A.7
Water Level Elevations
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

| MW-1 | | | |
|-------------------------|----------------|-----------------------|----------|
| Ground Elevation | | | 666.98 |
| Top of Casing Elevation | | | 666.76 |
| Top of Screen Elevation | | | 665.22 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 03/22/2012 | 2.65 | 664.11 | |
| 04/24/2012 | 2.35 | 664.41 | |
| 05/11/2012 | 1.85 | 664.91 | |
| 08/02/2012 | 3.92 | 662.84 | |
| 11/02/2012 | 3.80 | 662.96 | |
| 12/06/2012 | 4.12 | 662.64 | |
| 02/21/2013 | 2.96 | 663.80 | |
| 05/10/2013 | 2.92 | 663.84 | |
| 08/01/2013 | 3.98 | 662.78 | |
| | | | |

| MW-2 | | | |
|-------------------------|----------------|-----------------------|--------------------------------|
| Ground Elevation | | | 666.67 |
| Top of Casing Elevation | | | 666.54 |
| Top of Screen Elevation | | | 665.44 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 03/22/2012 | 2.93 | 663.61 | |
| 04/23/2012 | 2.21 | 664.33 | |
| 05/11/2012 | 2.06 | 664.48 | |
| 08/02/2012 | 3.42 | 663.12 | |
| 11/02/2012 | 3.80 | 662.74 | Cap broken off. 0.01 feet LPH. |
| 12/06/2012 | 3.99 | 662.55 | 0.02 feet LPH |
| 02/21/2013 | NM | | Well iced up |
| 05/10/2013 | 2.85 | 663.69 | hydrocarbon sheen observed |
| 08/01/2013 | 3.63 | 662.91 | |
| | | | |

| MW-3 | | | |
|-------------------------|----------------|-----------------------|-----------------|
| Ground Elevation | | | 665.69 |
| Top of Casing Elevation | | | 665.53 |
| Top of Screen Elevation | | | 664.71 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 03/22/2012 | 3.53 | 662.00 | |
| 04/23/2012 | 2.15 | 663.38 | |
| 05/11/2012 | 2.13 | 663.40 | |
| 08/01/2012 | 1.73 | 663.80 | |
| 11/01/2012 | 2.75 | 662.78 | Well cap broken |
| 12/06/2012 | 2.91 | 662.62 | |
| 02/21/2013 | 2.92 | 662.61 | |
| 05/09/2013 | 2.49 | 663.04 | |
| 08/01/2013 | 0.88 | 664.65 | |
| | | | |

| MW-4 | | | |
|-------------------------|----------------|-----------------------|----------|
| Ground Elevation | | | 666.82 |
| Top of Casing Elevation | | | 666.53 |
| Top of Screen Elevation | | | 663.52 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 03/22/2012 | 3.68 | 662.85 | |
| 04/24/2012 | 2.61 | 663.92 | |
| 05/11/2012 | 1.98 | 664.55 | |
| 08/01/2012 | 3.28 | 663.25 | |
| 11/02/2012 | 3.17 | 663.36 | |
| 12/06/2012 | 4.66 | 661.87 | |
| 02/21/2013 | 4.12 | 662.41 | |
| 05/09/2013 | 2.68 | 663.85 | |
| 08/01/2013 | 2.55 | 663.98 | |
| | | | |

| MW-5 | | | |
|-------------------------|----------------|-----------------------|--|
| Ground Elevation | | | 666.63 |
| Top of Casing Elevation | | | 666.17 |
| Top of Screen Elevation | | | 664.67 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 03/22/2012 | 3.42 | 662.75 | |
| 04/23/2012 | 2.78 | 663.39 | |
| 05/11/2012 | 2.83 | 663.34 | |
| 08/01/2012 | 3.55 | 662.62 | |
| 11/01/2012 | 3.05 | 663.12 | Well cap, well box, lid, & concrete broken |
| 12/06/2012 | 3.10 | 663.07 | |
| 02/21/2013 | 3.25 | 662.92 | |
| 05/10/2013 | 3.23 | 662.94 | |
| 08/01/2013 | 3.35 | 662.82 | |
| | | | |

| MW-6 | | | |
|-------------------------|----------------|-----------------------|---------------------------------|
| Ground Elevation | | | 666.63 |
| Top of Casing Elevation | | | 666.43 |
| Top of Screen Elevation | | | 665.18 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 03/22/2012 | 4.08 | 662.35 | |
| 04/24/2012 | 3.50 | 662.93 | |
| 05/11/2012 | 3.41 | 663.02 | |
| 08/01/2012 | 3.58 | 662.85 | |
| 11/01/2012 | 3.92 | 662.51 | Well shifted, difficult to open |
| 12/06/2012 | 3.97 | 662.46 | |
| 02/21/2013 | 4.15 | 662.28 | |
| 05/10/2013 | 3.81 | 662.62 | |
| 08/01/2013 | 3.58 | 662.85 | |
| | | | |

| MW-7 | | | |
|-------------------------|----------------|-----------------------|----------|
| Ground Elevation | | | 666.32 |
| Top of Casing Elevation | | | 666.02 |
| Top of Screen Elevation | | | 664.64 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 04/23/12 | 2.81 | 663.21 | |
| 05/11/12 | 2.91 | 663.11 | |
| 08/02/12 | 2.64 | 663.38 | |
| 11/1/2012 | 2.88 | 663.14 | |
| 12/6/2012 | 2.76 | 663.26 | |
| 2/21/2013 | 3.00 | 663.02 | |
| 5/10/2013 | 2.15 | 663.87 | |
| 8/1/2013 | 2.41 | 663.61 | |
| | | | |

| MW-8 | | | |
|-------------------------|----------------|-----------------------|-------------------------------|
| Ground Elevation | | | 666.61 |
| Top of Casing Elevation | | | 666.50 |
| Top of Screen Elevation | | | 664.56 |
| Measurement Date | Depth to Water | Groundwater Elevation | Comments |
| 04/24/2012 | 1.70 | 664.80 | |
| 05/11/2012 | 1.19 | 665.31 | |
| 08/01/2012 | 2.44 | 664.06 | |
| 11/02/2012 | 2.66 | 663.84 | |
| 12/06/2012 | 2.99 | 663.51 | |
| 02/21/2013 | 2.91 | 663.59 | Ice on surface of well casing |
| 05/09/2013 | 2.13 | 664.37 | |
| 08/01/2013 | 2.10 | 664.40 | |
| | | | |

TABLE A.7
Water Level Elevations
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

| MW-9 | | | |
|-------------------------|----------------|-----------------------|----------|
| Ground Elevation | | | 666.32 |
| Top of Casing Elevation | | | 665.99 |
| Top of Screen Elevation | | | 664.26 |
| Measurement Date | Depth To Water | Groundwater Elevation | Comments |
| 05/11/2012 | 7.53 | 658.46 | |
| 08/02/2012 | 2.21 | 663.78 | |
| 11/01/2012 | 2.59 | 663.40 | |
| 12/06/2012 | 2.58 | 663.41 | |
| 02/21/2013 | 2.50 | 663.49 | |
| 05/09/2013 | 2.36 | 663.63 | |
| 08/01/2013 | 3.00 | 662.99 | |
| | | | |

| MW-10 | | | |
|-------------------------|----------------|-----------------------|----------|
| Ground Elevation | | | 666.33 |
| Top of Casing Elevation | | | 665.89 |
| Top of Screen Elevation | | | 664.23 |
| Measurement Date | Depth To Water | Groundwater Elevation | Comments |
| 05/11/2012 | 11.21 | 654.68 | |
| 08/01/2012 | 1.09 | 664.80 | |
| 11/01/2012 | 1.45 | 664.44 | |
| 12/06/2012 | 1.70 | 664.19 | |
| 02/21/2013 | 2.18 | 663.71 | |
| 05/09/2013 | 2.30 | 663.59 | |
| 08/01/2013 | 2.76 | 663.13 | |
| | | | |

| MW-11 | | | |
|-------------------------|----------------|-----------------------|---------------------------|
| Ground Elevation | | | 666.08 |
| Top of Casing Elevation | | | 665.92 |
| Top of Screen Elevation | | | 664.14 |
| Measurement Date | Depth To Water | Groundwater Elevation | Comments |
| 05/11/2012 | 9.76 | 656.16 | |
| 08/01/2012 | 1.76 | 664.16 | |
| 11/02/2012 | 1.51 | 664.41 | |
| 12/06/2012 | 2.08 | 663.84 | |
| 02/21/2013 | NM | | Well is frozen- No Sample |
| 05/10/2013 | 2.53 | 663.39 | |
| 08/01/2013 | 2.88 | 663.04 | |
| | | | |

Notes:

TOC = Top of Casing

NM = Not Measured

LPH = Liquid Phase Hydrocarbon

Table A.8
Natural Attenuation Field Parameters Table
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-1

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 3/19/2012 | 9.2 | 67 | 8.6 | 0.816 | 6.96 |
| 3/22/2012 | 3.1 | -25 | 10.5 | 0.760 | 6.57 |
| 4/24/2012 | 1.2 | -56 | 10.3 | 0.465 | 6.93 |
| 11/2/2012 | 1.54 | -11.5 | 14.28 | 1.413 | 7.49 |
| 2/21/2013 | 1.3 | -127 | 4.2 | 1.315 | 7.1 |
| 5/10/2013 | 1.2 | -56.3 | 7.1 | 0.758 | 6.74 |
| 8/1/2013 | 1.43 | 235.1 | 17.42 | 1.028 | 6.98 |

MW-2

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 3/19/2012 | 10.6 | 69 | 9.5 | 0.786 | 7.20 |
| 3/22/2012 | 7.1 | 65 | 10.8 | 0.739 | 6.82 |
| 4/23/2012 | 0.5 | 64 | 11.1 | 0.732 | 7.44 |
| 11/2/2012 | 0.16 | -115.9 | 13.23 | 1.243 | 7.42 |
| 2/21/2013 | 0.7 | -171 | 4.8 | 0.982 | 7.31 |
| 5/10/2013 | 6.4 | -41.4 | 9.84 | 0.291 | 7.41 |
| 8/1/2013 | 1.8 | -256.1 | 17.6 | 0.899 | 6.99 |

MW-3

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 3/19/2012 | 10.0 | 62 | 9.3 | 0.730 | 7.1 |
| 3/22/2012 | 5.5 | 102 | 9.9 | 0.779 | 6.85 |
| 4/23/2012 | 1.8 | -56 | 11.1 | 0.978 | 7.01 |
| 11/1/2012 | 0.18 | -120.8 | 14.32 | 0.952 | 7.6 |
| 2/21/2013 | 0.6 | -183 | 4 | 2.031 | 7.19 |
| 5/9/2013 | 0.68 | -42.3 | 11.54 | 0.649 | 6.47 |
| 8/1/2013 | 3.91 | -112.9 | 17.76 | 0.333 | 6.99 |

Table A.8
Natural Attenuation Field Parameters Table
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-4

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 3/19/2012 | 8.5 | 21 | 10.0 | 0.868 | 7.68 |
| 3/22/2012 | 7.1 | 58 | 13.3 | 1.022 | 7.42 |
| 4/24/2012 | 1.6 | 36 | 11.4 | 0.596 | 7.13 |
| 11/2/2012 | 0.26 | -97.6 | 14.57 | 0.062 | 8.02 |
| 2/21/2013 | 1.4 | -120 | 4.8 | 1.439 | 7.64 |
| 5/9/2013 | 0.48 | -92 | 11.08 | 0.962 | 7.00 |
| 8/1/2013 | 1.86 | -203.4 | 20.96 | 0.983 | 7.12 |

MW-5

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 3/19/2012 | 10.3 | 66 | 9.3 | 0.703 | 7.14 |
| 3/22/2012 | 6.6 | 58 | 9.7 | 0.742 | 6.96 |
| 4/23/2012 | 2.3 | -27 | 11.4 | 0.678 | 7.01 |
| 11/1/2012 | 1.8 | -2.7 | 13.99 | 0.806 | 7.61 |
| 2/21/2013 | 1.3 | -83 | 4.5 | 1.026 | 6.88 |
| 5/10/2013 | 1.39 | -37.7 | 6.95 | 0.642 | 6.8 |
| 8/1/2013 | 1.66 | -149.4 | 15.75 | 0.758 | 7.01 |

MW-6

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 3/19/2012 | 10.0 | 59 | 9.7 | 0.706 | 7.28 |
| 3/22/2012 | 5.7 | 60 | 13.88 | 0.795 | 7.20 |
| 4/24/2012 | 2.9 | 15 | 10.4 | 0.395 | 7.19 |
| 11/1/2012 | 1.43 | -40.8 | 12.9 | 0.518 | 8.02 |
| 2/21/2013 | 1.7 | -150 | 1.7 | 2.159 | 7.5 |
| 5/10/2013 | 1.2 | -70.2 | 8.03 | 1.242 | 7.1 |
| 8/1/2013 | 1.85 | -183.4 | 22.4 | 0.824 | 7.3 |

Table A.8
Natural Attenuation Field Parameters Table
 GMIA Pipeline Fuel Release
 5300 South Howell Avenue
 Milwaukee, Wisconsin
 BRRTS 02-41-558334

MW-7

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 4/12/2012 | 3.7 | 99 | 9.5 | 2.48 | 7.16 |
| 4/23/2012 | 0.7 | 172 | 10.1 | 1.331 | 7.27 |
| 11/1/2012 | 0.2 | -12.6 | 14.46 | 1.83 | 8.17 |
| 2/21/2013 | 0.6 | -283 | 4.2 | 4.16 | 7.62 |
| 5/10/2013 | 0.8 | -201.3 | 7.05 | 1.88 | 7.6 |
| 8/1/2013 | 1.34 | -291.3 | 17.96 | 1.64 | 7.63 |

MW-8

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 4/13/2012 | 9.0 | 76 | 9.2 | 0.814 | 6.79 |
| 4/24/2012 | 4.2 | 79 | 8.8 | 0.435 | 6.87 |
| 11/2/2012 | 1.42 | 16.3 | 13.14 | 1.344 | 7.41 |
| 2/21/2013 | 0.9 | -125 | 4.5 | 1.488 | 7.09 |
| 5/9/2013 | 0.99 | -76.3 | 9.78 | 0.853 | 6.34 |
| 8/1/2013 | 2.28 | -205.9 | 18.99 | 0.99 | 6.85 |

MW-9

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 11/1/2012 | 1.5 | -6 | 13.93 | 0.859 | 7.25 |
| 2/21/2013 | 1 | -167 | 4.4 | 1.333 | 7.23 |
| 5/9/2013 | 0.98 | -149.4 | 9.57 | 1.11 | 6.49 |
| 8/1/2013 | 2.18 | -180.7 | 17.01 | 0.931 | 6.9 |

MW-10

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 11/1/2012 | 2.5 | -15.9 | 13.23 | 0.89 | 7.3 |
| 2/21/2013 | 1 | -81 | 4.7 | 1.089 | 7.09 |
| 5/9/2013 | 1.68 | -56 | 9.73 | 0.83 | 6.1 |
| 8/1/2013 | 2.31 | -169.5 | 17.03 | 0.839 | 6.81 |

Table A.8
Natural Attenuation Field Parameters Table

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin
BRRS 02-41-558334

MW-11

| Parameter | Dissolved Oxygen | Oxidation-Reduction Potential | Temperature | Specific Conductance | pH |
|--------------|------------------|-------------------------------|-------------|----------------------|------|
| Date / Units | mg/L | mV | deg C | mS/cm | IU |
| 11/2/2012 | 2.7 | 56.9 | 10.3 | 1.115 | 7.34 |
| 2/21/2013 | WELL FROZEN | | | | |
| 5/10/2013 | 2.3 | -61.4 | 6.99 | 1.159 | 6.67 |
| 8/1/2013 | 2.36 | -193.4 | 16.21 | 0.918 | 6.83 |

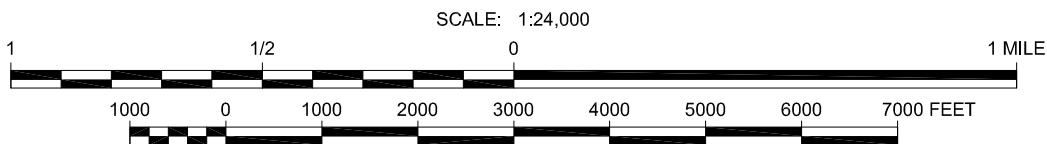
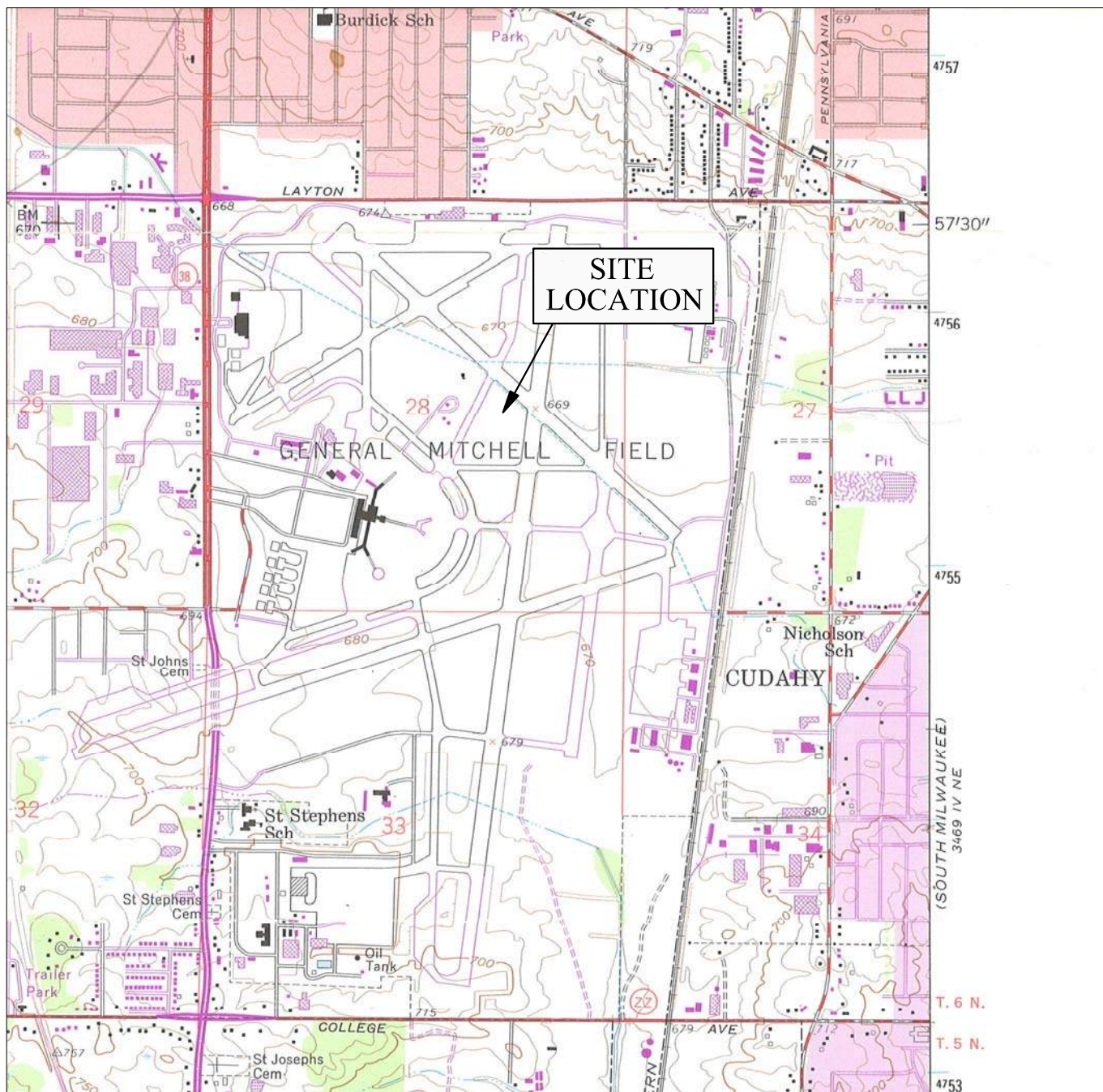
Notes:

mg/L = milligrams per liter, approximately equivalent to parts per million
mV = millivolts
deg C = degrees Celcius
mS/cm = microSiemens per centimeter
IU + instrument units

ATTACHMENT B

Figures

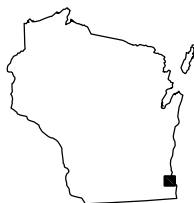
- B.1.a Site Location Map
- B.1.b Site Map
- B.1.c RR Site Map
- B.2.a Pre-Remedial Soil Contamination— **Not Applicable**
No Remedial Action Plan was prepared for pipeline repair excavation.
- B.2.b Post-remedial Soil Contamination
- B.2.c Pre/Post Remaining Soil Contamination
- B.3.a.1 Geologic Cross Sections A To A'
- B.3.a.2 Geologic Cross Sections B To B'
- B.3.a.3 Cross Sections Overview Plan
- B.3.b Groundwater Isoconcentrations
- B.3.c Groundwater Flow Direction
- B.3.d Monitoring Wells
- B.4.a Vapor Intrusion Map— **Not Applicable**
No buildings are located near the release and no indoor vapor samples were collected.
- B.4.b.1 Surface Water Sample Results
- B.4.b.2 Sediment Sample Results
- B.4.c Other— **Not Applicable**



NORTH

MAP REFERENCE:

GREENDALE QUADRANGLE MAP
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 SOUTH MILWAUKEE, 1976



QUADRANGLE LOCATION

FIGURE B.1.a SITE LOCATION MAP

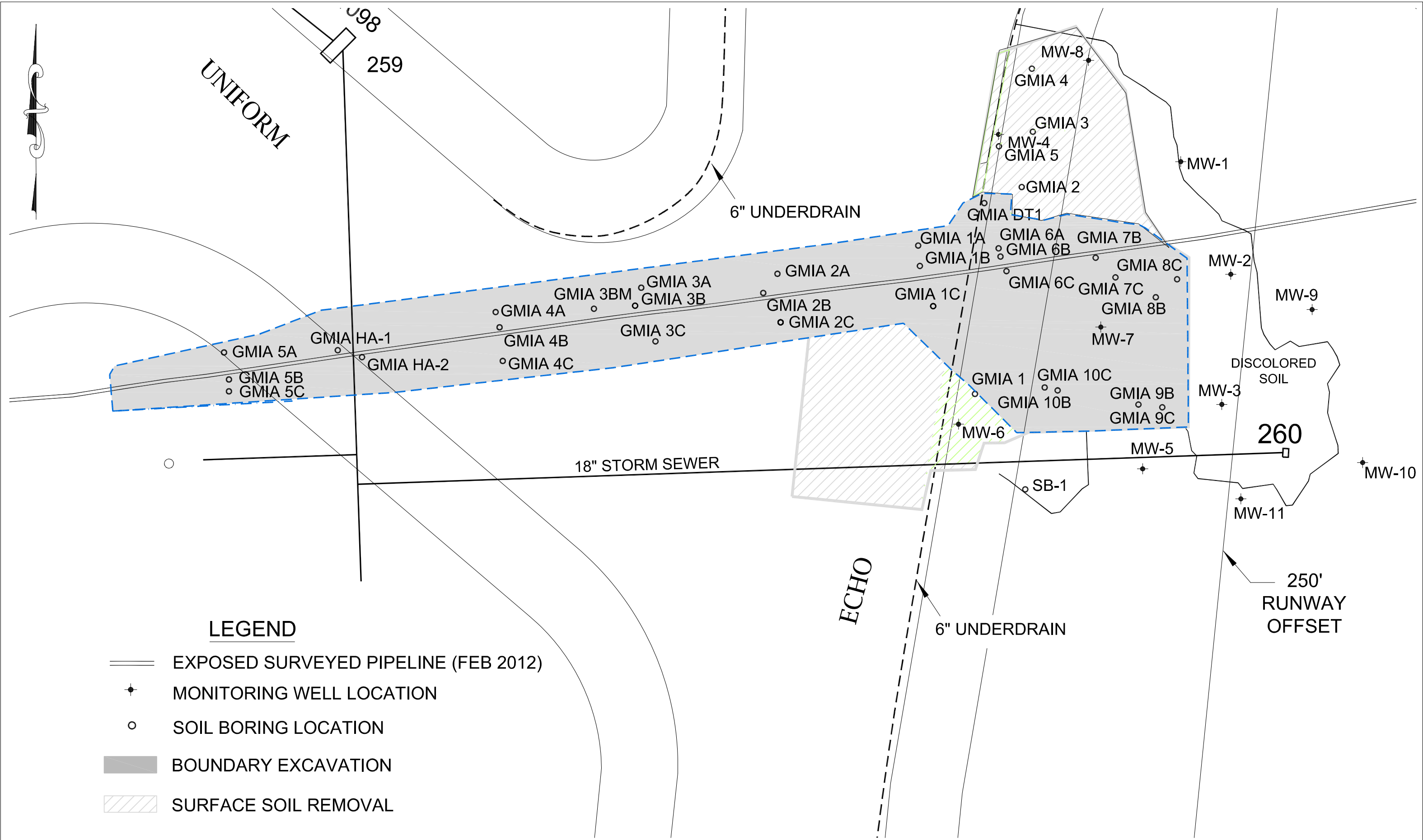
GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

DATE:
August 23, 2013
JOB NO.:
49233474
DRAWN BY:
RF
CHK'D BY:
KDM
SCALE:
AS SHOWN

URS

342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202

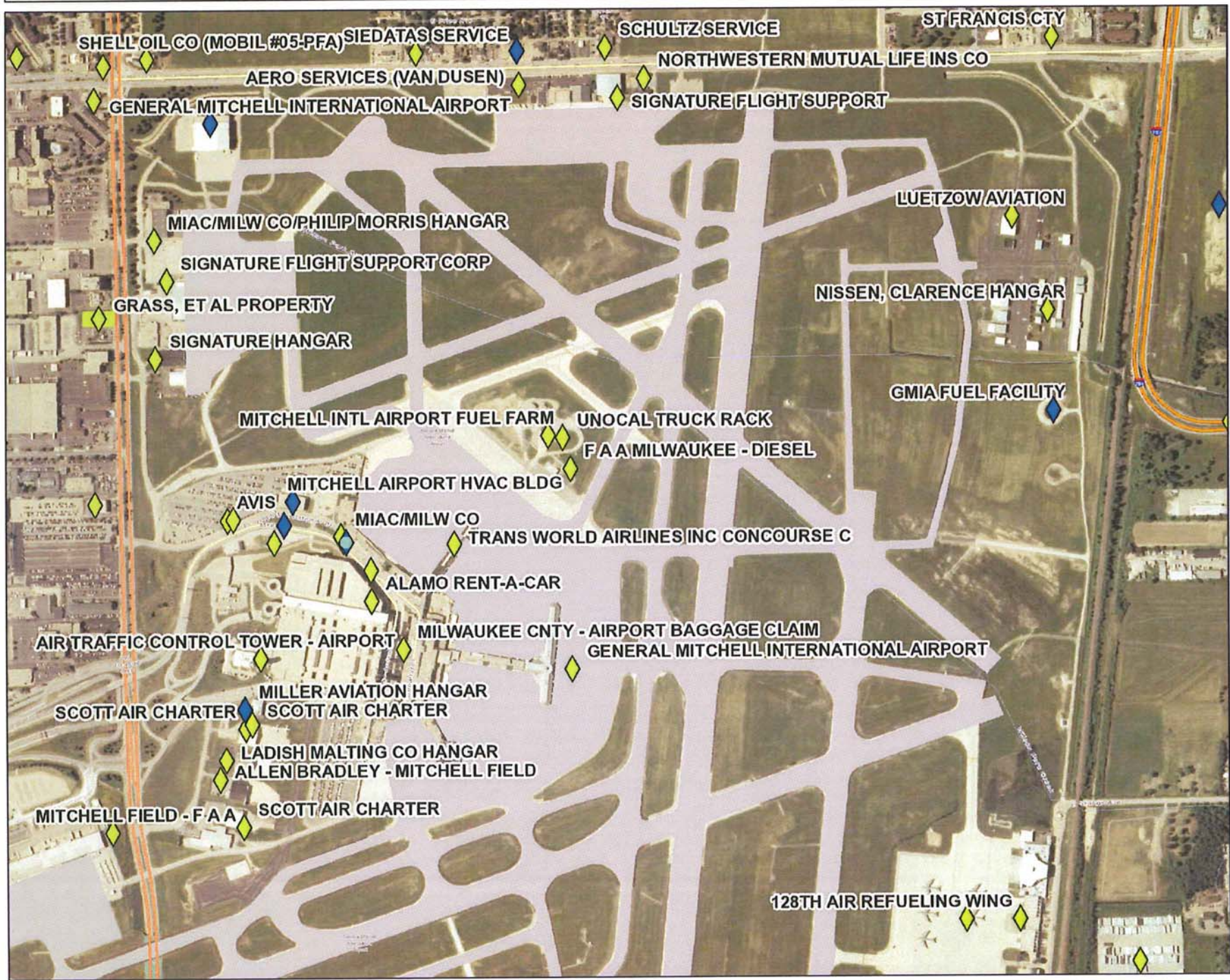
P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.1.b Site Map.dwg User:michele_mcgavock Apr 30, 2014 - 3:37pm



P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.1.c RR Site Map.dwg User:michele_mcgrook Apr 30, 2014 - 4:31pm



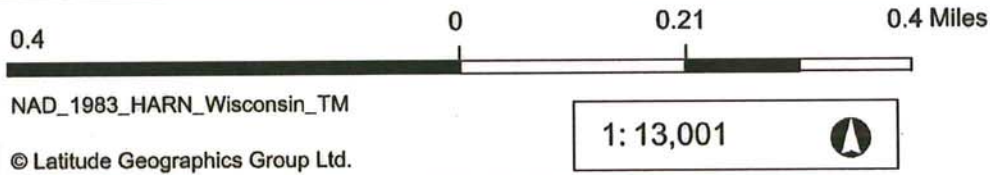
Figure B.1.c RR Site Map



Legend

- Open Site (ongoing cleanup)
- Open Site Boundary
- Closed Site (completed cleanup)
- Closed Site Boundary
- Airport
- 2010 Air Photos (WROC)
- Cities
- Villages

Notes



DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/org/legal/>

Note: Not all sites are mapped.

Apr. 24, 2014
JOB NO:
49233474
DRAWN BY: RF
APPD BY: KDM
SCALE:
AS SHOWN

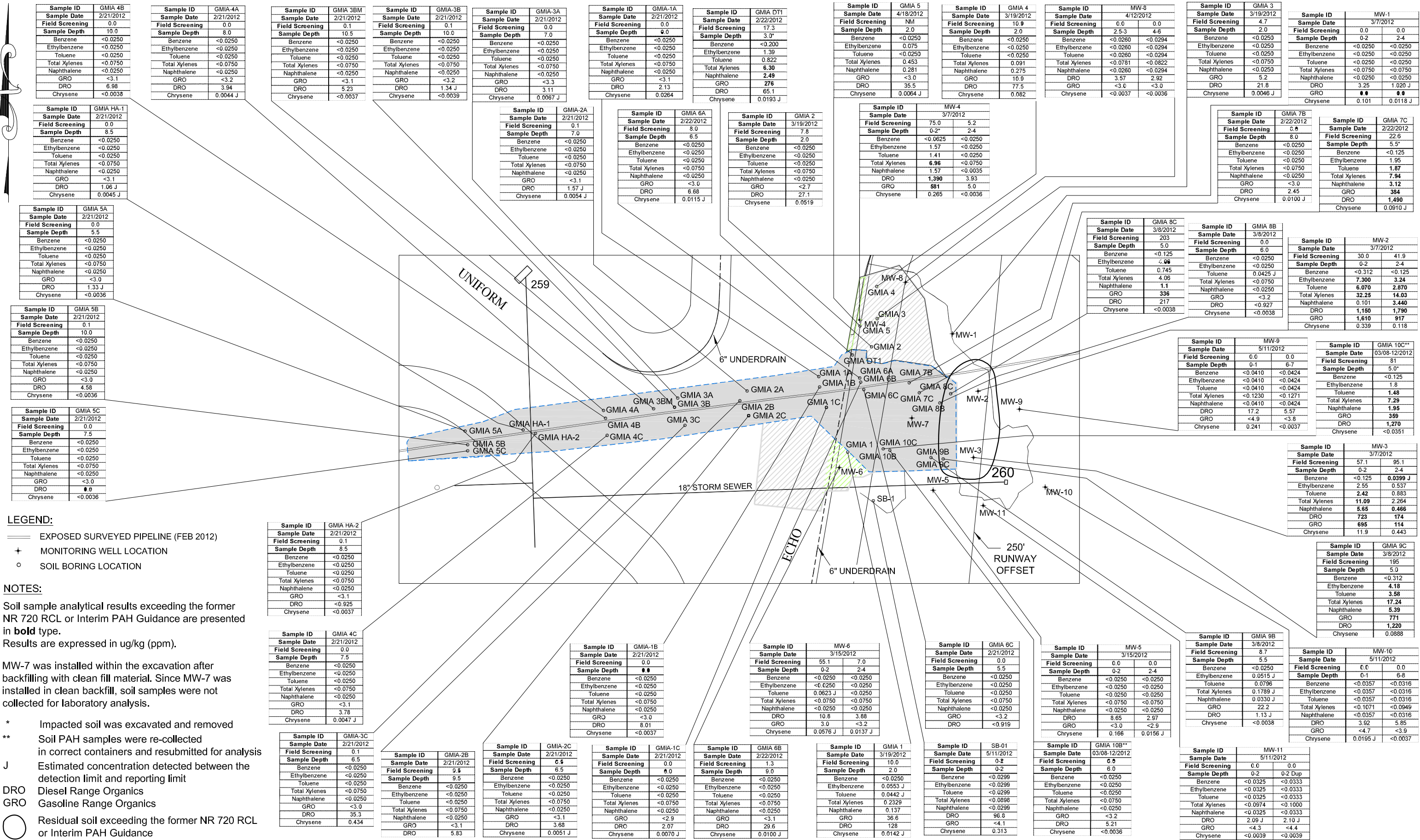
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MILWAUKEE, WISCONSIN 53202
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COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE B.1.c
RR SITE MAP



P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.2.c Pre-Post Remaining Soil Contamination.dwg User:michele_mcgavock May 14, 2014 - 9:47am

LEGEND:

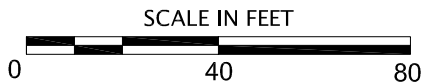
- EXPOSED SURVEYED PIPELINE (FEB 2012)
- MONITORING WELL LOCATION
- SOIL BORING LOCATION

NOTES:

Soil sample analytical results exceeding the former NR 720 RCL or Interim PAH Guidance are presented in **bold** type. Results are expressed in ug/kg (ppm).

MW-7 was installed within the excavation after backfilling with clean fill material. Since MW-7 was installed in clean backfill, soil samples were not collected for laboratory analysis.

- * Impacted soil was excavated and removed
- J Estimated concentration detected between the detection limit and reporting limit
- DRO Diesel Range Organics
- GRO Gasoline Range Organics
- Residual soil exceeding the former NR 720 RCL or Interim PAH Guidance

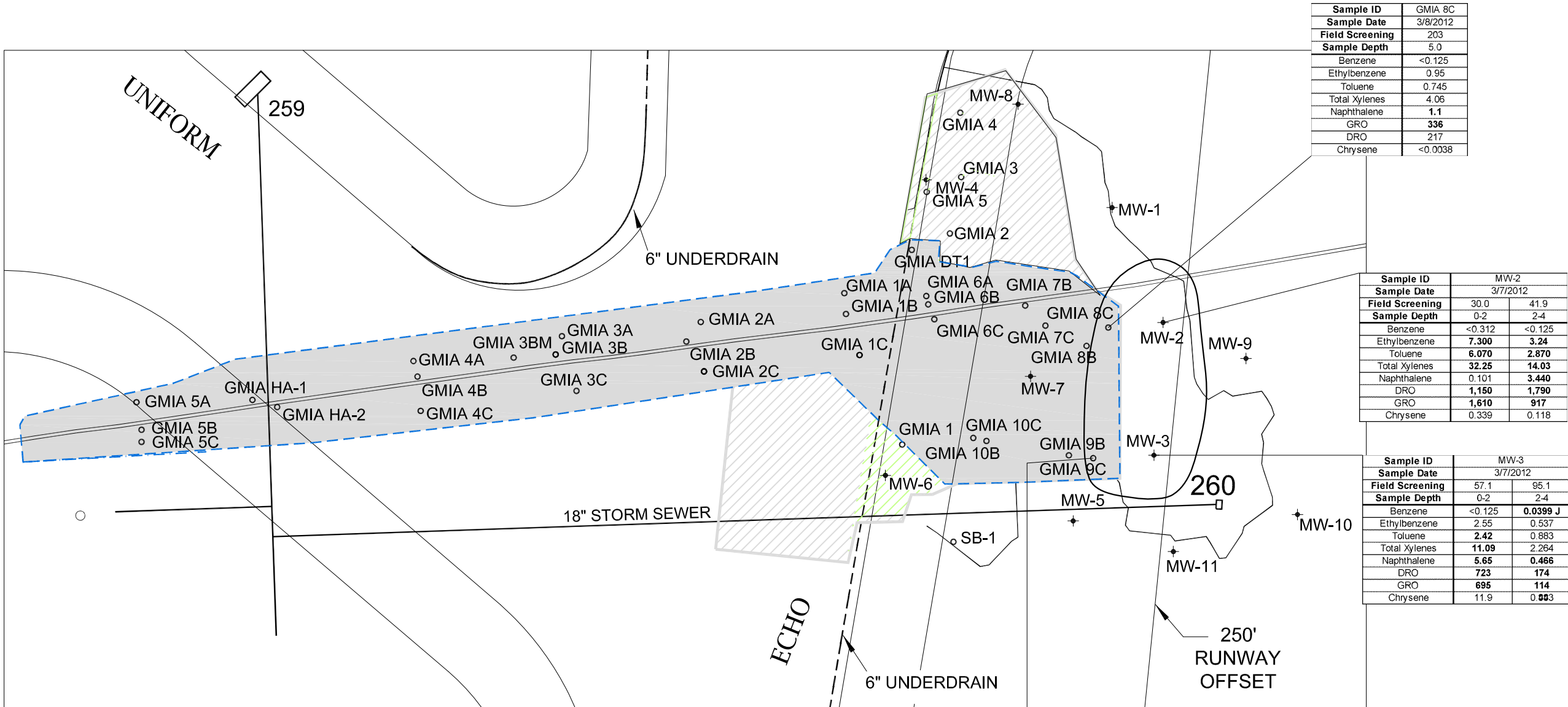


| | |
|---------------|----------|
| Apr. 29, 2014 | |
| JOB NO.: | 49233474 |
| DRAWN BY: | RF |
| APP'D BY: | KDM |
| SCALE: | AS SHOWN |

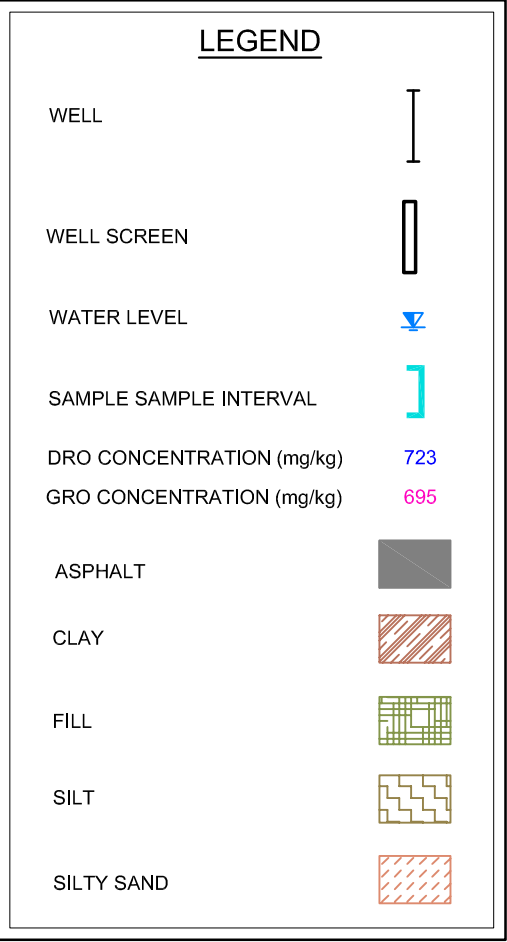
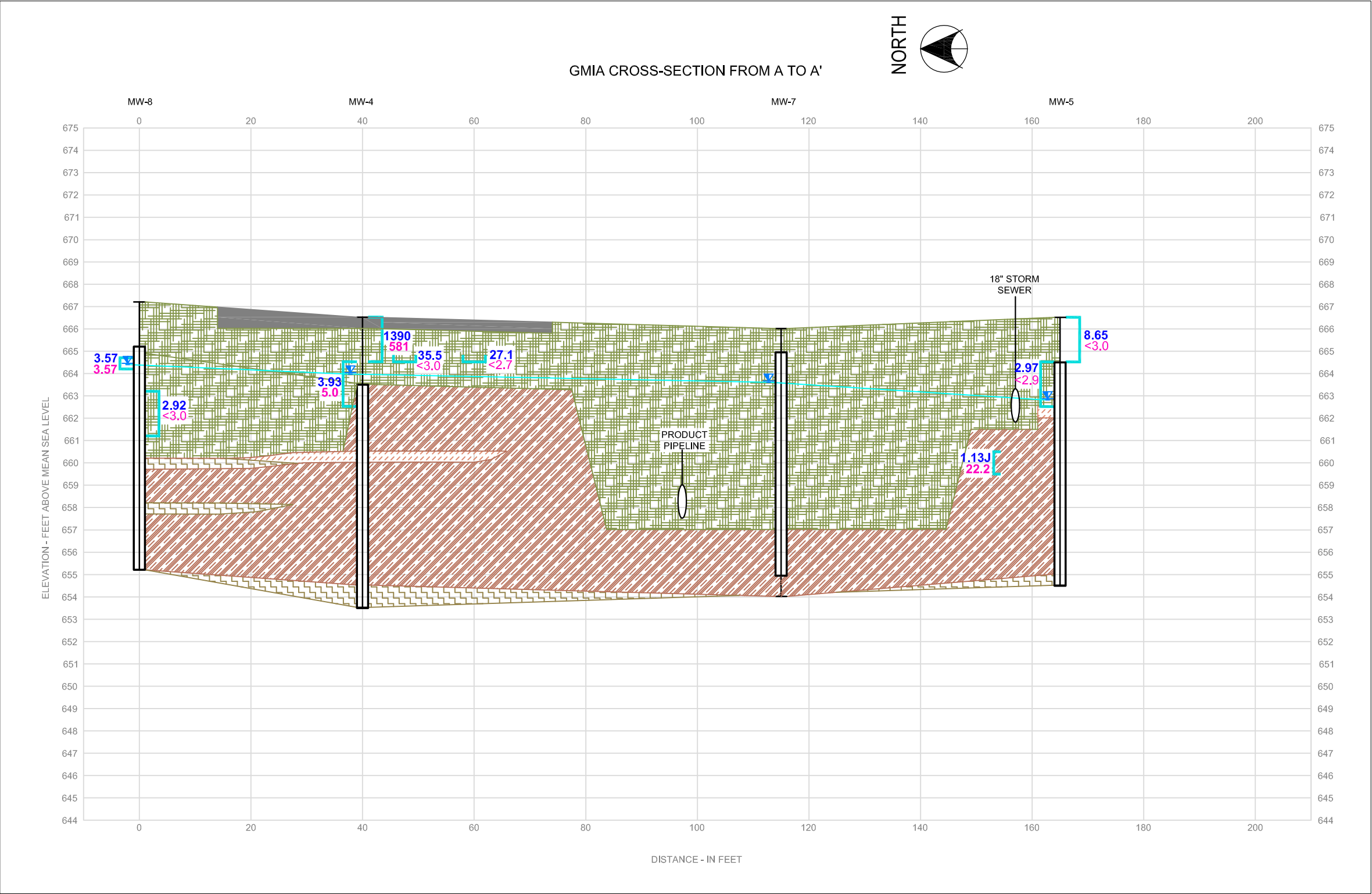


GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE B.2.c
PRE/POST REMAINING
SOIL CONTAMINATION



P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.3.a.1 Cross Section A to A'.dwg User:michele_mcgavock May 20, 2014 1:56pm



BOLD = EXCEEDS RCL VALUE OF 250 mg/kg

SCALE: VERTICAL : 1" = 20'
HORIZONTAL: 1" = 5'



| | |
|-------------------|---------------|
| April 24, 2014 | |
| JOB NO.: 49233474 | |
| DRAWN BY: MMM | APP'D BY: KDM |
| SCALE: AS SHOWN | |

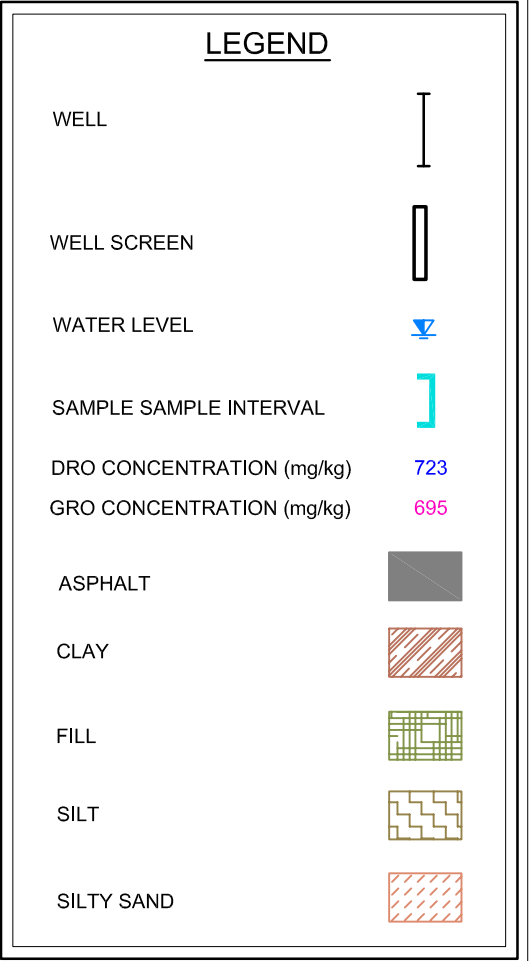
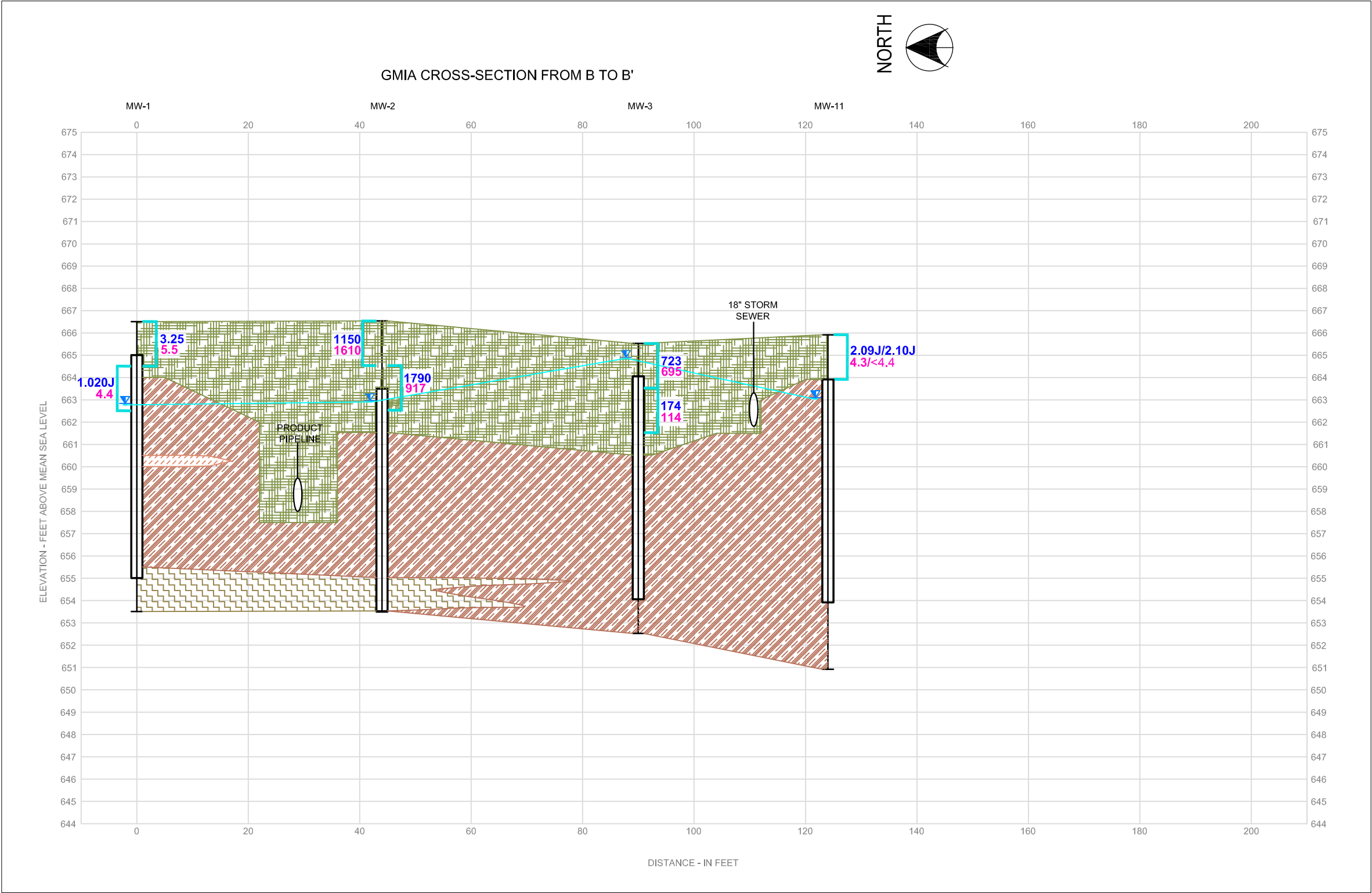
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5300 South Howell Avenue
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**FIGURE B.3.a.1
CROSS SECTIONS
A TO A'**

P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.3.a.2 Cross Section B to B'.dwg User:michele_mcgavock May 20, 2014 1:55pm



BOLD = EXCEEDS RCL VALUE OF 250 mg/kg

SCALE: VERTICAL : 1" = 20'
HORIZONTAL: 1" = 5'



| | |
|-------------------|---------------|
| April 24, 2014 | |
| JOB NO.: 49233474 | |
| DRAWN BY: MMM | APP'D BY: KDM |
| SCALE: AS SHOWN | |

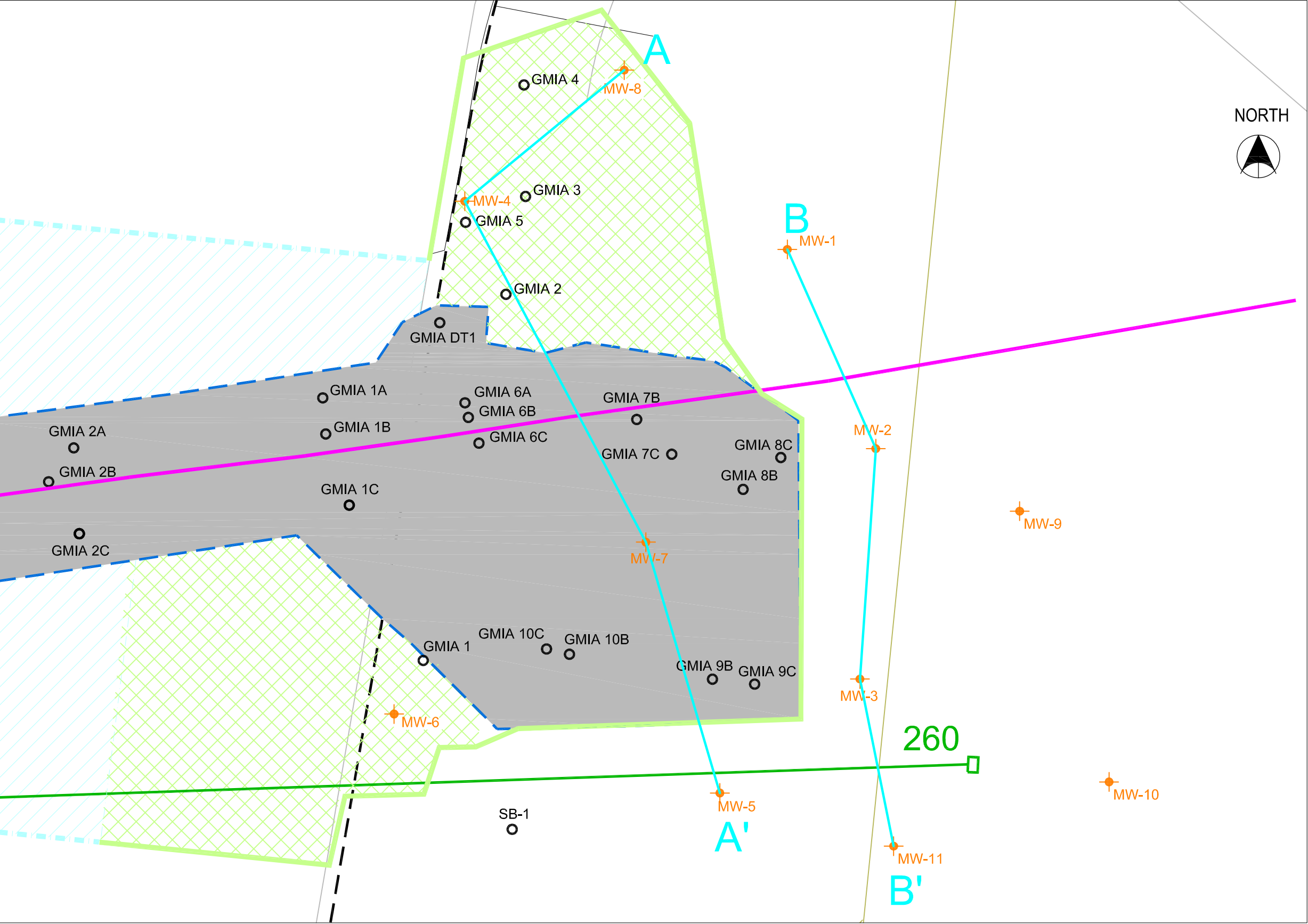
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GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

**FIGURE B.3.a.2
CROSS SECTIONS
B TO B'**

P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.3.a.3 Cross Section Overview Plan - no aerial.dwg User:michele_mcgovack Apr 30, 2014 - 3:42pm



LEGEND

- A - A' CROSS SECTION LOCATION
- DAYLIT SURVEYED PIPELINE (FEB 2012)
- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- BOUNDARY AND REMEDIAL EXCAVATION
- SURFACE SOIL REMOVAL
- PAVEMENT REMOVAL



| | |
|----------------|-----------|
| April 24, 2014 | |
| JOB NO.: | 49233474 |
| DRAWN BY: | APP'D BY: |
| MMM | KDM |
| SCALE: | |
| AS SHOWN | |

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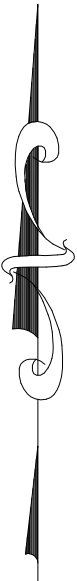
PREPARED FOR:



**SHELL
PIPELINE
COMPANY LP**

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

**FIGURE B.3.a.3
CROSS SECTIONS
OVERVIEW PLAN**



| MW-4 | | | | |
|----------------------|------------|----------------|----------|--------------|
| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | 2.2 | 1.5 | 1.5 | 0.91 J |
| Toluene | 0.83 J | <0.67 | 0.76 J | <0.44 |
| Total Xylenes | 6.8 | <2.63 | 5.7 | 3.0 J |
| 1,2,4-TMB | 11.5 | 6.8 | 6.8 | 10.9 |
| 1,3,5-TMB | 4.2 | 2.8 | 2.8 J | 3.0 J |
| Naphthalene | 1.7 J | 1.4 J | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0045 | 0.020 J | <0.0056 | <0.0054 |
| Benzo(b)fluoranthene | <0.0048 | <i>0.042 J</i> | <0.0077 | <0.0074 |
| Chrysene | 0.0067 J | <i>0.024 J</i> | <0.0070 | <0.0068 |
| DRO | 240 | 98 | 130 | 64 |
| GRO | 95.7 | 70.4 | 37.9 J | 55.6 |

| MW-7 | | | | | | | |
|----------------------|-----------|-----------|-----------|----------|---------|---------|---------|
| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 | | | |
| Benzene | <0.41 | <0.41 | <0.41 | <0.50 | <0.50 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.54 | <0.50 | <0.50 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.97 | <0.97 | <0.44 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <2.63 | <2.63 | <1.32 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.97 | <0.97 | <0.57 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <0.83 | <0.83 | <2.5 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <0.89 | <0.89 | <2.5 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0044 | <0.0055 | <0.0054 | <0.0055 | <0.0059 | <0.0059 |
| Benzo(b)fluoranthene | <0.0044 | <0.0044 | <0.0075 | <0.0074 | <0.0075 | <0.0075 | <0.0080 |
| Chrysene | <0.0048 | <0.0048 | <0.0069 | <0.0068 | <0.0069 | <0.0069 | <0.0073 |
| DRO | 90 | 71 | 92 | 90 | 180 | 85 | 64 |
| GRO | <32.4 | <32.4 | <32.4 | <32.4 | <32.4 | <34.9 | <34.9 |

| MW-6 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.97 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.89 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0044 | <0.0054 | <0.0057 | <0.0053 |
| Benzo(b)fluoranthene | <0.0046 | <0.0074 | <0.0077 | <0.0072 |
| Chrysene | <0.0047 | <0.0068 | <0.0071 | <0.0066 |
| DRO | 130 | 140 | 340 | 130 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-8 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.59 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.41 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.57 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0047 | <0.0057 | <0.0056 | <0.0050 |
| Benzo(b)fluoranthene | <0.0050 | <0.0077 | <0.0077 | <0.0069 |
| Chrysene | <0.0051 | <0.0071 | <0.0070 | <0.0063 |
| DRO | 180 | 84 | 49 | 44 J |
| GRO | <32.4 | 35.3 J | <32.4 | <34.9 |

| MW-1 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0048 | <0.0058 | <0.0055 | <0.0054 |
| Benzo(b)fluoranthene | <0.0051 | <0.0079 | <0.0079 | <0.0074 |
| Chrysene | <0.0052 | <0.0079 | <0.0069 | 0.11 J |
| DRO | 12 J | <11 | 57 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-2 | | | | |
|----------------------|-------------|------------|-----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | 18.1 | <1.8 | <1.0 | 3.3 |
| Ethylbenzene | 203 | 68.1 | 31.7 | 82.0 |
| Toluene | <0.67 | <2.7 | <0.88 | <0.88 |
| Total Xylenes | 455.8 | 218.9 | 105.4 | 93.4 |
| 1,2,4-TMB | 604 | 431 | 188 | 256 |
| 1,3,5-TMB | 154 | 136 | 71 | 79.2 |
| Naphthalene | 92.4 | 59.0 | 29.9 | 68.5 |
| Benzo(a)pyrene | <0.54 | <0.56 | <0.22 | <0.55 |
| Benzo(b)fluoranthene | <0.59 | <0.77 | <0.30 | <0.75 |
| Chrysene | <0.59 | <0.70 | <0.28 | <0.65 |
| DRO | 2,100 | 2,700 | 2,300 | 3,900 |
| GRO | 3,720 | 2,170 | 1,960 | 1,550 |

| MW-9 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | 0.85 J | <0.57 |
| 1,3,5-TMB | <0.83 | <0.89 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | 0.0049 J | <0.0056 | <0.0056 | <0.0054 |
| Benzo(b)fluoranthene | 0.0061 J | <0.0076 | <0.0076 | <0.0074 |
| Chrysene | 0.0069 J | <0.0070 | <0.0070 | <0.0068 |
| DRO | 27 J | 70 | 120 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-3 | | | | |
|----------------------|---------------|-------------|----------------|----------------|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <i>0.95 J</i> | <0.41 | 1.6 | 1.6 |
| Ethylbenzene | 3.8 | 6.5 | 4.9 | 4.7 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | 2.3 | 13.6 | 12.9 |
| 1,2,4-TMB | 9.6 | 41.5 | 19.5 | 17.3 |
| 1,3,5-TMB | 4.6 | 15.6 | 6.4 | 6.1 |
| Naphthalene | 4.1 J | 8.5 | 4.2 J | 4.2 J |
| Benzo(a)pyrene | 0.22 | 0.89 | <i>0.062 J</i> | <i>0.059 J</i> |
| Benzo(b)fluoranthene | 0.21 | 1.1 | <i>0.064 J</i> | <i>0.059 J</i> |
| Chrysene | 0.26 | 0.89 | <i>0.10</i> | <i>0.088 J</i> |
| DRO | 3,500 | 420 | 690 | 650 |
| GRO | 192 | 317 | 150 | 141 |

| MW-10 | | | | |
|----------------------|-----------|-----------|----------|----------|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 |
| Toluene | <0.97 | <0.97 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0045 | <0.0054 | <0.0057 | <0.0054 |
| Benzo(b)fluoranthene | <0.0049 | <0.0074 | <0.0078 | <0.0074 |
| Chrysene | <0.0049 | <0.0068 | <0.0072 | <0.0068 |
| DRO | 27 J | <11 | 75 | <20 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-5 | | | | |
|----------------------|-----------|-----------|-----------|----------|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.59 | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 |
| Benzo(a)pyrene | <0.0048 | <0.0055 | <0.0055 | <0.0058 |
| Benzo(b)fluoranthene | <0.0047 | <0.0075 | <0.0075 | <0.0073 |
| Chrysene | <0.0048 | <0.0069 | <0.0069 | <0.0073 |
| DRO | <10 | <10 | 24 J | 80 |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 |

| MW-11 | | | | | |
|----------------------|----------|-----------|--------------------------|-----------|----------|
| Date | 8/1/2012 | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | Not Sampled- Well Frozen | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.59 | | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.57 | | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.89 | | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | | <2.5 | <2.5 |
| Benzo(a)pyrene | 0.0036 J | <0.0048 | | <0.0056 | <0.0055 |
| Benzo(b)fluoranthene | 0.0038 J | <0.0047 | | <0.0076 | <0.0075 |
| Chrysene | 0.0056 J | <0.0048 | | <0.0070 | <0.0069 |
| DRO | 36 J | 12 J | | 65 | 37 J |
| GRO | <32.4 | <32.4 | | <32.4 | <34.9 |

Notes:

Detections presented in **bold** type indicate an exceedance of the NR 140 groundwater enforcement standard.

Detections presented in *italic* type indicate an exceedance of the NR 140 preventive action limit.

Results are expressed in µg/L (ppb).

J Estimated concentration detected between the detection limit and reporting limit.

DRO Diesel Range Organics

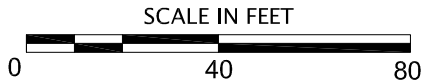
GRO Gasoline Range Organics

1,2,4-TMB 1,2,4-Trimethylbenzene

1,3,5-TMB 1,3,5-Trimethylbenzene



Estimated Extent of Intermittent Exceedence of the NR140 ES.



Apr. 24, 2014
JOB NO.: 49233474
DRAWN BY: RF
APP'D BY: KDM
SCALE: AS SHOWN

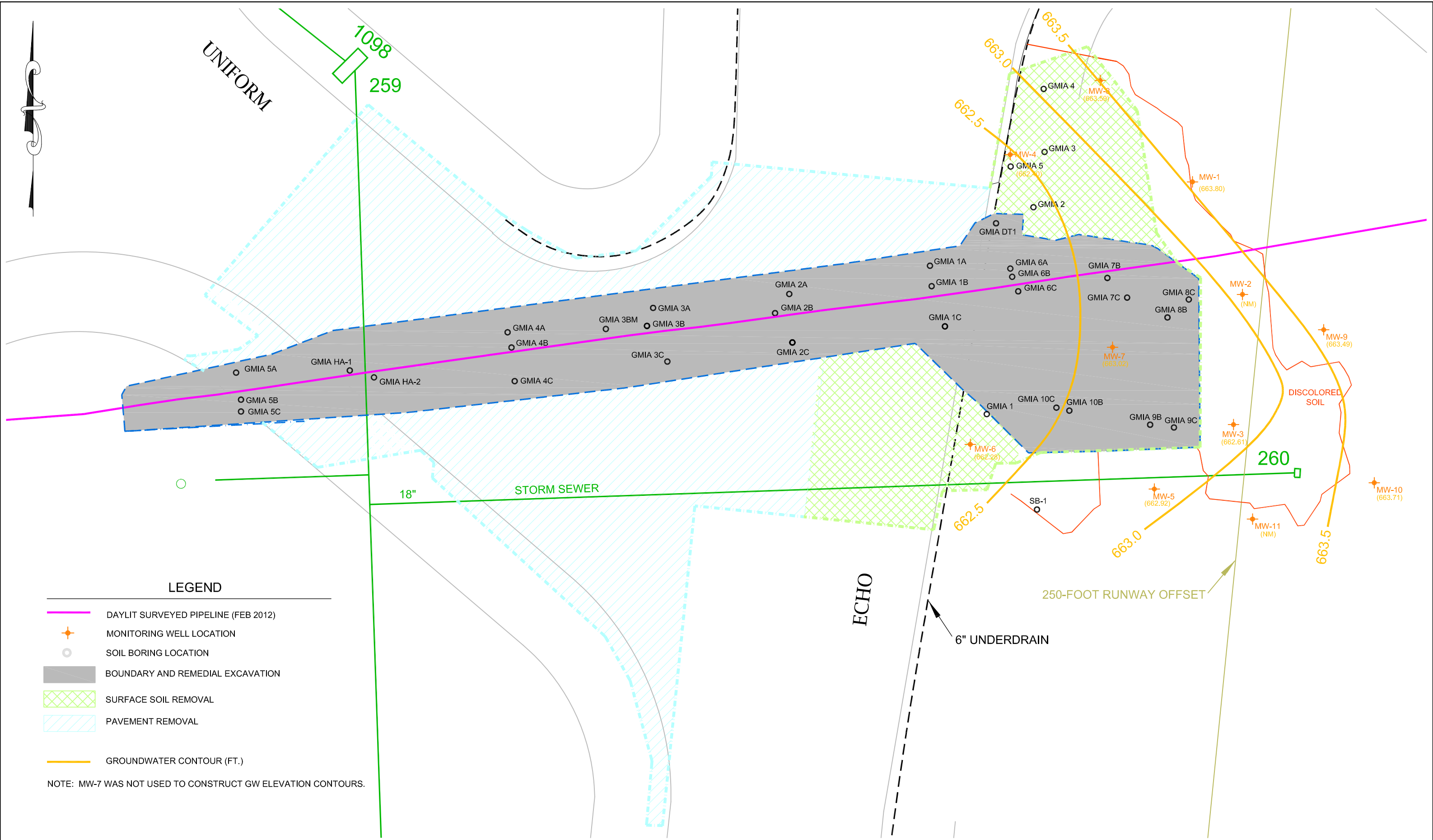
URS
342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101



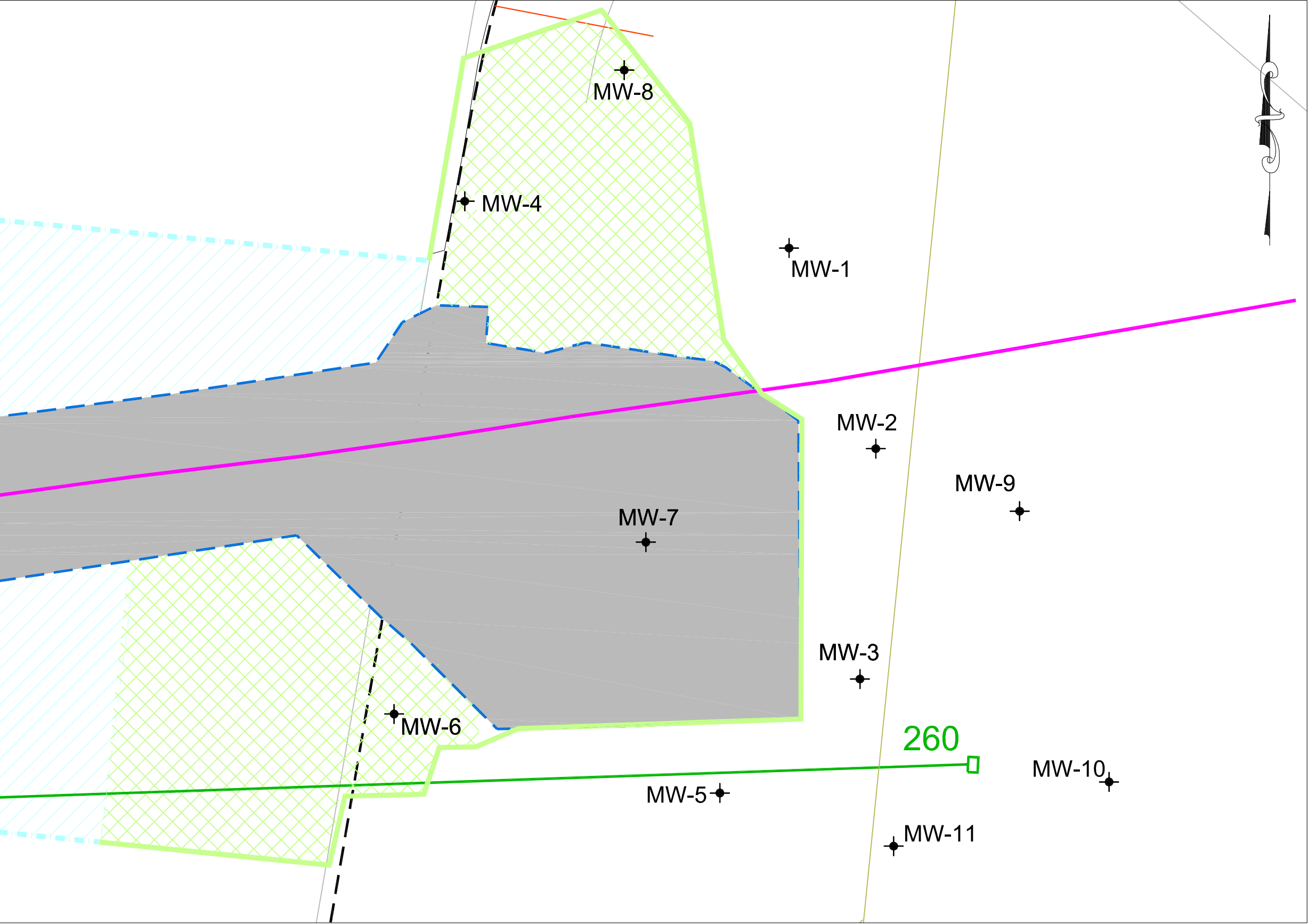
SHELL
PIPELINE
COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE B.3.b
GROUNDWATER ISOCONCENTRATIONS



P:\GED\49233474 Shell Mitchell Airport\AutoCad\DELIVERABLES\2014 Closure Report\Figure B.3.d Monitoring Wells -- no aerial.dwg User:michele_mcgavock Apr 30, 2014 -- 3:50pm



LEGEND

DAYLIT SURVEYED PIPELINE (FEB 2012)

MONITORING WELL LOCATION

BOUNDARY AND REMEDIAL EXCAVATION

SURFACE SOIL REMOVAL

PAVEMENT REMOVAL



| | |
|-------------------|---------------|
| April 24, 2014 | |
| JOB NO.: 49233474 | |
| DRAWN BY: MMM | APP'D BY: KDM |
| SCALE: AS SHOWN | |

URS

342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101

PREPARED FOR:

SHELL
PIPELINE
COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE B.3.d
MONITORING WELLS

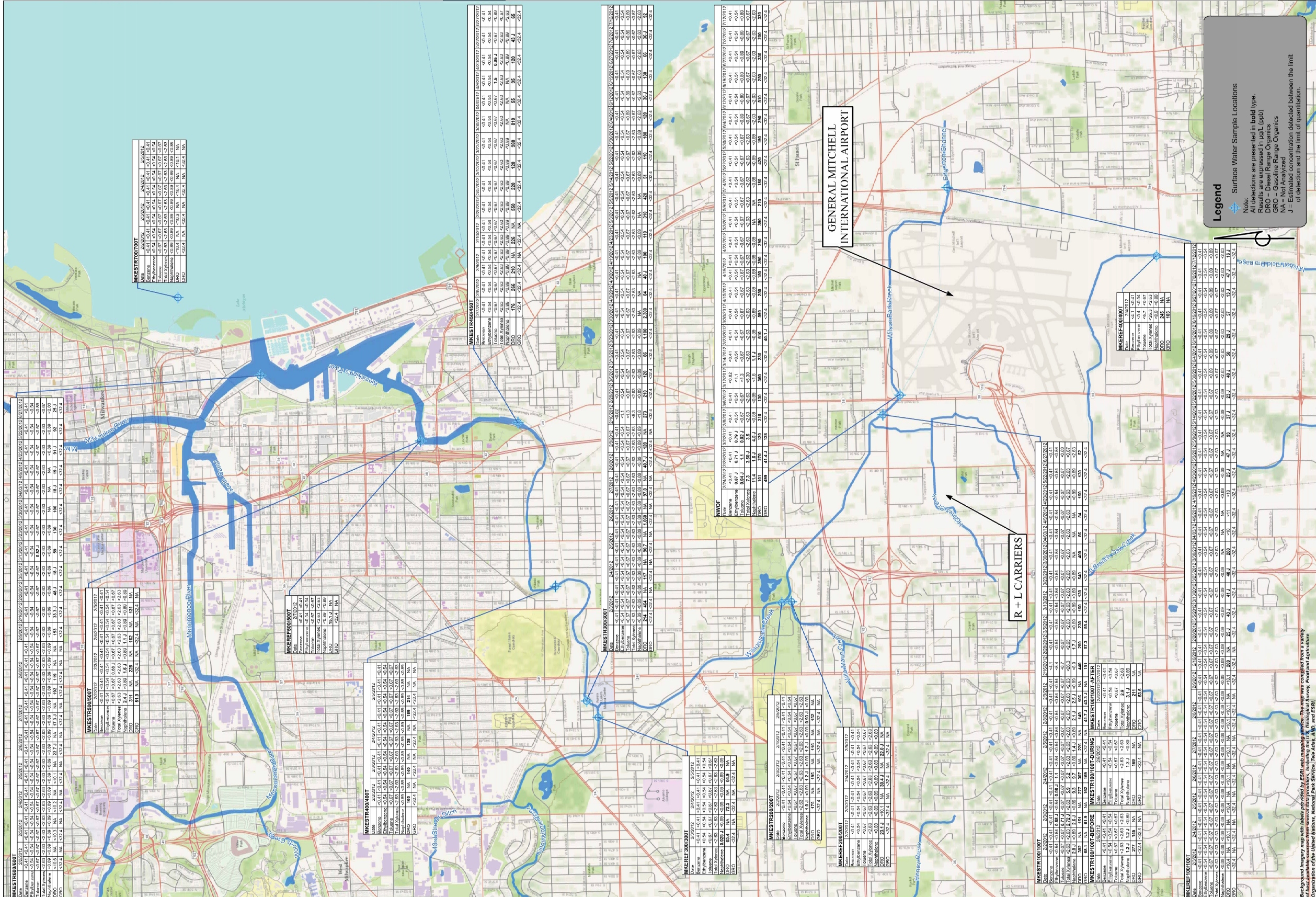


FIGURE B.4.b.1
SURFACE WATER
SAMPLE RESULTS

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin



URS
345 N. WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 654-1100 FAX (414) 514-1011

April 24, 2014
JOB NO. 49223474
DRAWN BY: KDM
RF
SCALE: AS SHOWN

0 5,200 10,400
SCALE IN FEET



| Date | MKE-KKR-SD01 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | 0.09 J |
| Ethylbenzene | 0.01 J |
| Toluene | 0.04 J |
| Xylenes | 0.093 J |
| Naphthalene | 0.02 |
| GRO | <3.6 |
| DRO | 9.41 |
| Benzo(a) pyrene | 1.26 J |
| Benzo(b) fluoranthene | 1.29 J |
| Chrysene | 1.28 J |
| Fluoranthene | 2.49 J |
| Pyrene | 1.96 J |
| Total PAH (16) | 14.4 |

| Date | MKE-KKR-SD02 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | <0.080 J |
| Ethylbenzene | 0.010 J |
| Toluene | 0.094 J |
| Xylenes | 0.116 J |
| Naphthalene | 0.065 |
| GRO | <3.3 |
| DRO | 128 |
| Benzo(a) pyrene | 1.11 |
| Benzo(b) fluoranthene | 1.31 |
| Chrysene | 1.19 |
| Fluoranthene | 2.19 J |
| Pyrene | 1.71 J |
| Total PAH (16) | 13.3 |

| Date | MKE-KKR-SD03 |
|-----------------------|--------------|
| Field Screening | 4/10/2013 |
| Benzene | 0.074 B |
| Ethylbenzene | 0.009 |
| Toluene | 0.046 B |
| Xylenes | 0.058 |
| Naphthalene | 0.090 |
| GRO | <3.9 |
| DRO | 117 |
| Benzo(a) pyrene | 4.660 |
| Benzo(b) fluoranthene | 4.710 |
| Chrysene | 4.780 |
| Fluoranthene | 10.500 |
| Pyrene | 8.250 |
| Total PAH (16) | 57.3 |

| Date | MKE-KKR-SD04 | MKE-KKR-SD04 Dup |
|-----------------------|--------------|------------------|
| Field Screening | 4/9/2013 | 16.7 |
| Benzene | 0.359 J | 0.215 J |
| Ethylbenzene | 0.077 J | 0.046 J |
| Toluene | 1.25 J | 0.966 J |
| Xylenes | 1.24 J | 1.093 J |
| Naphthalene | 0.297 | 0.220 |
| GRO | 12.8 | 15.7 |
| DRO | 66 | 132 |
| Benzo(a) pyrene | 11.4 J | 8.51 J |
| Benzo(b) fluoranthene | 12.4 J | 9.49 J |
| Chrysene | 12.7 J | 9.49 J |
| Fluoranthene | 24.4 J | 18.0 J |
| Pyrene | 19.2 J | 13.8 J |
| Total PAH (16) | 142 | 105 |

| Date | MKE-KKR-SD05 |
|-----------------------|--------------|
| Field Screening | 4/9/2013 |
| Benzene | 0.495 J |
| Ethylbenzene | 0.065 J |
| Toluene | 1.51 J |
| Xylenes | 1.131 J |
| Naphthalene | 0.423 |
| GRO | <5.8 |
| DRO | 22 |
| Benzo(a) pyrene | 6.07 J |
| Benzo(b) fluoranthene | 6.83 J |
| Chrysene | 7.15 J |
| Fluoranthene | 13.4 |
| Pyrene | 10.6 |
| Total PAH (16) | 78.2 |

| Date | MKE-UNC-SD01 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | <0.088 J |
| Ethylbenzene | 0.006 J |
| Toluene | 0.086 B,J |
| Xylenes | 0.269 J |
| Naphthalene | 0.026 |
| GRO | <3.6 |
| DRO | 16.6 |
| Benzo(a) pyrene | 1.41 J |
| Benzo(b) fluoranthene | 1.5 J |
| Chrysene | 1.46 J |
| Fluoranthene | 2.76 J |
| Pyrene | 2.16 J |
| Total PAH (16) | 16.3 |

| Date | MKE-WPC-SD05 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | 0.122 J |
| Ethylbenzene | 0.013 J |
| Toluene | 0.052 J |
| Xylenes | 0.095 J |
| Naphthalene | 0.016 |
| GRO | <3.2 |
| DRO | 241 |
| Benzo(a) pyrene | 1.62 J |
| Benzo(b) fluoranthene | 1.6 J |
| Chrysene | 1.6 J |
| Fluoranthene | 3.25 J |
| Pyrene | 2.55 J |
| Total PAH (16) | 18.4 |

| Date | MKE-VMC-SD01 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | <0.078 J |
| Ethylbenzene | <0.009 J |
| Toluene | 0.041 J |
| Xylenes | 0.036 J |
| Naphthalene | 0.063 |
| GRO | <2.9 |
| DRO | 304 |
| Benzo(a) pyrene | 8.81 J |
| Benzo(b) fluoranthene | 9.35 J |
| Chrysene | 9.14 J |
| Fluoranthene | 18.8 J |
| Pyrene | 15.4 J |
| Total PAH (16) | 104 |

| Date | MKE-WPC-SD04 | MKE-WPC-SD04 Dup |
|-----------------------|--------------|------------------|
| Field Screening | 4/8/2013 | 0.4 |
| Benzene | <0.088 J | <0.042 J |
| Ethylbenzene | 0.007 J | 0.005 J |
| Toluene | <0.035 J | <0.032 J |
| Xylenes | 0.068 J | 0.025 J |
| Naphthalene | 0.122 | 0.026 |
| GRO | <3.1 | <3.0 |
| DRO | 251 | 159 |
| Benzo(a) pyrene | 12.8 D,J | 2.95 |
| Benzo(b) fluoranthene | 10.9 J | 2.96 |
| Chrysene | 8.04 | 3.07 |
| Fluoranthene | 13.1 D,J | 6.53 J |
| Pyrene | 15 D,J | 5.09 J |
| Total PAH (16) | 104 | 36.1 |

| Date | MKE-WPC-SD03 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | <0.079 B,J |
| Ethylbenzene | 0.012 J |
| Toluene | 0.103 J |
| Xylenes | 0.200 J |
| Naphthalene | 0.358 |
| GRO | <3.6 |
| DRO | 158 |
| Benzo(a) pyrene | 12.3 |
| Benzo(b) fluoranthene | 13.4 |
| Chrysene | 12.2 |
| Fluoranthene | 23.7 J |
| Pyrene | 18.6 J |
| Total PAH (16) | 147 |

| Date | MKE-HOC-SD01 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | 0.112 J |
| Ethylbenzene | 0.009 J |
| Toluene | 0.054 J |
| Xylenes | 0.049 J |
| Naphthalene | 0.070 |
| GRO | <3.7 |
| DRO | 211 |
| Benzo(a) pyrene | 12.0 J |
| Benzo(b) fluoranthene | 12.7 J |
| Chrysene | 12.0 J |
| Fluoranthene | 23.9 J |
| Pyrene | 18.4 J |
| Total PAH (16) | 137 |

| Date | MKE-WPC-SD02 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | 0.518 J |
| Ethylbenzene | 0.089 J |
| Toluene | 0.467 J |
| Xylenes | 1.00 J |
| Naphthalene | 2.36 |
| GRO | <5.9 |
| DRO | 45 |
| Benzo(a) pyrene | 9.16 J |
| Benzo(b) fluoranthene | 10.5 J |
| Chrysene | 9.76 J |
| Fluoranthene | 18.8 J |
| Pyrene | 14.4 J |
| Total PAH (16) | 116 |

| Date | MKE-WPC-SD01 |
|-----------------------|--------------|
| Field Screening | 4/8/2013 |
| Benzene | 0.276 J |
| Ethylbenzene | 0.078 J |
| Toluene | 0.174 J |
| Xylenes | 0.241 J |
| Naphthalene | 0.054 |
| GRO | <3.5 |
| DRO | 22 |
| Benzo(a) pyrene | 1.99 J |
| Benzo(b) fluoranthene | 2.19 J |
| Chrysene | 2.0 J |
| Fluoranthene | 3.76 J |
| Pyrene | 2.95 J |
| Total PAH (16) | 22.8 |

LEGEND

- MKE-WPC-SD02 ● Downstream sampling location
- MKE-HOC-SD01 ● Upstream sampling location

Sample Numbering System

MKE-Site-MatrixXX

MKE - designates sample is from the Milwaukee site

Site - indicates the waterway which is:

HOC Holmes Creek

KKR Kinnickinnic River

UNC Unnamed Creek

VMC Villa Mann Creek

WPC Wilson Park Creek

Matrix - indicates the matrix which is "SD" for sediment

XX - indicates the sample number

Notes:

Concentrations are expressed in milligrams per kilogram, dry weight equivalent to parts per million.

These laboratory results were evaluated using a Level II data validation protocol. See Attachment 2 for the Data Assessment Report.

Total PAH (16) is the sum of the detected PAH Priority Pollutants.

Triphenylene is known to coelute with chrysene. The reported concentration of chrysene includes triphenylene.

GRO Gasoline Range Organics

DRO Diesel Range Organics

PAH Polynuclear Aromatic Hydrocarbons

IU Instrument Units

mg/kg milligrams per kilogram

B Analyte was detected in the method blank

D Analyte was reported from a diluted extract

Dup Duplicate sample collected in the field

J Estimated concentration detected between the Reporting Limit and the Estimated Detection Level

NS No standard



Apr. 24, 2014

JOB NO.: 49233474

DRAWN BY: RF APP'D BY: KDM

SCALE: AS SHOWN

URS

342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101



**SHELL
PIPELINE
COMPANY LP**

GMIA Pipeline Fuel Release

5300 South Howell Avenue
Milwaukee, Wisconsin

**FIGURE B.4.b.2
SEDIMENT SAMPLE RESULTS**

ATTACHMENT C

Documentation of Remedial Action— Not Applicable

A Remedial Action Plan was not submitted; the excavation was conducted as part of pipeline repairs

ATTACHMENT D

Maintenance Plans and Photographs— Not Applicable

No Maintenance Plan is proposed

ATTACHMENT E

Monitoring Well Information— Not Applicable

All wells will be located and abandoned upon receiving conditional case closure

ATTACHMENT F

Notifications to Owners of Impacted Properties—Notice to Airport Director

PS Form 3800, August 2006



March 10, 2014

Mr. C. Barry Bateman
 Airport Director
 General Mitchell Administration
 5300 South Howell Avenue
 Milwaukee, WI 53207-6189

Shell Oil Products US
 20945 S. Wilmington Ave.
 Carson, California 90810
 Attn: John Robbins
 Phone: 815-468-8824
 Fax: 713-423-0544
 Email john.robbs@shell.com

Subject: Notification of Residual Contamination
 Shell Pipeline Company LLC
 MKE Spill Site
 5300 South Howell Avenue Milwaukee, Wisconsin

Dear Mr. Bateman,

This letter is in regards to the investigation of a release of jet fuel from a pipeline located near the intersection of taxiways Echo and Uniform at General Mitchell International Airport (GMIA) located at 5300 South Howell Avenue in Milwaukee, Wisconsin ("site" or "subject property"). This investigation has shown that contamination remains on this property. Shell Pipeline (Shell) has conducted a cleanup and will be requesting that the Wisconsin Department of Natural Resources (WDNR) grant case closure. Closure means the WDNR will not be requiring any further investigation or cleanup action to be taken.

As part of the cleanup, Shell proposes that the subject property be listed on Wisconsin's Geographic Information System (GIS) Registry of closed remediation sites for the residual groundwater impacts exceeding Wisconsin Administrative Code Chapter NR 140 Enforcement Standards (NR 140 ES) and for the residual soil impacts located along the buried pipeline within the 250-foot setback from the North-South Runway (19R-1L).

The WDNR will not review a closure request for at least 30 days after the date of this letter. As an affected property owner, you have a right to contact the WDNR to provide any technical information that you may have that indicates closure should not be granted for this site. If you would like to submit any information to the WDNR that is relevant to this closure request, you should mail that information to:

Scott J. Ferguson
 Southeast Region Office- WDNR
 2300 North Martin Luther King Drive
 Milwaukee, Wisconsin 53212
 (414) 263-8685

Please review the following legal description of your property and notify me within the next 30 days if the legal description is incorrect:

LANDS IN 1/4 SECS OF NW & SW 27, NE 32, NW & SW 34, ALL OF SEC 28 AND SEC 33 OF T6N R22E (MILWAUKEE COUNTY AIRPORT) THAT PART BETW E LAYTON AV-CITY LIMITS LI-58.50 AC M/L OF WIS STATE ARMORY BOARD LANDS IN SECS 33 & 34-N & W LI SW 1/4 SEC 34-E COLLEGE AV-SW1/4 SEC 33 (EXC ST R/W & S 528' OF E 660' & S 484' OF W 600' OF E 1320')-W LI SEC 33-NW1/4 SEC 33 (EXC THAT PART BEG SE COR SD SEC TH N 567'-TH SWLY 701.54'-TH S 330'-TH E 660' TO BEG & S 165' OF W 1330' AND ST R/W)-NE 1/4 SEC 32 (EXC CSM #2066 & E 23.50' OF S LI OF W 56.50' OF S 231' & AIRPORT SPUR FWY AND STS) & E LI S HOWELL AVE IN SW & NW SEC 28-6-22
 TAXKEY: 640-9999-118

Before a request for closure is submitted, WDNR must be informed who will be responsible for the continuing obligation on your property. Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement on the responsibility for properly disposing of jet fuel impacted soil that is excavated from along the pipeline, you will need to request additional time from Scott J. Ferguson at WDNR.

Under s. 292.12(5), Wis. Stats., occupants of this property are also responsible for complying with any continuing obligations. Please notify any current and future occupants that may be affected by a continuing obligation, by supplying them with a copy of this letter. The WDNR fact sheet, RR-819, *Continuing Obligations for Environmental Protection*, has been included with this letter, to help explain a property owner's responsibility for continuing obligations on their property. If the fact sheet is lost, you may obtain copies at <http://dnr.wi.gov/org/aw/rr/archives/pubs/RR819.pdf>.

Groundwater contamination at relatively low concentrations was detected intermittently in groundwater samples collected from monitoring wells installed near the pipeline release. Groundwater samples intermittently contain concentrations of benzene, trimethylbenzenes, benzo(a)pyrene, benzo(b)fluoranthene, and/or chrysene above the state groundwater enforcement standards found in chapter NR 140, Wisconsin Administrative Code. If you intend to construct a new well, or reconstruct an existing well, you'll need prior WDNR approval.

The environmental consultants who have investigated this contamination have determined the groundwater contaminant plume is stable or receding and will naturally degrade over time. Natural attenuation will eventually complete the cleanup at this site will meet the requirements for case closure that are found in chapter NR 726, Wisconsin Administrative Code, and I will be requesting that the WDNR accept natural attenuation as the final remedy for this site and grant case closure.

The following WDNR fact sheet (RR 671 – *What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater*) has been included with this letter, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <http://dnr.wi.gov/org/aw/rr/archives/pubs/RR671.pdf>.

Residual soil contamination remains near the intersection of taxiways Echo and Uniform, east of the offset for the North-South Runway. The remaining contaminants include low concentrations of Gasoline Range Organics (GRO), Diesel Range Organics (DRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and chrysene. Soil contamination has been excavated and removed to the extent practicable. A relatively small amount of impacted soil remains at areas that are inaccessible due to proximity to buried utilities and/or the North-South Runway. The small amount of residual soil impact will degrade naturally over time and is not anticipated to pose a threat to human health or the environment.

If soil in the specific location described above is excavated, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present, the property owner at the time of excavation will need to determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment, or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.

Summary

Once the Department makes a decision on the closure request, it will be documented in a letter. If the WDNR grants closure, you will receive a copy of the closure letter. If you need to, you may also obtain a copy of the closure letter by requesting a copy from me, by writing to the agency address given above, or by accessing the WDNR Geographic Information System (GIS) Registry (via RR Sites Map) on the internet at <http://www.dnr.wi.gov/org/aw/rr/gis/index.htm>. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan. The final closure letter, any required maintenance plan and a map of the properties affected will be included as part of the site file

attached on the GIS Registry.

If this case is closed, all properties within the site boundaries where groundwater contamination attains or exceeds the NR 140 ES and soil contamination attains or exceeds WAC Chapter NR 720 residual contaminant levels will be listed on the publicly accessible Bureau for Remediation and Redevelopment Tracking System on the Web (BOTW) to provide public notice of remaining contamination and of any continuing obligations. In addition, information will be displayed on the Remediation and Redevelopment Sites Map (RR Sites Map); a mapping application, under the GIS Registry theme. This GIS Registry is available to the general public on the WDNR's internet web site. WDNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09(4) (w), Wis. Adm. Code.

Should you or any subsequent property owner wish to construct or reconstruct a well on your property, special well construction standards may be necessary to protect the well from the remaining contamination. Any well driller who proposes to construct a well on your property in the future will first need to obtain approval from a regional water supply specialist in WDNR's Drinking Water and Groundwater Program. The well construction application, form 3300-254, is on the internet at <http://www.dnr.state.wi.us/org/water/dwg/3300254.pdf>, or may be accessed through the GIS Registry web address in the preceding paragraph.

If you need more information about my proposed cleanup completion and request for closure, you may contact me at (815) 468-8824 or at the letterhead address. If you need more information about cleanups and closure requirements, or to review the WDNR's file on my case, you may contact Scott J. Ferguson at the Southeast Region Headquarters of the WDNR at (414) 263-8685.

Sincerely,

Shell Oil Products US

John Robbins
Sr. Program Manager

Enclosures

c: Greg Failey, Milwaukee County- General Mitchell International Airport
Scott J. Ferguson, Wisconsin Department of Natural Resources
Kurt McClung, URS Corporation



| Sample ID | GMIA 1 |
|-----------------|-----------|
| Sample Date | 3/19/2012 |
| Field Screening | 10.0 |
| Sample Depth | 2.0 |
| Benzene | <0.0250 |
| Ethylbenzene | 0.0553 J |
| Toluene | 0.0442 J |
| Total Xylenes | 0.2329 |
| Naphthalene | 0.137 |
| GRO | 36.6 |
| DRO | 128 |
| Chrysene | 0.0142 J |

| Sample ID | MW-3 |
|-----------------|-----------------|
| Sample Date | 3/7/2012 |
| Field Screening | 57.1 95.1 |
| Sample Depth | 0-2 2-4 |
| Benzene | <0.125 0.0399 J |
| Ethylbenzene | 2.55 0.537 |
| Toluene | 2.42 0.883 |
| Total Xylenes | 11.09 2.264 |
| Naphthalene | 5.65 0.466 |
| GRO | 695 114 |
| Chrysene | 11.9 0.443 |

| Sample ID | MW-6 |
|-----------------|-------------------|
| Sample Date | 3/15/2012 |
| Field Screening | 55.1 7.0 |
| Sample Depth | 0-2 2-4 |
| Benzene | <0.0250 <0.0250 |
| Ethylbenzene | <0.0250 <0.0250 |
| Toluene | 0.0623 J <0.0250 |
| Total Xylenes | <0.0750 <0.0750 |
| Naphthalene | <0.0250 <0.0250 |
| DRO | 10.8 3.88 |
| GRO | 3.0 <3.2 |
| Chrysene | 0.0576 J 0.0137 J |

| Sample ID | GMIA 9B |
|-----------------|----------|
| Sample Date | 3/8/2012 |
| Field Screening | 8.7 |
| Sample Depth | 5.5 |
| Benzene | <0.0250 |
| Ethylbenzene | 0.0515 J |
| Toluene | 0.0796 |
| Total Xylenes | 0.1789 J |
| Naphthalene | 0.0330 J |
| GRO | 22.2 |
| DRO | 1.13 J |
| Chrysene | <0.0038 |

| Sample ID | GMIA 8B |
|-----------------|----------|
| Sample Date | 3/8/2012 |
| Field Screening | 0.0 |
| Sample Depth | 6.0 |
| Benzene | <0.0250 |
| Ethylbenzene | <0.0250 |
| Toluene | 0.0425 J |
| Total Xylenes | <0.0750 |
| Naphthalene | <0.0250 |
| GRO | <3.2 |
| DRO | <0.927 |
| Chrysene | <0.0038 |

| Sample ID | GMIA 5 |
|-----------------|-----------|
| Sample Date | 4/18/2012 |
| Field Screening | NM |
| Sample Depth | 2.0 |
| Benzene | <0.0250 |
| Ethylbenzene | 0.0750 |
| Toluene | <0.0250 |
| Total Xylenes | 0.453 |
| Naphthalene | 0.281 |
| GRO | <3.0 |
| DRO | 35.5 |
| Chrysene | 0.0064 J |

| Sample ID | GMIA 4 |
|-----------------|-----------|
| Sample Date | 3/19/2012 |
| Field Screening | 10.8 |
| Sample Depth | 2.0 |
| Benzene | <0.0250 |
| Ethylbenzene | <0.0250 |
| Toluene | <0.0250 |
| Total Xylenes | 0.091 |
| Naphthalene | 0.275 |
| GRO | 10.9 |
| DRO | 77.5 |
| Chrysene | 0.0820 |

| Sample ID | MW-8 |
|-----------------|-----------------|
| Sample Date | 4/12/2012 |
| Field Screening | 0.0 0.0 |
| Sample Depth | 2.5-3 4-6 |
| Benzene | <0.0260 <0.0294 |
| Ethylbenzene | <0.0260 <0.0294 |
| Toluene | <0.0260 <0.0294 |
| Total Xylenes | <0.0781 <0.0822 |
| Naphthalene | <0.0260 <0.0294 |
| DRO | 3.57 2.92 |
| GRO | <3.0 <3.0 |
| Chrysene | <0.0037 <0.0036 |

| Sample ID | MW-4 |
|-----------------|-----------------|
| Sample Date | 3/7/2012 |
| Field Screening | 75.0 5.2 |
| Sample Depth | 0-2 2-4 |
| Benzene | <0.0625 <0.0250 |
| Ethylbenzene | 1.57 <0.0250 |
| Toluene | 1.41 <0.0250 |
| Total Xylenes | 6.96 <0.0750 |
| Naphthalene | 1.97 <0.0035 |
| DRO | 1390 3.93 |
| GRO | 581 5.0 |
| Chrysene | 0.265 <0.0036 |

| Sample ID | GMIA 3 |
|-----------------|-----------|
| Sample Date | 3/19/2012 |
| Field Screening | 4.7 |
| Sample Depth | 2.0 |
| Benzene | <0.0250 |
| Ethylbenzene | <0.0250 |
| Toluene | <0.0250 |
| Total Xylenes | <0.0750 |
| Naphthalene | <0.0250 |
| GRO | 5.2 |
| DRO | 21.8 |
| Chrysene | 0.0046 J |

| Sample ID | MW-1 |
|-----------------|-----------------|
| Sample Date | 3/7/2012 |
| Field Screening | 0.0 0.0 |
| Sample Depth | 0-2 2-4 |
| Benzene | <0.0250 <0.0250 |
| Ethylbenzene | <0.0250 <0.0250 |
| Toluene | <0.0250 <0.0250 |
| Total Xylenes | <0.0750 <0.0750 |
| Naphthalene | <0.0250 <0.0250 |
| DRO | 3.25 1.020 J |
| GRO | 5.5 4.4 |
| Chrysene | 0.101 0.0118 J |

| Sample ID | MW-2 |
|-----------------|---------------|
| Sample Date | 3/7/2012 |
| Field Screening | 30.0 41.9 |
| Sample Depth | 0-2 2-4 |
| Benzene | <0.312 <0.125 |
| Ethylbenzene | 7.300 3.24 |
| Toluene | 6.070 2.870 |
| Total Xylenes | 32.25 14.03 |
| Naphthalene | 0.101 3.440 |
| DRO | 1,150 1,790 |
| GRO | 1,610 917 |
| Chrysene | 0.339 0.118 |

| Sample ID | MW-9 |
|-----------------|-----------------|
| Sample Date | 5/11/2012 |
| Field Screening | 0.0 0.0 |
| Sample Depth | 0-1 6-7 |
| Benzene | <0.0410 <0.0424 |
| Ethylbenzene | <0.0410 <0.0424 |
| Toluene | <0.0410 <0.0424 |
| Total Xylenes | <0.1230 <0.1271 |
| Naphthalene | <0.0410 <0.0424 |
| DRO | 17.2 5.57 |
| GRO | <4.9 <3.8 |
| Chrysene | 0.241 <0.0037 |

| Sample ID | GMIA 8C |
|-----------------|----------|
| Sample Date | 3/8/2012 |
| Field Screening | 203 |
| Sample Depth | 5.0 |
| Benzene | <0.125 |
| Ethylbenzene | 0.95 |
| Toluene | 0.745 |
| Total Xylenes | 4.05 |
| Naphthalene | 1.1 |
| GRO | 336 |
| DRO | 217 |
| Chrysene | <0.0038 |

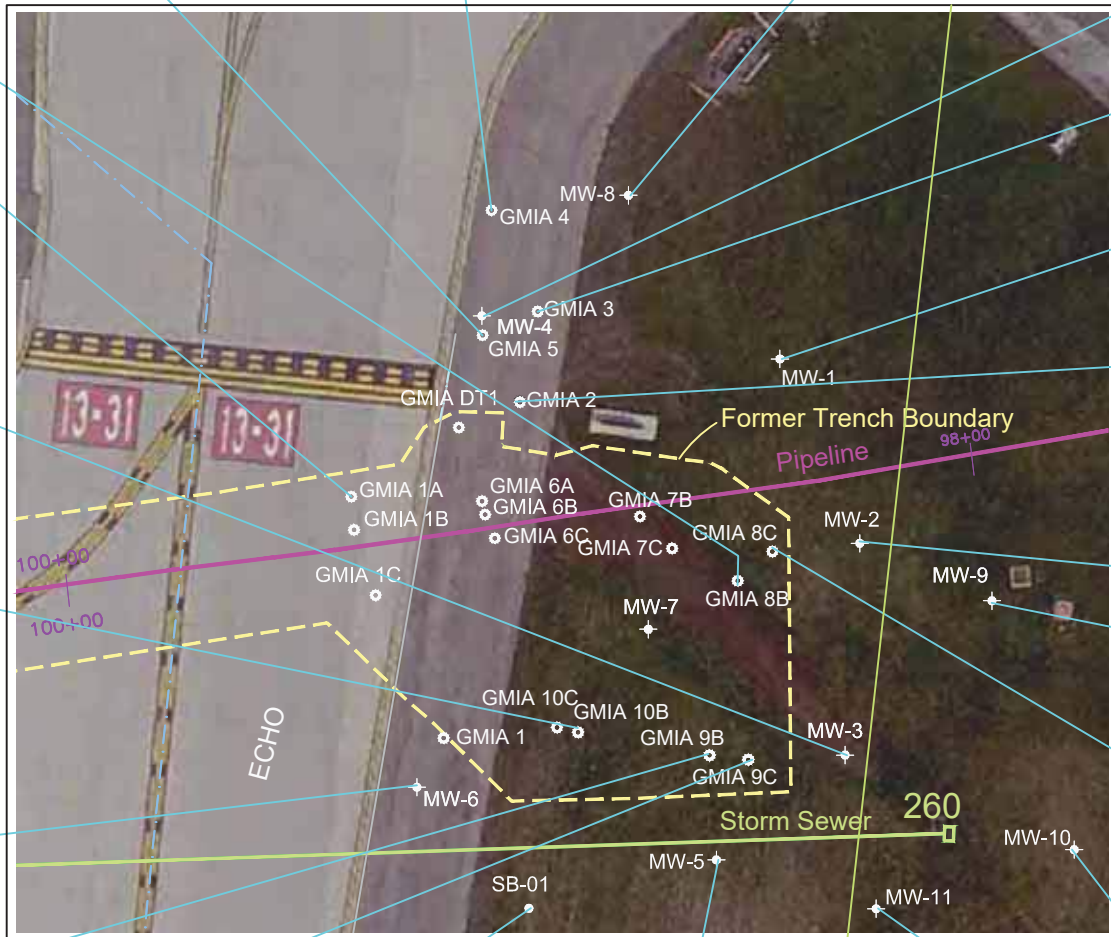
| Sample ID | MW-10 |
|-----------------|------------------|
| Sample Date | 5/11/2012 |
| Field Screening | 0.0 0.0 |
| Sample Depth | 0-1 6-8 |
| Benzene | <0.0357 <0.0316 |
| Ethylbenzene | <0.0357 <0.0316 |
| Toluene | <0.0357 <0.0316 |
| Total Xylenes | <0.1071 <0.0949 |
| Naphthalene | <0.0357 <0.0316 |
| DRO | 3.92 5.85 |
| GRO | <4.7 <3.9 |
| Chrysene | 0.0195 J <0.0037 |

| Sample ID | MW-11 |
|-----------------|-----------------|
| Sample Date | 5/11/2012 |
| Field Screening | 0.0 0.0 |
| Sample Depth | 0-2 0-2 Dup |
| Benzene | <0.0325 <0.0333 |
| Ethylbenzene | <0.0325 <0.0333 |
| Toluene | <0.0325 <0.0333 |
| Total Xylenes | <0.0974 <0.1000 |
| Naphthalene | <0.0325 <0.0333 |
| DRO | 2.09 J 2.10 J |
| GRO | <4.3 <4.4 |
| Chrysene | <0.0039 <0.0039 |

| Sample ID | MW-5 |
|-----------------|-----------------|
| Sample Date | 3/15/2012 |
| Field Screening | 0.0 0.0 |
| Sample Depth | 0-2 2-4 |
| Benzene | <0.0250 <0.0250 |
| Ethylbenzene | <0.0250 <0.0250 |
| Toluene | <0.0250 <0.0250 |
| Total Xylenes | <0.0750 <0.0750 |
| Naphthalene | <0.0250 <0.0250 |
| DRO | 8.65 2.97 |
| GRO | <3.0 <2.9 |
| Chrysene | 0.166 0.0156 J |

| Sample ID | SB-01 |
|-----------------|-----------|
| Sample Date | 5/11/2012 |
| Field Screening | 0.0 |
| Sample Depth | 0-2 |
| Benzene | <0.0299 |
| Ethylbenzene | <0.0299 |
| Toluene | <0.0299 |
| Total Xylenes | <0.0898 |
| Naphthalene | <0.0299 |
| GRO | 96.8 |
| DRO | <4.1 |
| Chrysene | 0.313 |

| Sample ID | GMIA 9C |
|-----------------|----------|
| Sample Date | 3/8/2012 |
| Field Screening | 195 |
| Sample Depth | 5.0 |
| Benzene | <0.312 |
| Ethylbenzene | 4.18 |
| Toluene | 3.58 |
| Total Xylenes | 17.24 |
| Naphthalene | 5.39 |
| GRO | 771 |
| DRO | 1,220 |
| Chrysene | 0.0888 |



NOTES:

All detections are presented in **bold**.
Results are expressed in ug/kg (ppm).

Yellow shading in data boxes indicates
exceedance of either the former NR 720 RCL
or the former interim PAH guidance standard.

** Soil PAH samples were re-collected
in correct containers and resubmitted for analysis.

J Estimated concentration detected between
the detection limit and reporting limit

DRO Diesel Range Organics
GRO Gasoline Range Organics



Feb. 11, 2014
JOB NO.: 49233474
DRAWN BY: RF
APPD BY: KDM
SCALE: AS SHOWN

URS
342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101

PREPARED FOR:
 SHELL
PIPELINE
COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

FIGURE 1
RESIDUAL SOIL SAMPLE ANALYTICAL
RESULTS

| MW-4 | | | | | |
|----------------------|-----------|-----------|----------|----------|--|
| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | 2.2 | 1.9 | 1.5 | 0.91 J | |
| Toluene | 0.83 J | <0.67 | 0.76 J | <0.44 | |
| Total Xylenes | 6.1 | <2.63 | 5.7 | 3.0 J | |
| 1,2,4-TMB | 11.5 | 6.9 | 6.8 | 10.9 | |
| 1,3,5-TMB | 4.2 | 2.8 | 2.8 J | 3.5 J | |
| Naphthalene | 1.7 J | 1.4 J | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0045 | 0.020 J | <0.0056 | <0.0054 | |
| Benzo(b)fluoranthene | <0.0048 | 0.042 J | <0.0077 | <0.0074 | |
| Chrysene | 0.0067 J | 0.024 J | <0.0070 | <0.0068 | |
| DRO | 240 | 98 | 130 | 64 | |
| GRO | 95.7 | 70.4 | 37.9 J | 55.6 | |

| MW-8 | | | | | |
|----------------------|-----------|-----------|----------|----------|--|
| Date | 11/2/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0047 | <0.0057 | <0.0056 | <0.0050 | |
| Benzo(b)fluoranthene | <0.0050 | <0.0077 | <0.0077 | <0.0069 | |
| Chrysene | <0.0051 | <0.0071 | <0.0070 | <0.0063 | |
| DRO | 180 | 84 | 49 | 44 J | |
| GRO | <32.4 | 35.3 J | <32.4 | <34.9 | |

| MW-1 | | | | | |
|----------------------|-----------|-----------|-----------|----------|--|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0048 | <0.0058 | <0.0055 | <0.0054 | |
| Benzo(b)fluoranthene | <0.0051 | <0.0079 | <0.0075 | <0.0074 | |
| Chrysene | <0.0052 | <0.0073 | <0.0069 | 0.11 J | |
| DRO | 12 J | <11 | 57 | <20 | |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 | |

| MW-2 | | | | | |
|----------------------|-----------|-----------|-----------|----------|--|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 | |
| Benzene | 18.1 | <1.6 | <1.0 | 3.3 | |
| Ethylbenzene | 203 | 68.1 | 31.7 | 31.7 | |
| Toluene | <0.67 | <2.7 | <0.88 | <0.88 | |
| Total Xylenes | 455.8 | 218.9 | 105.4 | 105.4 | |
| 1,2,4-TMB | 604 | 431 | 188 | 256 | |
| 1,3,5-TMB | 154 | 136 | 71 | 79.2 | |
| Naphthalene | 92.4 | 59.0 | 29.9 | 29.9 | |
| Benzo(a)pyrene | <0.54 | <0.56 | <0.22 | <0.55 | |
| Benzo(b)fluoranthene | <0.58 | <0.77 | <0.30 | <0.75 | |
| Chrysene | <0.59 | <0.70 | <0.28 | <0.69 | |
| DRO | 2,100 | 2,700 | 2,300 | 3,900 | |
| GRO | 3,720 | 2,170 | 1,960 | 1,550 | |

| MW-9 | | | | | |
|----------------------|-----------|-----------|----------|----------|--|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | 0.85 J | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | 0.0049 J | <0.0056 | <0.0056 | <0.0054 | |
| Benzo(b)fluoranthene | 0.0061 J | <0.0076 | <0.0076 | <0.0074 | |
| Chrysene | 0.0069 J | <0.0070 | <0.0070 | <0.0068 | |
| DRO | 27 J | 70 | 120 | <20 | |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 | |

| MW-7 | | | | | | |
|----------------------|-----------|-----------|-----------|----------|---------|-------|
| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 | | |
| Benzene | <0.41 | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | <0.97 | <0.57 | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0044 | <0.0044 | <0.0055 | <0.0055 | <0.0059 | |
| Benzo(b)fluoranthene | <0.0047 | <0.0047 | <0.0075 | <0.0075 | <0.0080 | |
| Chrysene | <0.0048 | <0.0048 | <0.0069 | <0.0069 | <0.0073 | |
| DRO | 90 | 71 | 92 | 180 | 85 | 64 |
| GRO | <32.4 | <32.4 | <32.4 | <32.4 | <34.9 | <34.9 |

| MW-6 | | | | | |
|----------------------|-----------|-----------|-----------|----------|--|
| Date | 11/1/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0044 | <0.0054 | <0.0057 | <0.0053 | |
| Benzo(b)fluoranthene | <0.0046 | <0.0074 | <0.0077 | <0.0072 | |
| Chrysene | <0.0047 | <0.0068 | <0.0071 | <0.0066 | |
| DRO | 130 | 140 | 340 | 100 | |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 | |

| MW-5 | | | | | |
|----------------------|-----------|-----------|-----------|----------|--|
| Date | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0044 | <0.0055 | <0.0055 | <0.0058 | |
| Benzo(b)fluoranthene | <0.0047 | <0.0075 | <0.0075 | <0.0079 | |
| Chrysene | <0.0048 | <0.0069 | <0.0069 | <0.0073 | |
| DRO | <10 | <10 | 24 J | 80 | |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 | |

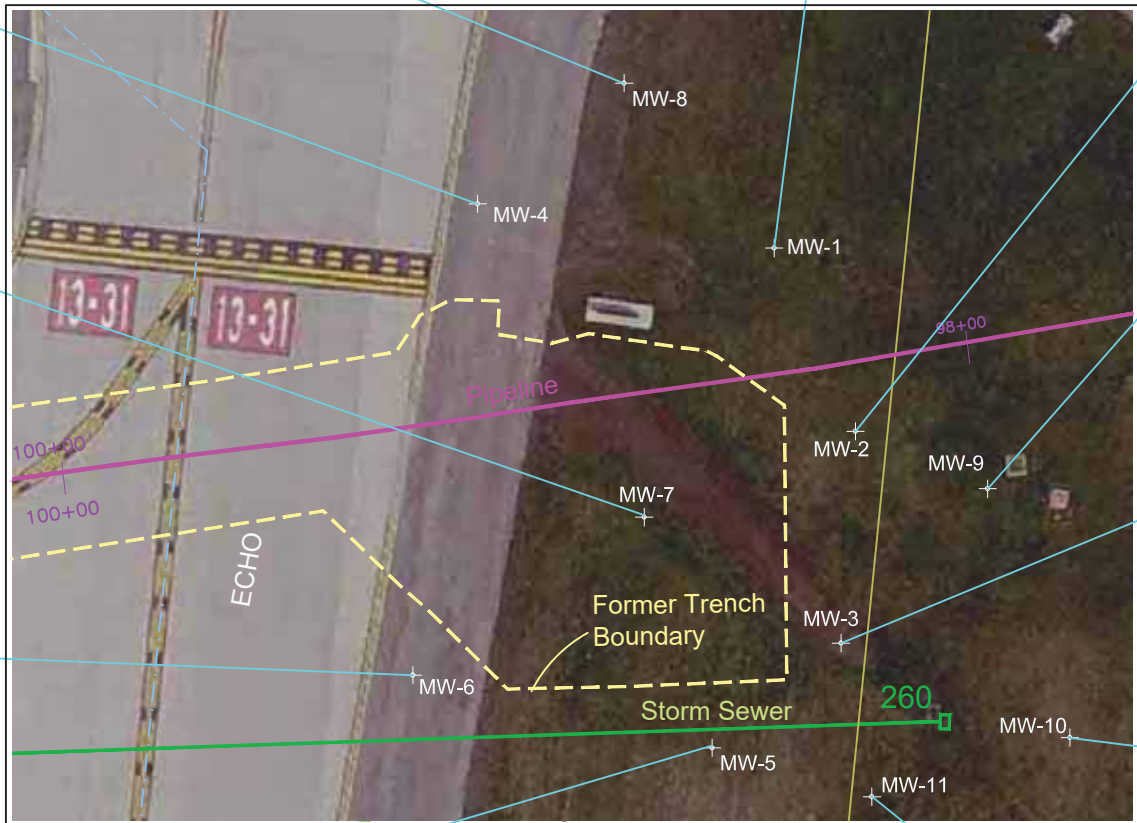
| MW-11 | | | | | |
|----------------------|----------|-----------|-----------------------------|-----------|----------|
| Date | 8/1/2012 | 11/2/2012 | 2/21/2013 | 5/10/2013 | 8/1/2013 |
| Benzene | <0.41 | <0.41 | Not Sampled- Well Frozen | <0.50 | <0.50 |
| Ethylbenzene | <0.54 | <0.54 | | <0.50 | <0.50 |
| Toluene | <0.67 | <0.67 | | <0.44 | <0.44 |
| Total Xylenes | <2.63 | <2.63 | | <1.32 | <1.32 |
| 1,2,4-TMB | <0.97 | <0.97 | | <0.57 | <0.57 |
| 1,3,5-TMB | <0.83 | <0.83 | | <2.5 | <2.5 |
| Naphthalene | <0.89 | <0.89 | | <2.5 | <2.5 |
| Benzo(a)pyrene | 0.0036 J | <0.0044 | | <0.0056 | <0.0055 |
| Benzo(b)fluoranthene | 0.0038 J | <0.0047 | | <0.0076 | <0.0075 |
| Chrysene | 0.0056 J | <0.0048 | | <0.0070 | <0.0069 |
| DRO | 36 J | 12 J | | 65 | 37 J |
| GRO | <32.4 | <32.4 | | <32.4 | <34.9 |

| MW-10 | | | | | |
|----------------------|-----------|-----------|----------|----------|--|
| Date | 11/1/2012 | 2/21/2013 | 5/9/2013 | 8/1/2013 | |
| Benzene | <0.41 | <0.41 | <0.50 | <0.50 | |
| Ethylbenzene | <0.54 | <0.54 | <0.50 | <0.50 | |
| Toluene | <0.67 | <0.67 | <0.44 | <0.44 | |
| Total Xylenes | <2.63 | <2.63 | <1.32 | <1.32 | |
| 1,2,4-TMB | <0.97 | <0.97 | <0.57 | <0.57 | |
| 1,3,5-TMB | <0.83 | <0.83 | <2.5 | <2.5 | |
| Naphthalene | <0.89 | <0.89 | <2.5 | <2.5 | |
| Benzo(a)pyrene | <0.0045 | <0.0054 | <0.0057 | <0.0054 | |
| Benzo(b)fluoranthene | <0.0048 | <0.0074 | <0.0078 | <0.0074 | |
| Chrysene | <0.0049 | <0.0068 | <0.0072 | <0.0068 | |
| DRO | 27 J | <11 | 75 | <20 | |
| GRO | <32.4 | <32.4 | <32.4 | <34.9 | |

NOTES:

Detections presented in bold type indicate an exceedance of the NR 140 groundwater enforcement standard.
Results are expressed in ug/L (ppb).

J Estimated concentration detected between the detection limit and reporting limit
DRO Diesel Range Organics
GRO Gasoline Range Organics
1,2,4-TMB 1,2,4-Trimethylbenzene
1,3,5-TMB 1,3,5-Trimethylbenzene



Feb. 10, 2013
JOB NO.: 49233474
DRAWN BY: RF
SCALE: AS SHOWN

URS
342 NORTH WATER STREET
MILWAUKEE, WISCONSIN 53202
(414) 831-4100 FAX (414) 831-4101



SHELL
PIPELINE
COMPANY LP

GMIA Pipeline Fuel Release
5300 South Howell Avenue
Milwaukee, Wisconsin

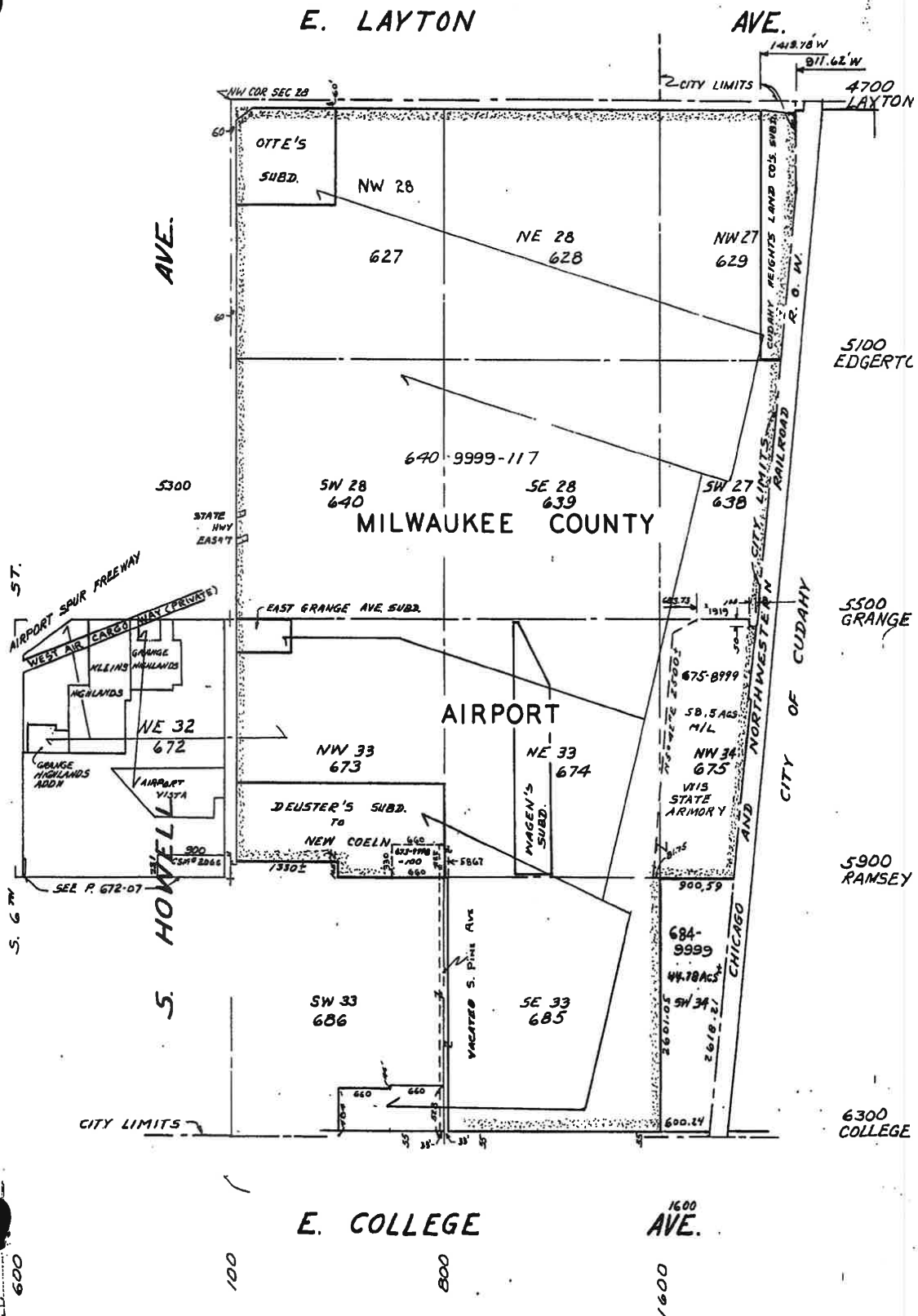
FIGURE 2
GROUNDWATER ANALYTICAL RESULTS
SUMMARY

ATTACHMENT G

Source Legal Documents

- G.1 Lands Map and Sample Deeds
- G.2 Certified Survey Map—**Not Applicable**
- G.3 Zoning Map
- G.4 Signed Statement

NW & SW 27-6-22 - A.P. 629 & 638 640-673-684-675 640-01
 SEC. 28-6-22 - ATLAS P. 627-628-639 & 640 SCALE 1200' = 1"
 SEC. 33-6-22 - ATLAS P. 674-673-685-686 LANDS FEB - 2 1998
 NW & SW 34-6-22 - ATLAS P. 675 & 684
 NE 32-6-22 ATLAS P. 672



MICROFILMED 600

This indenture, Made this 20th day of January, A. D., 1941,
between Arthur H. Schroeter and Mildred F. Schroeter, his wife, of the
Town of Lake, Milwaukee County, Wisconsin

part 1st of the first part, and
Milwaukee County, a municipal body corporate,

~~xx Corporation~~ duly organized and existing under and by virtue of the laws of the State of Wisconsin, located
at Milwaukee County, Wisconsin, party of the second part.

Witnesseth, That the said part 1st of the first part, for and in consideration of the sum of
Twelve Thousand and 00/100 Dollars (\$12,000.00) - - - - -

to them in hand paid by the said party of the second part, the receipt whereof is hereby confessed and
acknowledged, have given, granted, bargained, sold, remised, released, aliened, conveyed and confirmed, and
by these presents do give, grant, bargain, sell, remise, release, alien, convey and confirm unto the said party
of the second part, its successors and assigns forever, the following described real estate, situated in the County
of Milwaukee and State of Wisconsin, to-wit:

That part of the south 5 acres of the west 13 acres of the west 1/2 of
the southeast 1/4 of section 28, town 6 north, range 22 east, bounded
and described as follows, to wit: Commencing at the southeast corner of
said south 5 acres, running thence north along the east line of said
south 5 acres 400 feet to a point, thence west on a line parallel with
the south line of said 1/4 section 75 feet to a point, thence south on
a line parallel with the east line of said south 5 acres 400 feet to a
point in the south line of said 1/4 section, thence east along said
south line 75 feet to the place of beginning, excepting the south 55
feet thereof.

Together with all and singular the hereditaments and appurtenances thereunto belonging or in any wise
appertaining; and all the estate, right, title, interest, claim or demand whatsoever, of the said part 1st of the
first part, either in law or equity, either in possession or expectancy of, in and to the above bargained premises,
and their hereditaments and appurtenances.

To have and to hold the said premises as above described with the hereditaments and appurtenances, unto
the said party of the second part, and to its successors and assigns FOREVER.

And the said Arthur H. Schroeter and Mildred F. Schroeter, his wife,

for themselves, their heirs, executors and administrators, do covenant, grant, bargain and agree
to and with the said party of the second part, its successors and assigns, that at the time of the enrolling and
delivery of these presents they are well seized of the premises above described, as of a good, sure,
perfect, absolute and indefeasible estate of inheritance in the law, in fee simple, and that the same are free
and clear from all incumbrances whatever, provided, however, that the grantors
reserve the right to occupy the house on the premises rent free until
September 1, 1941, ^{and other buildings}

and that the above bargained premises in the quiet and peaceable possession of the said party of the second

In Witness Whereof, the said parties of the first part have hereunto set their hands and seals this 20th day of January, A.D. 1941.

Stanley Perry
Susan M. Fadden

Arthur H. Schroeter (Seal)
 Mildred F. Schroeter (Seal)
 _____ (Seal)
 _____ (Seal)

Milwaukee

County.

Personally came before me this 20th day of January, A. D., 1941.

the above named Arthur H. Schroeter and Mildred F. Schroeter, his wife,

to me known to be the persons who executed the foregoing instrument and acknowledged the same.

Notary Public, Milwaukee County, Wis.

My commission expires Aug 3, A. D., 194

2299802

No.

Arthur H. Schroeter and

Mildred F. Schroeter, his wife
to

Milwaukee County

Dead figures

**REGISTER'S OFFICE,
State of Wisconsin,**

WALKER.....County.

Received for Record this FEB 4 1941 day of 25 at 7:35 o'clock M., and recorded in

Vol. 1701 of Deeds on page 624

Register of Deeds

Deputy

+ Approved Jan 20. 1941

Descript OK - Puz

Bucks

DEED 1718 PAGE 419

This indenture, Made this 22 day of March, A.D. 1941,
between NORTHWESTERN TRUST AND INVESTMENT ASSOCIATION,
a Corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, located
at Milwaukee, Wisconsin, party of the first part, and
MILWAUKEE COUNTY, WISCONSIN,

Witnesseth, That the said party of the first part, for and in consideration of the sum of
One Dollar (\$1.00) and other good and valuable consideration,

to it paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged,
has given, granted, bargained, sold, remised, released, aliened, conveyed and confirmed, and by these presents
does give, grant, bargain, sell, remise, release, alien, convey and confirm unto the said party of the second
part, its successors and assigns forever, the following described real estate, situated in the County of
Milwaukee and State of Wisconsin, to-wit:

The South Seventy (70) acres of the East one-half
(E $\frac{1}{2}$) of the Southeast One-quarter (SE $\frac{1}{4}$) of Section
Twenty-eight (28), Township No. Six (6), Range No.
Twenty-two (22) East, in the Town of Lake, County
and State aforesaid.

given in

This deed is fulfillment of a land contract between the parties
hereto dated June 17, 1938.

Together with all and singular the hereditaments and appurtenances thereunto belonging or in any wise
appertaining; and all the estate, right, title, interest, claim or demand whatsoever, of the said party of the first
part, either in law or equity, either in possession or expectancy of, in and to the above bargained premises, and
their hereditaments and appurtenances.

Un have and to hold the said premises as above described with the hereditaments and appurtenances, unto
the said party of the second part, and to its successors and assigns FOREVER.

And the said NORTHWESTERN TRUST AND INVESTMENT ASSOCIATION,
party of the first part, for itself and its successors, does covenant, grant, bargain and agree to and with the said
party of the second part, its successors and assigns, that at the time of the enrolling and delivery of these
presents it is well seized of the premises above described, as of a good, sure, perfect, absolute and indefeasible
estate of inheritance in the law, in fee simple, and that the same are free and clear from all incumbrances what-
ever.

and that the above bargained premises in the quiet and peaceable possession of the said party of the second

1718 420

successors
part, its heirs and assigns, against all and every person or persons lawfully claiming the whole or any
part thereof, it will forever WARRANT and DEFEND.

In Witness Whereof, the said NORTHWESTERN TRUST AND INVESTMENT ASSOCIATION
party of the first part, has caused these presents to be signed by E. L. Richardson
its President, and countersigned by Donald A. Grant, its Secretary,
at Milwaukee, Wisconsin, and its corporate seal to be hereunto affixed, this 22nd
day of March, A. D. 1941

SIGNED AND SEALED IN PRESENCE OF

NORTHWESTERN TRUST AND INVESTMENT
ASSOCIATION

Corporate Name

Ruth Ostermann
(Ruth Ostermann)

By: E. L. Richardson
COUNTERSIGNED E. L. Richardson President

Edith Nestingen
(Edith Nestingen)

Donald A. Grant
(Donald A. Grant) Secretary

State of Wisconsin,

MILWAUKEE County.

Personally came before me, this 22nd day of March, A. D. 1941

E. L. Richardson, President, and Donald A. Grant, Secretary
of the above named Corporation, to me known to be the persons who executed the foregoing instrument, and
to me known to be such President and Secretary of said Corporation, and acknowledged that they executed the
foregoing instrument as such officers as the deed of said Corporation, by its authority.

Edith Nestingen

Notary Public, Milwaukee County, Wis.

My commission expires December 7, A. D. 1941



(ORIGINAL)

No. 2309789

NORTHWESTERN TRUST AND

INVESTMENT ASSOCIATION

MILWAUKEE COUNTY, WISCONSIN

Warranty Deed

REGISTER'S OFFICE,

State of Wisconsin,

MILWAUKEE County.

Received for Record this

APR 18 1941

at 8:30 o'clock A. M., and recorded in

Vol. 1718 of Deeds on page 419

Edith Nestingen
Register of Deeds

Deputy

Edith Nestingen
Deputy

WISCONSIN LEGAL BLANK CO.
MILWAUKEE, WISCONSIN.

DEED 1732 PAGE 91

This indenture, Made this 14th day of March, A. D., 1941,
between Hugo Schroeter and Louise Schroeter, husband and wife,
of Milwaukee County, Wisconsin,

part 1st of the first part, and
Milwaukee County, a municipal body corporate,

~~and~~ duly organized and existing under and by virtue of the laws of the State of Wisconsin, located
at Milwaukee County Wisconsin, party of the second part.

Witnesseth, That the said part 1st of the first part, for and in consideration of the sum of
Seventeen Thousand and 00/100 Dollars (\$17,000.00) - - - - -

to them in hand paid by the said party of the second part, the receipt whereof is hereby confessed and
acknowledged, have given, granted, bargained, sold, remised, released, aliened conveyed and confirmed, and
by these presents do give, grant, bargain, sell, remise, release, alien, convey and confirm unto the said party
of the second part, its successors and assigns forever, the following described real estate, situated in the County
of Milwaukee and State of Wisconsin, to-wit:

That part of the South Five (5) acres of the West Thirteen (13) acres
of the West One-half (1/2) of the South East One-quarter (1/4) of
Section numbered Twenty-eight (28) in Township numbered Six (6) North,
Range numbered Twenty-two (22) East, in the Town of Lake, bounded and
described as follows, to-wit: Commencing at a point in the West line
of said South 5 acres, 55 feet North of (measured at right angles) the
South line of said South East 1/4 of Section 28, running thence North
along the West line of said South 5 acres to the North West corner
thereof, thence East along the North line of said South 5 acres to the
North East corner thereof, thence South along the East line of said
South 5 acres to a point 400 feet North of the South East corner
thereof, thence West on a line parallel with the South line of said 1/4
Section, 75 feet to a point, thence South on a line parallel with the
East line of said South 5 acres to a point, 55 feet North of (measured
at right angles) the South line of said 1/4 Section, thence West on a
line 55 feet North of and parallel with the South line of said 1/4
Section to the place of beginning.

Together with all and singular the hereditaments and appurtenances thereunto belonging or in any wise
appertaining; and all the estate, right, title, interest, claim or demand whatsoever, of the said part 1st of the
first part, either in law or equity, either in possession or expectancy of, in and to the above bargained premises
and their hereditaments and appurtenances.

To have and to hold the said premises as above described with the hereditaments and appurtenances, unto
the said party of the second part, and to its successors and assigns FOREVER.

And the said Hugo Schroeter and Louise Schroeter, husband and wife,

for themselves, their heirs, executors and administrators, do covenant, grant, bargain and agree
to and with the said party of the second part, its successors and assigns, that at the time of the ensembling and
delivery of these presents they are well seized of the premises above described, as of a good, sure,
perfect, absolute and indefeasible estate of inheritance in the law, in fee simple, and that the same are free and
clear from all incumbrances whatever, provided, however, that the grantors reserve
the right to occupy the residence on the premises rent free until
July 1, 1941.

and that the above bargained premises in the quiet and peaceable possession of the said party of the second

part, its successors and assigns, against all and every person or persons lawfully claiming the whole or any part thereof, they will forever WARRANT and DEFEND.

In Witness Whereof, the said part ies of the first part have hereunto set their hand s and seal s this 14th day of March, A. D. 19 41.

SIGNED AND SEALED IN PRESENCE OF

Arthur Ray

Sam M. Freeman

Hugo Schroeter

Louise Schroeter

(SEAL)

(SEAL)

(SEAL)

(SEAL)

State of Wisconsin,

Milwaukee

County.

Personally came before me, this 14th day of March, A. D. 19 41

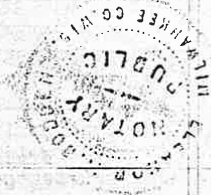
the above named Hugo Schroeter and Louise Schroeter, husband and wife,
of Milwaukee County, Wisconsin,

to me known to be the person s who executed the foregoing instrument and acknowledged the same.

Sam M. Freeman

Notary Public, Milwaukee County, Wis.

My commission expires Aug 3 A. D. 19 41



(Original)

2317930

No.

Hugo Schroeter and Louise

Schroeter, husband and wife,

Milwaukee County

Warranty Deed

REGISTER'S OFFICE,

State of Wisconsin,

MILWAUKEE County.

Received for Record this

JUN 26 1941

at 11 o'clock A. M., and recorded in

Vol. 1732 of Deeds on page 91

Arthur Ray
Register of Deeds

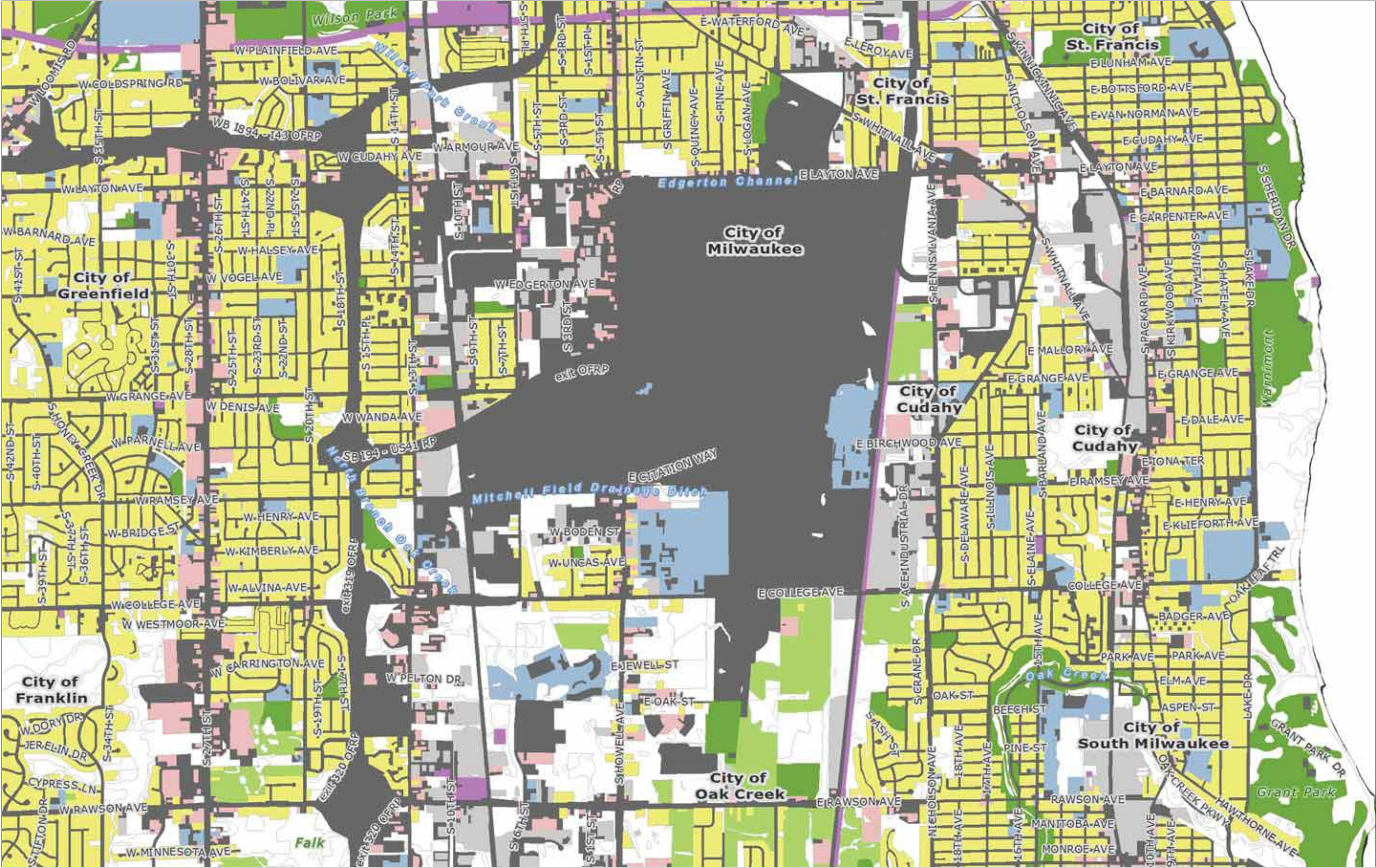
Deputy

Sam M. Freeman
1941
Received OK. Feb 3/14/41

WISCONSIN LEGAL BLANK CO.
MILWAUKEE, WISCONSIN



Figure G.3 GMIA Zoning Map



Legend

- General Land Use
- Residential
 - Transportation
 - Commercial
 - Open Lands
 - Industrial
 - Government and Institutional
 - Agricultural
 - Recreation
 - Communication and Institutional
- County Boundary
- Highways, 8k to 30k
- Freeway
 - Primary
 - Secondary
 - Freeway Ramp
 - Primary Ramp
- Street Centerlines, 20k to 50k
- Primary and Secondary
 - Local
- Railroad 30k
- Water 195k
- Rivers 50k
- Airport 80k
- Landmarks 80k
- Cemetery
 - Golf Course
- County Parks 195k
- Municipal Subdivisions 125k
- Milwaukee (City)
 - Hales Corners (Village)
 - Whitefish Bay (Village)
 - South Milwaukee (City)
 - Greenfield (City)
 - Fox Point (Village)
 - West Milwaukee (Village)
 - River Hills (Village)
 - Oak Creek (City)
 - Wauwatosa (City)
 - Greendale (Village)
 - Cudahy (City)
 - Glendale (City)
 - Shorewood (Village)
 - Bayside (Village)
 - West Allis (City)
 - Franklin (City)
 - Brown Deer (Village)
 - St. Francis (City)

1: 29,099



Notes

DISCLAIMER: This map is a user generated static output from the Milwaukee County Land Information Office Interactive Mapping Service website. The contents herein are for reference purposes only and may or may not be accurate, current or otherwise reliable. No liability is assumed for the data delineated herein either expressed or implied by Milwaukee County or its employees.

4,850 0 2,425 4,850 Feet

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Statement of Legal Property Description Accuracy


FOR

Parcel Identification Number: 640-9999-118
General Mitchell International Airport
5300 South Howell Avenue
Milwaukee, Wisconsin 53207
BRRS No. 02-41-558334

General Mitchell International Airport provided the following legal description of the above-mentioned property:

LANDS IN 1/4 SECS OF NW & SW 27, NE 32, NW & SW 34, ALL OF SEC 28 AND SEC 33 OF T6N R22E (MILWAUKEE COUNTY AIRPORT) THAT PRT BETW E LAYTON AV-CITY LIMITS LI-58.50 AC M/L OF WIS STATE ARMORY BOARD LANDS IN SECS 33 & 34-N & W LI SW 1/4 SEC 34-E COLLEGE AV-SW1/4 SEC 33 (EXC ST R/W & S 528' OF E 660' & S 484' OF W 600' OF E 1320')-W LI SEC 33-NW1/4 SEC 33 (EXC THAT PRT BEG SE COR SD SEC TH N 567'-TH SWLY 701.54'-TH S 330'-TH E 660' TO BEG & S 165' OF W 1330' AND ST R/W)-NE 1/4 SEC 32 (EXC CSM #2066 & E 23.50' OF S LI OF W 56.50' OF S 231' & AIRPORT SPUR FWY AND STS) & E LI S HOWELL AVE IN SW & NW SEC 28-6-22

According to the information available to me and to the best of my knowledge, the legal description presented on the deed for the property provided by General Mitchell International Airport is accurate.


John Robbins, Environmental Program Manager
Shell Oil Products US
Soil and Groundwater FDG
20945 S. Wilmington Ave.
Carson, California 90810

5/20/14
Date

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April 26, 2024

Ryan Pappas
Transportation Liaison
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, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Mr. Pappas:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Ryan Pappas
Transportation Liaison
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, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Mr. Pappas:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

David Hanson
Remediation & Redevelopment
Wisconsin Department of Natural Resources
Via Electronic Mail Only to David.hanson@wisconsin.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Mr. Hanson:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

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**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

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 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.

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. Thank you for your assistance.

Sincerely,

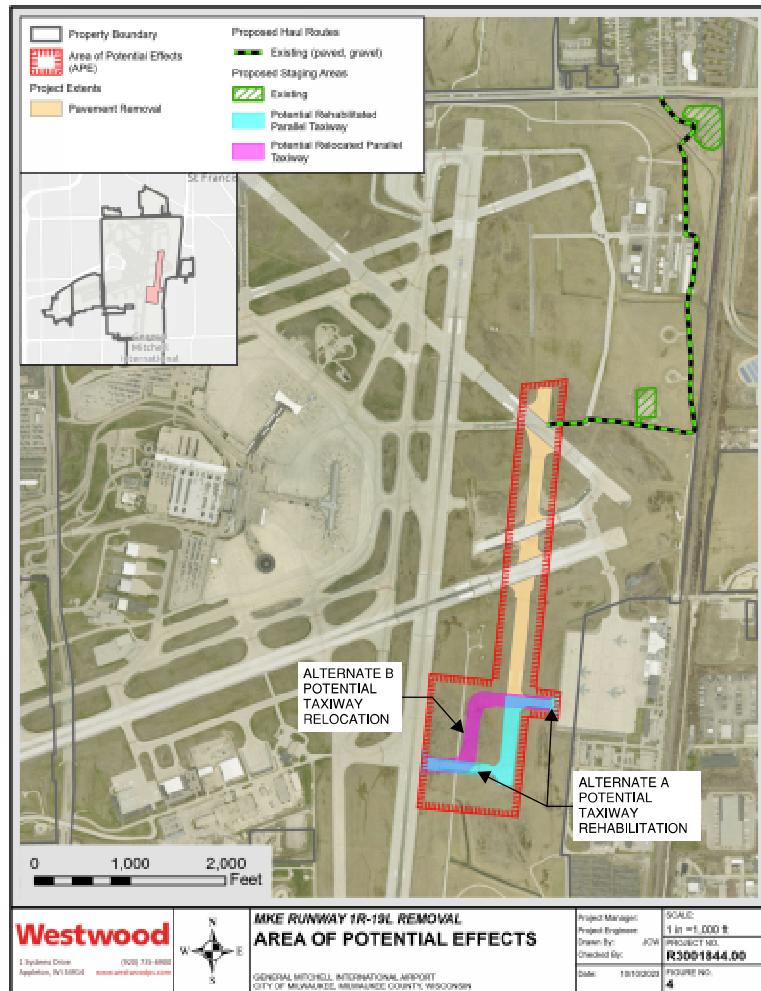
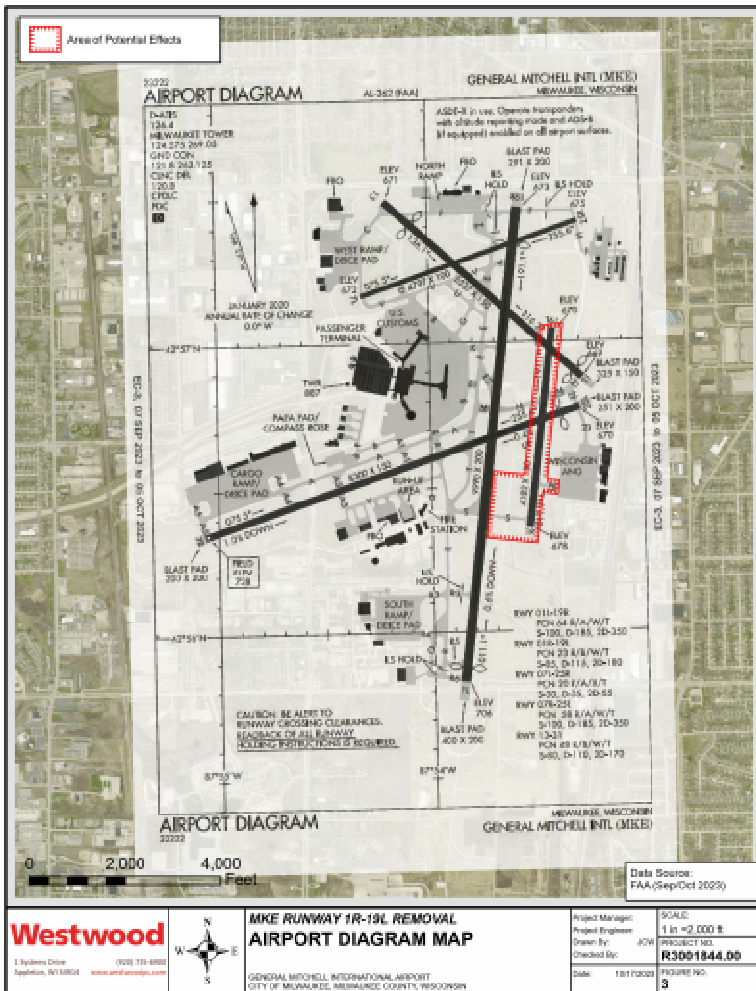
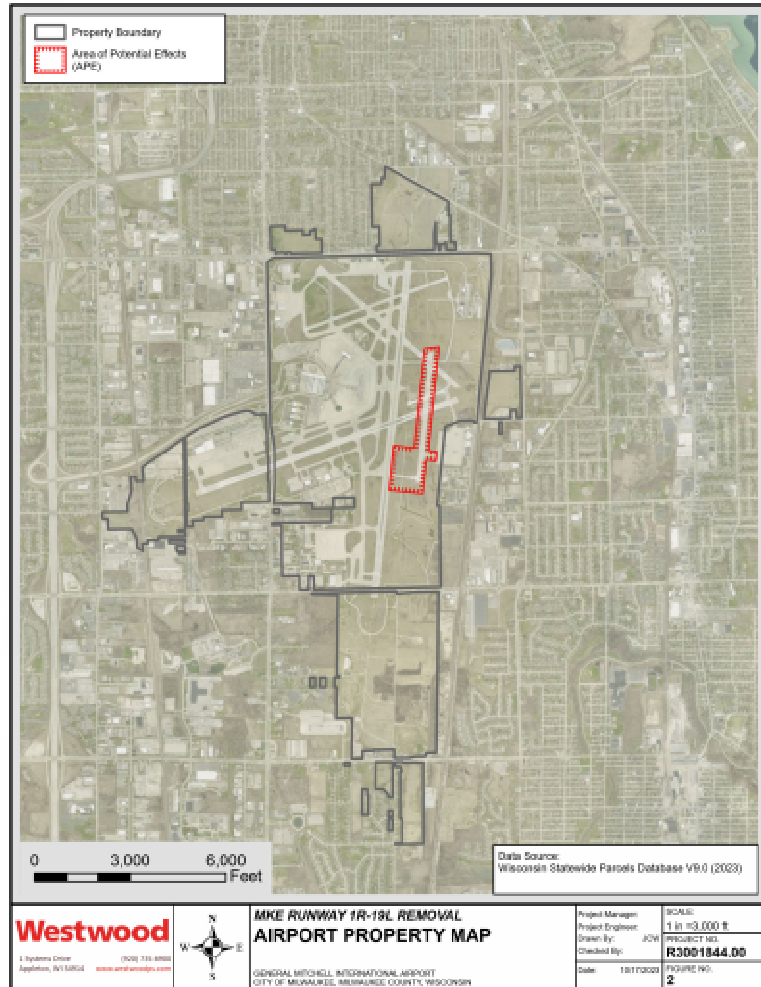
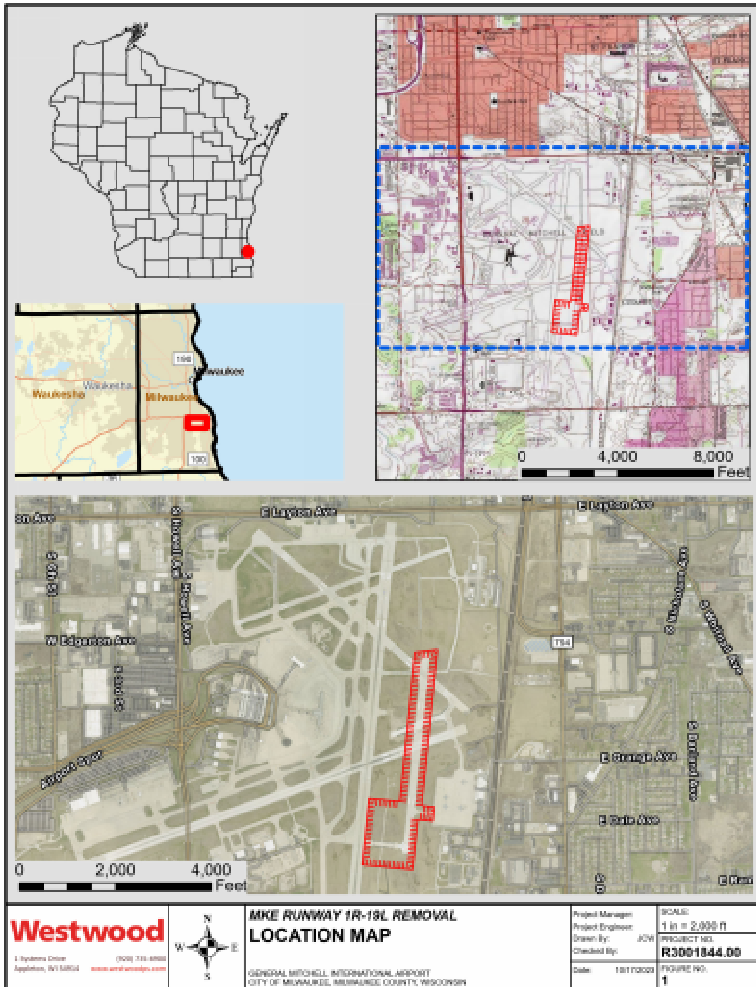
A handwritten signature in blue ink, appearing to read "Christine Turk".

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)



Kaitlyn Wehner

From: Turk, Christine <cturk@mitchellairport.com>
Sent: Wednesday, November 8, 2023 3:52 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 13-31 Decommissioning and Removal Project
Attachments: MKE RWY 13-31 - Wisconsin Coastal Management Program Letter.pdf; Attachment 1 - RWY 13-31 Location Map.pdf; Attachment 2 - RWY 13-31 Airport Property Map.pdf; Attachment 3 - RWY 13-31 Airport Diagram Map.pdf; Attachment 4 - RWY 13-31 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 13-31 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

RE: Milwaukee General Mitchell International Airport
Proposed Runway 13-31 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 13-31 (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 improve safety by removing non-standard runway/taxiway intersections.

Currently, Runway 13-31 is 5,537 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 13-31 primarily serves general aviation aircraft. Currently the intersection of Runway 13-31, Taxiway G, and Taxiway E can be classified as non-standard and has a greater potential for pilot confusion.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.



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. Thank you for your assistance.

Sincerely,

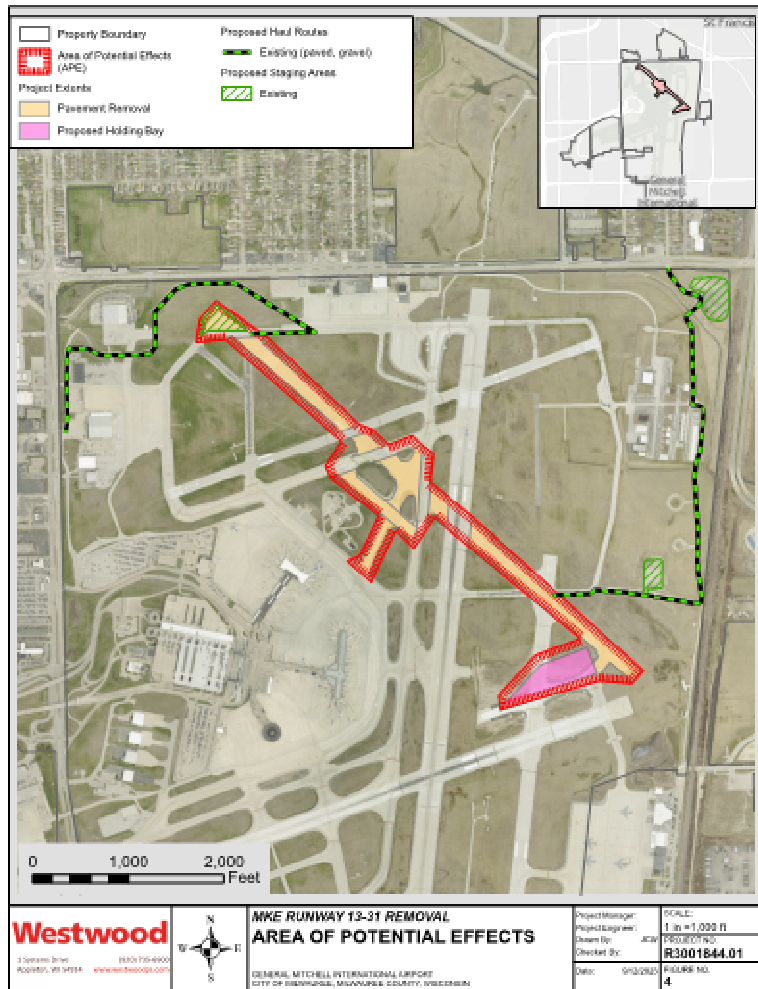
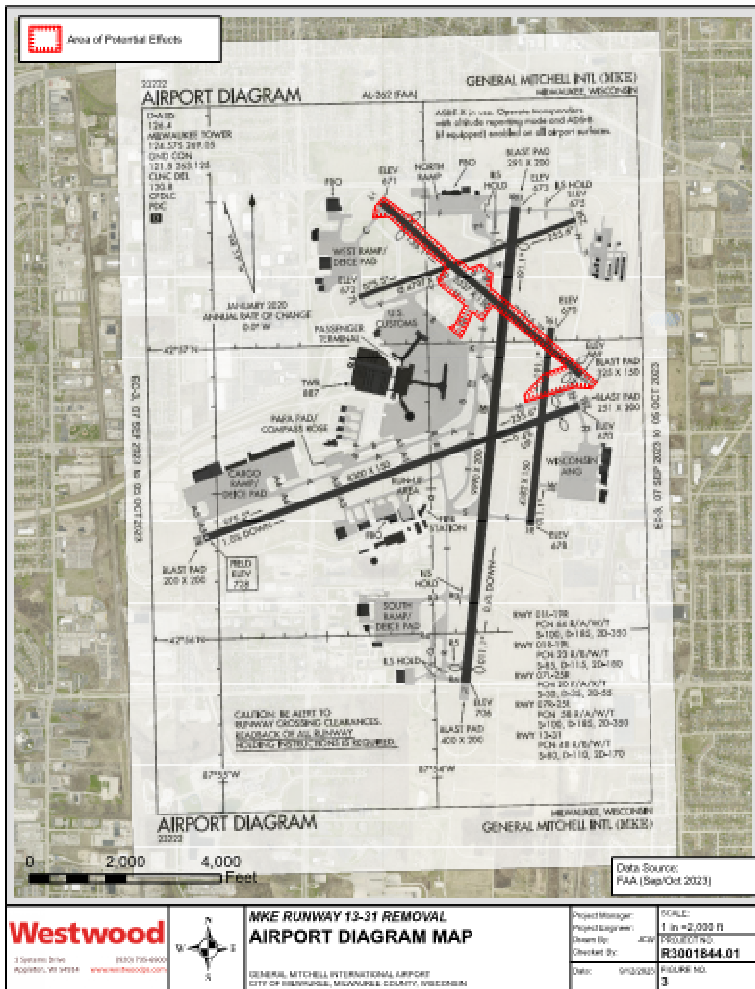
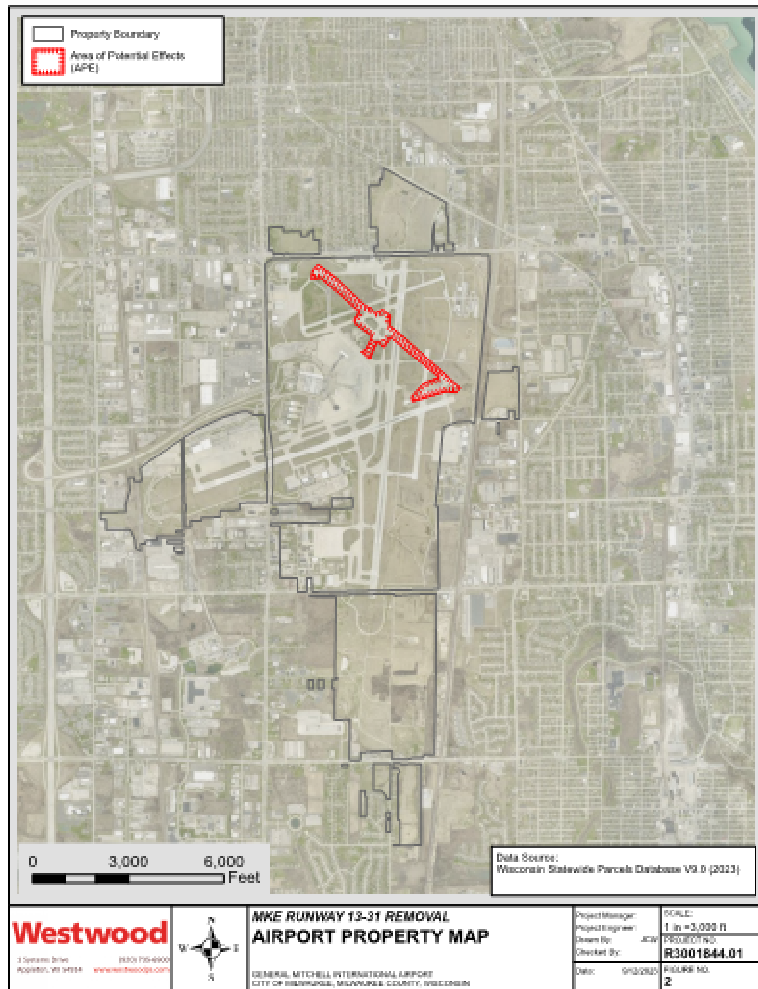
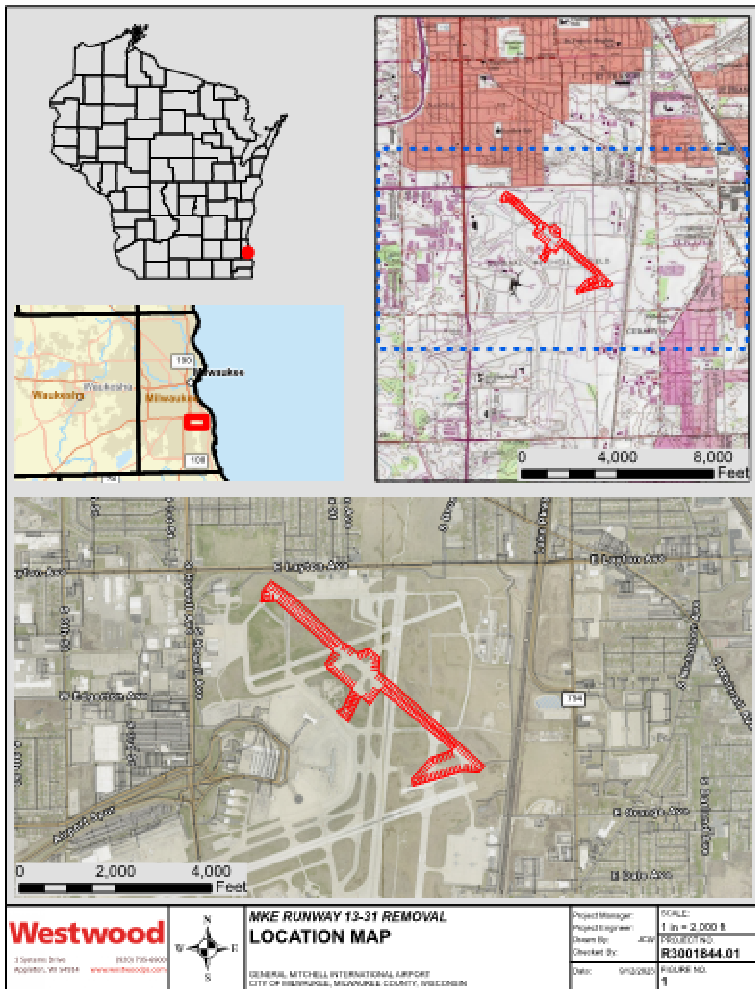
A handwritten signature in blue ink, appearing to read "Christine Turk".

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)



April 26, 2024

Kathleen Angel
Division of Intergovernmental Relations
Wisconsin Coastal Management Program
Via Electronic Mail Only to Kathleen.angel@wisconsin.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Angel:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Kathleen Angel
Division of Intergovernmental Relations
Wisconsin Coastal Management Program
Via Electronic Mail Only to Kathleen.angel@wisconsin.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Angel:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

UNITED STATES ARMY CORPS OF ENGINEERS (USACE)

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Kaitlyn Wehner

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 Wisconsin wetland confirmation.

Thank you,

Kaitlyn Wehner

Airport Engineer

kaitlyn.wehner@westwoodps.com

main (920)-735-6900
office (920)-830-6183

Westwood

1 Systems Drive
Appleton, WI 54914

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: 62.844 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 09:38:45-08'00' 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.

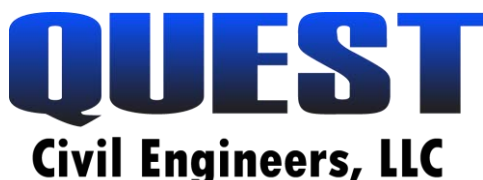
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Wetland Delineation

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

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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**).

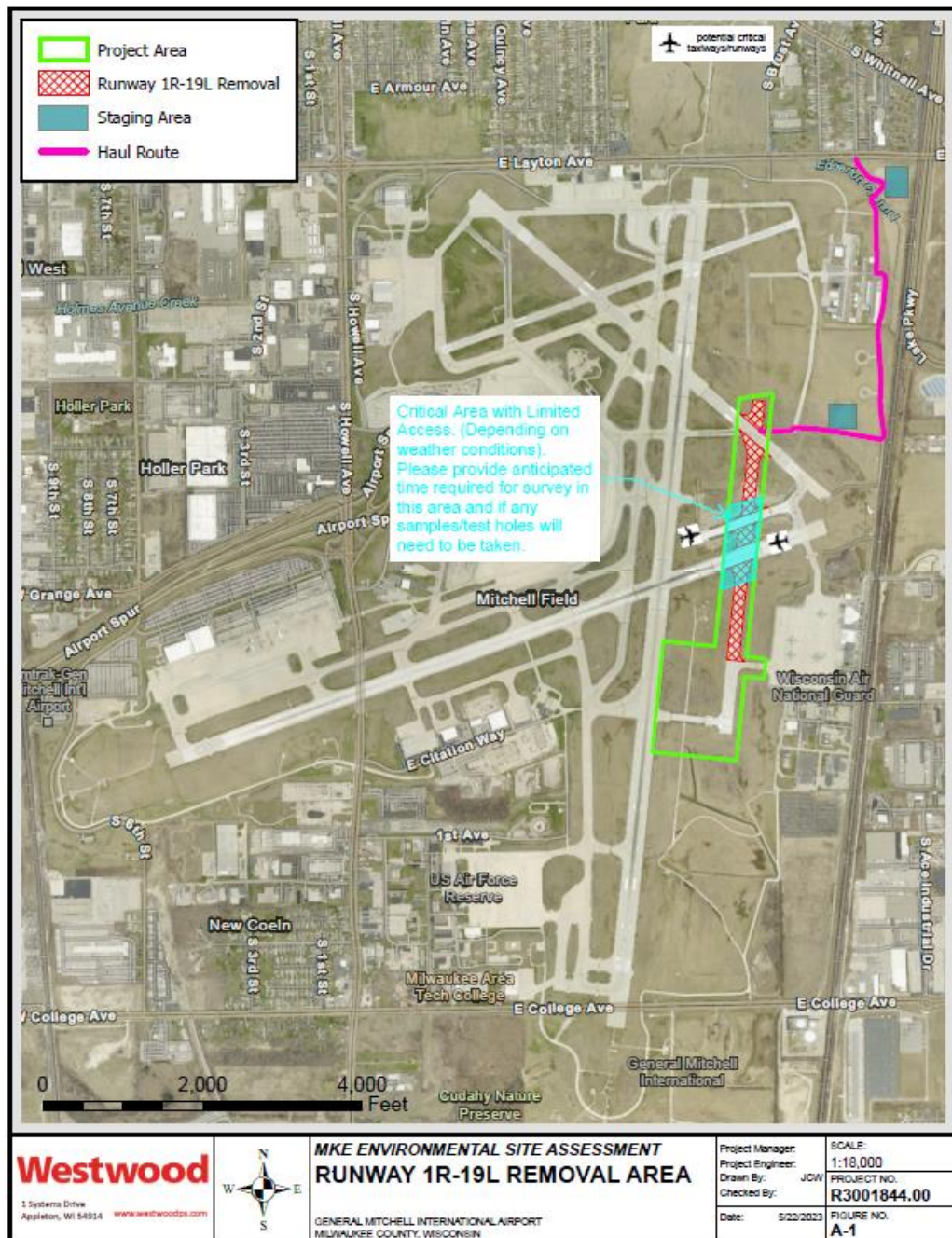


Figure 3.1-1

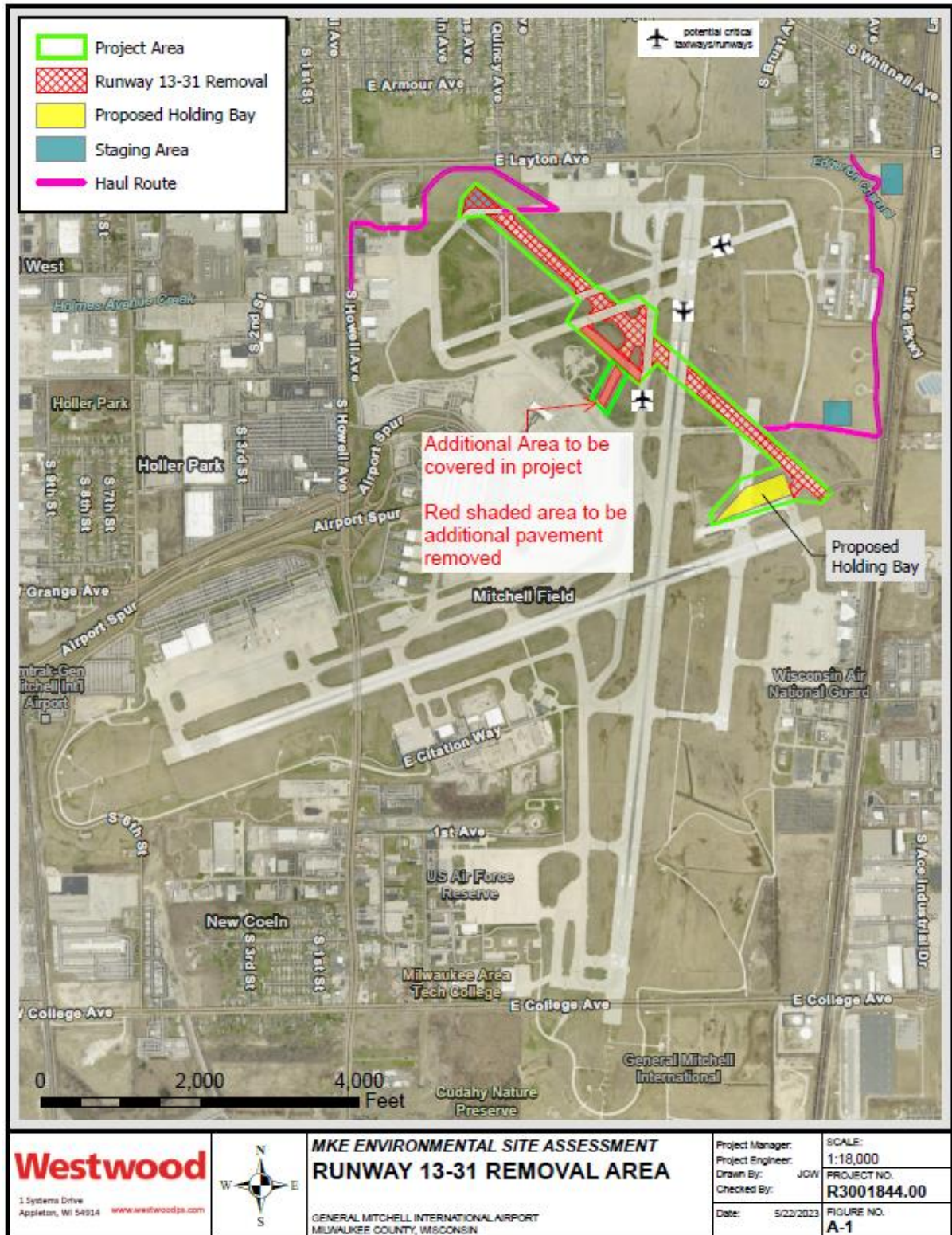


Figure 3.1-2

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**).

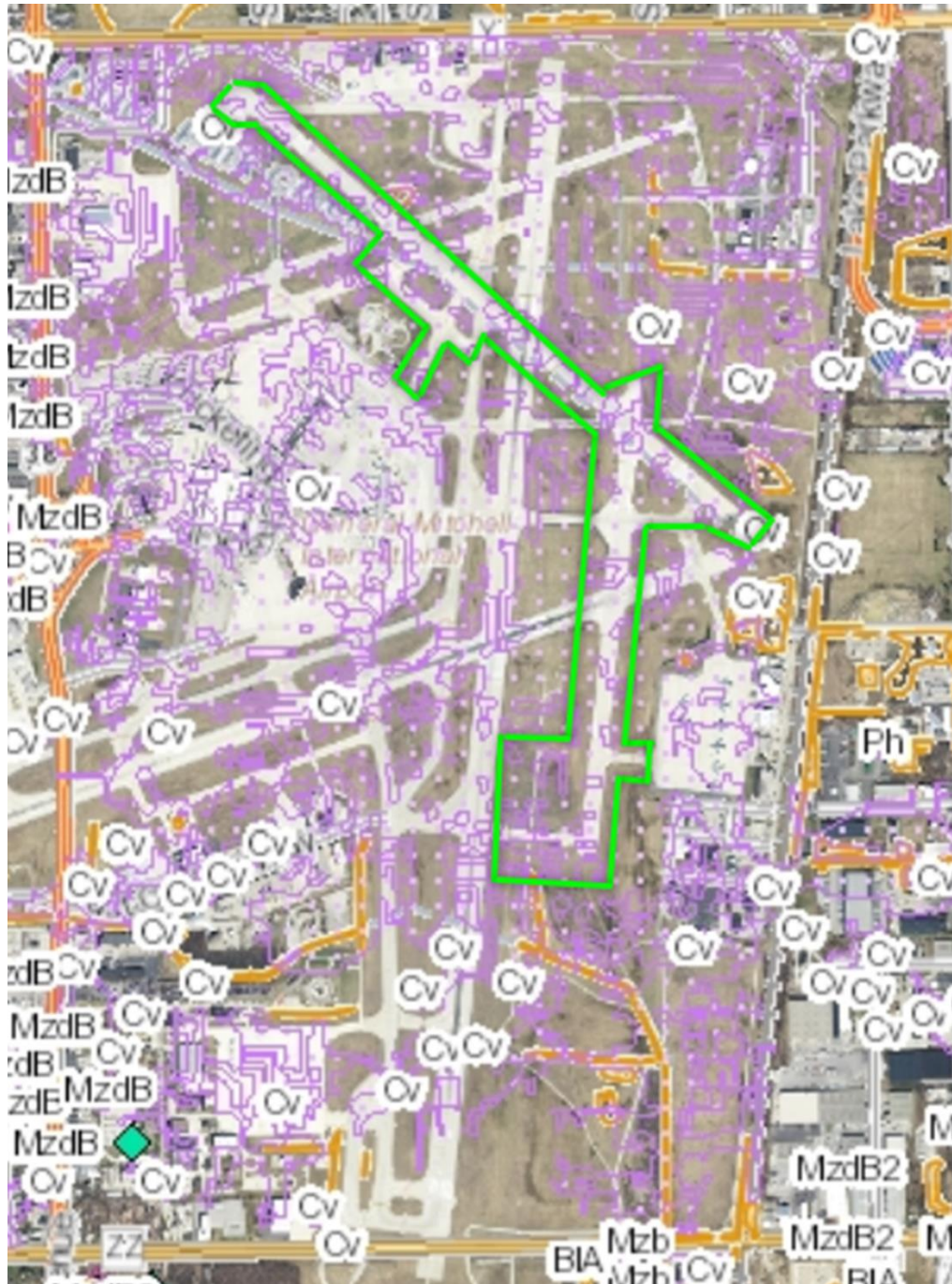


Figure 4.2-1

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>

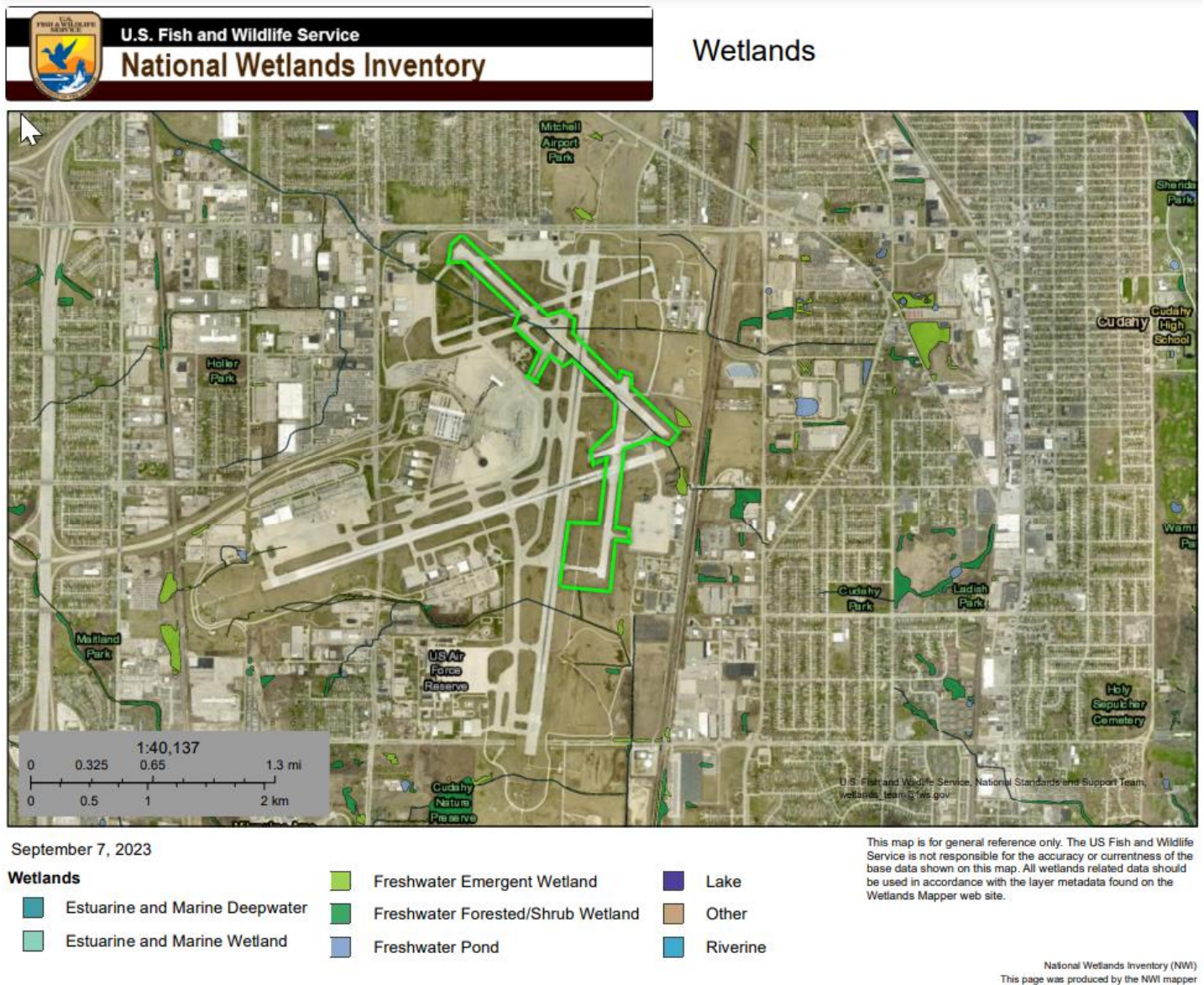


Figure 4.3-1

4.4 Topographical Mapping

The topography of the site is very flat. (Figure 4.4-1).

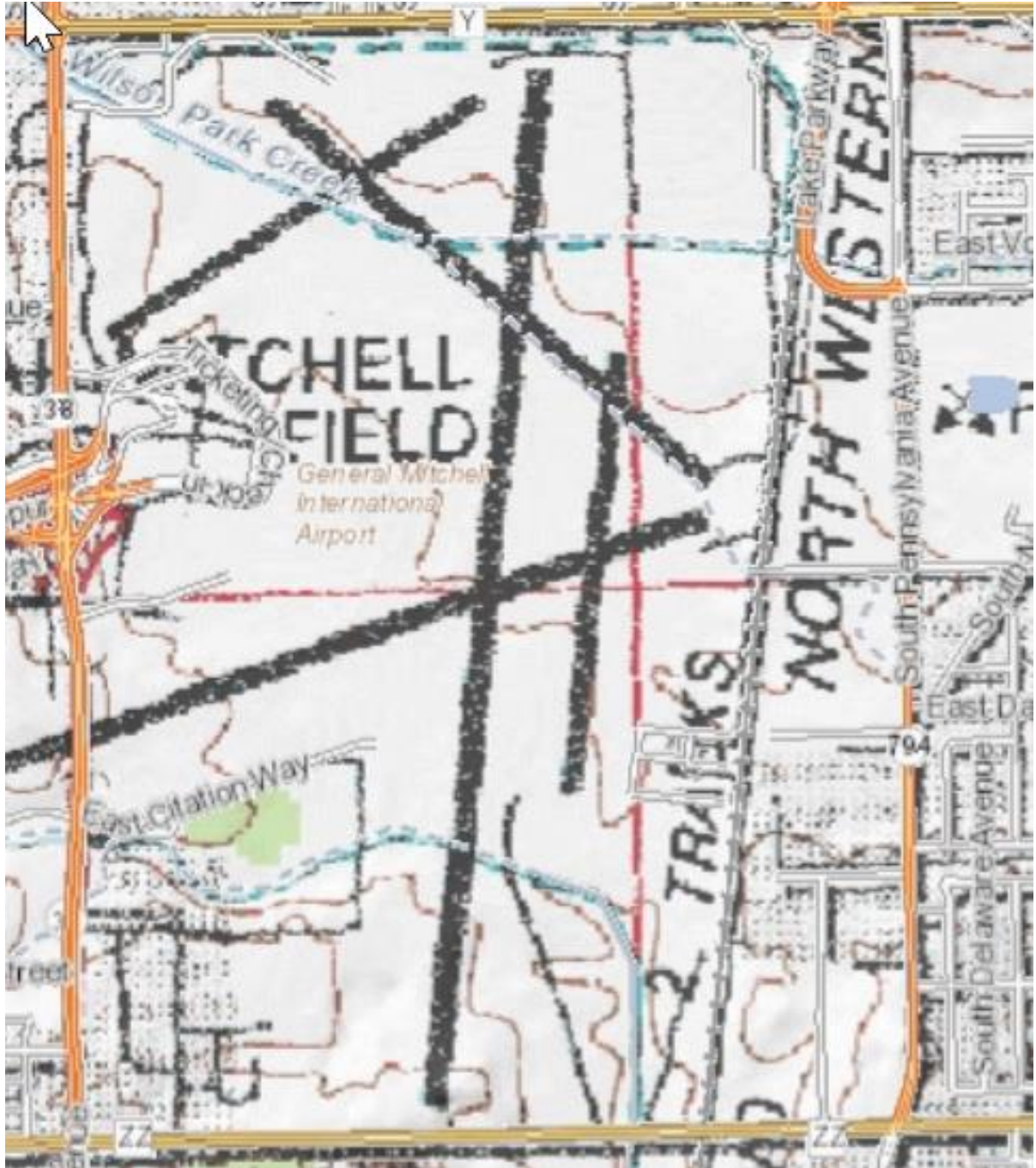


Figure 4.4-1

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: | | | | | | | ___ 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; http://agacis.rcc-acis.org | | | | | | | |
| | | | | | | | | | |
| 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 it's 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

- Knobel, E., 1980. Field Guide to the Grasses, Sedges and Rushes of the United States. Dover Publications.
- Newcomb. L., 1977. Newcomb's Wildflower Guide. Little, Brown and Company.
- USDA Web Soil Survey. United States Department of Agriculture, Soil Conservation
<http://websoilsurvey.nrcs.usda.gov/app/>
- U.S. Army Corps of Engineers, 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. Waterways Experiment Station, Vicksburg, Mississippi.
- U.S. Army Corps of Engineers, 1988. Wetland Evaluation Methodology for the North Central United States.
- Kollmorgen Instruments Corporation, 1992. MUNSELL SOIL COLOR CHARTS. Macbeth Division of Kollmorgen Instruments Corporation, Newburgh, New York.
- U.S. Department of the Interior, 1988. National List of Plant Species That Occur in Wetlands: North Central (Region 3). Biological Report 88 (26.3), Fish and Wildlife Service. In cooperation with the National and Regional Interagency review Panels. Washington, D.C.
- Eggers, Steve D., and Donald M. Reed. 1997. Wetland plants and communities of Minnesota and Wisconsin. U.S. Army Corps of Engineers, St. Paul District. Jamestown, ND: Northern Prairie
- Wildlife Research Center Online. (Version 03SEP1998).
<http://www.npwrc.usgs.gov/resource/plants/mnplant/index.htm>
- 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://dnrmapping.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 or Kaitlyn Wehner at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com. Thank you for your assistance.

Sincerely,

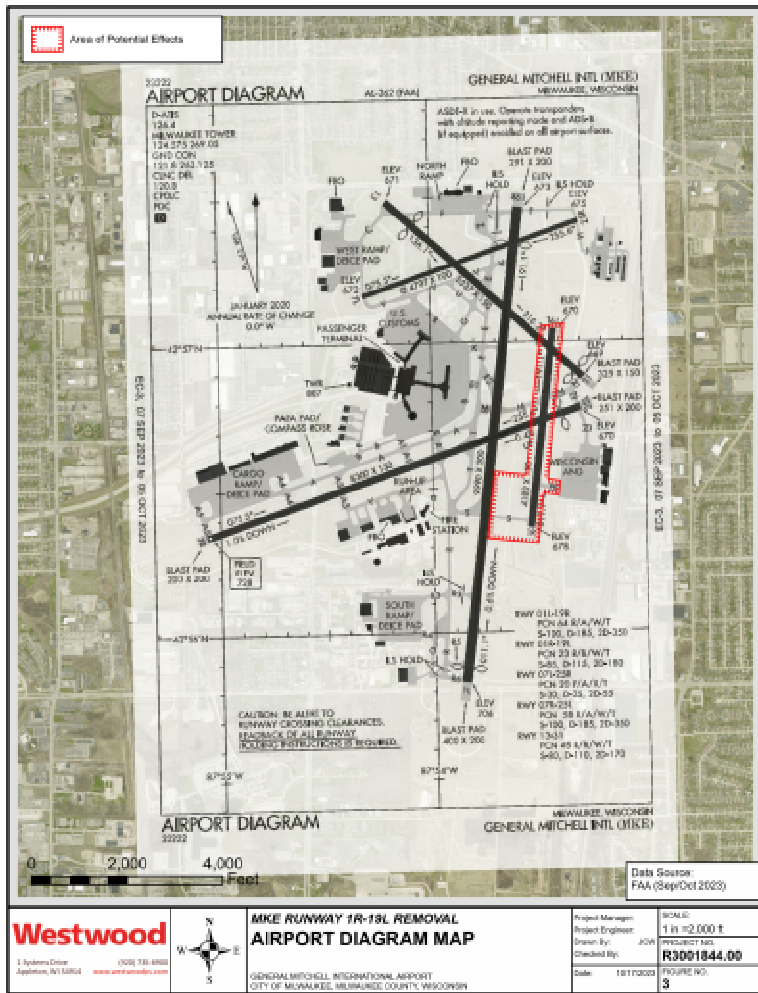
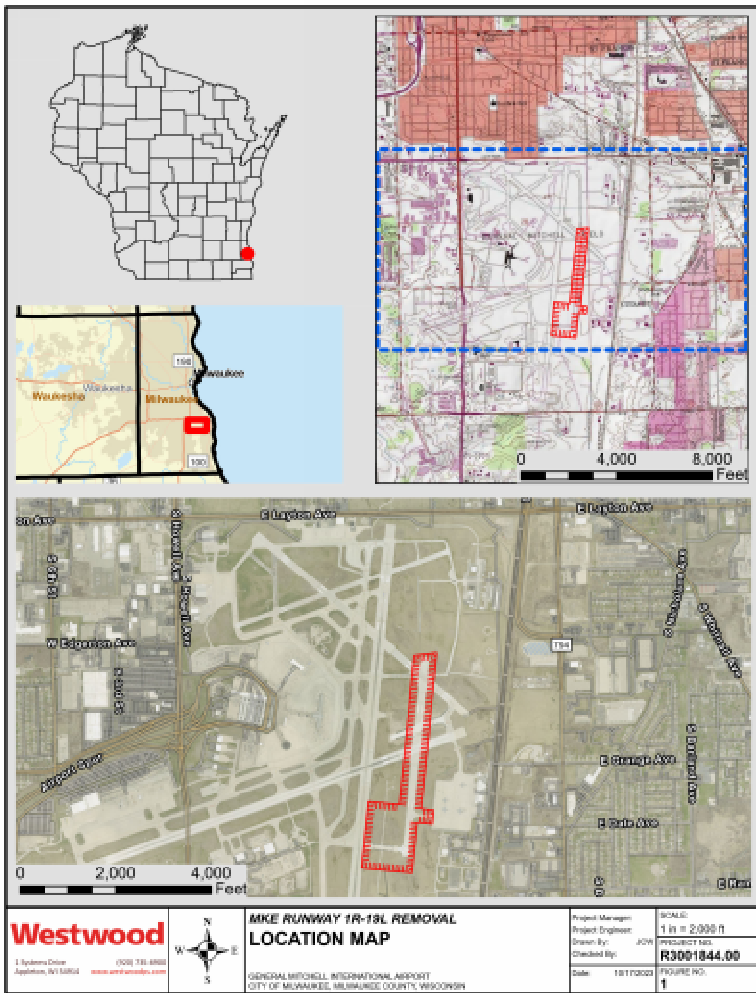
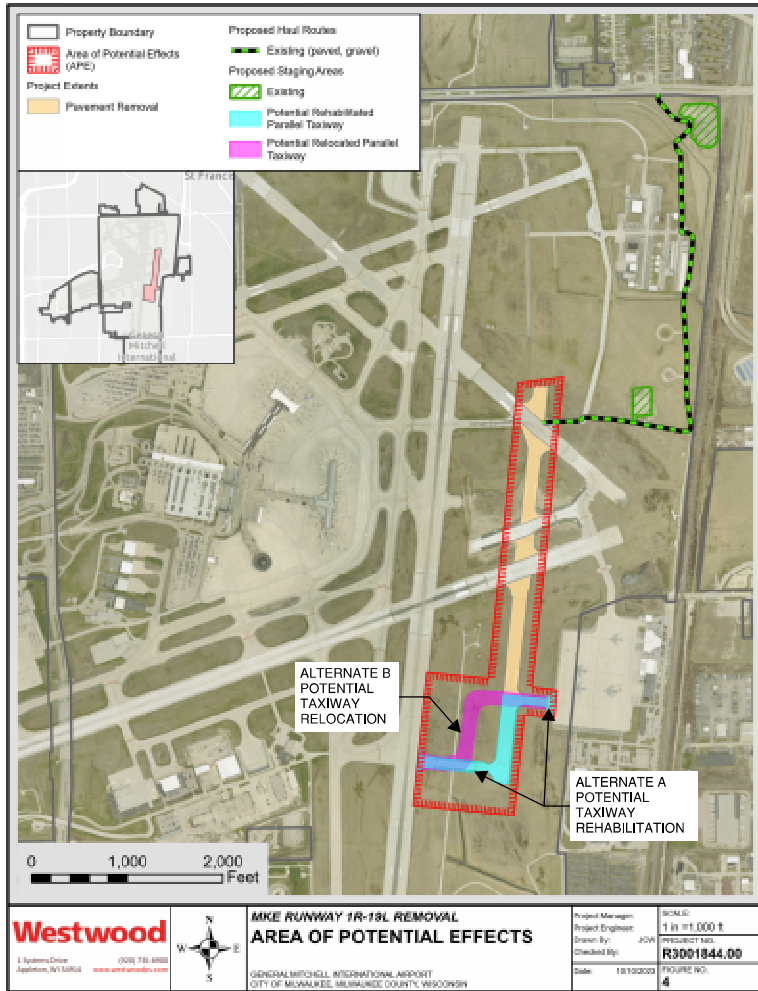
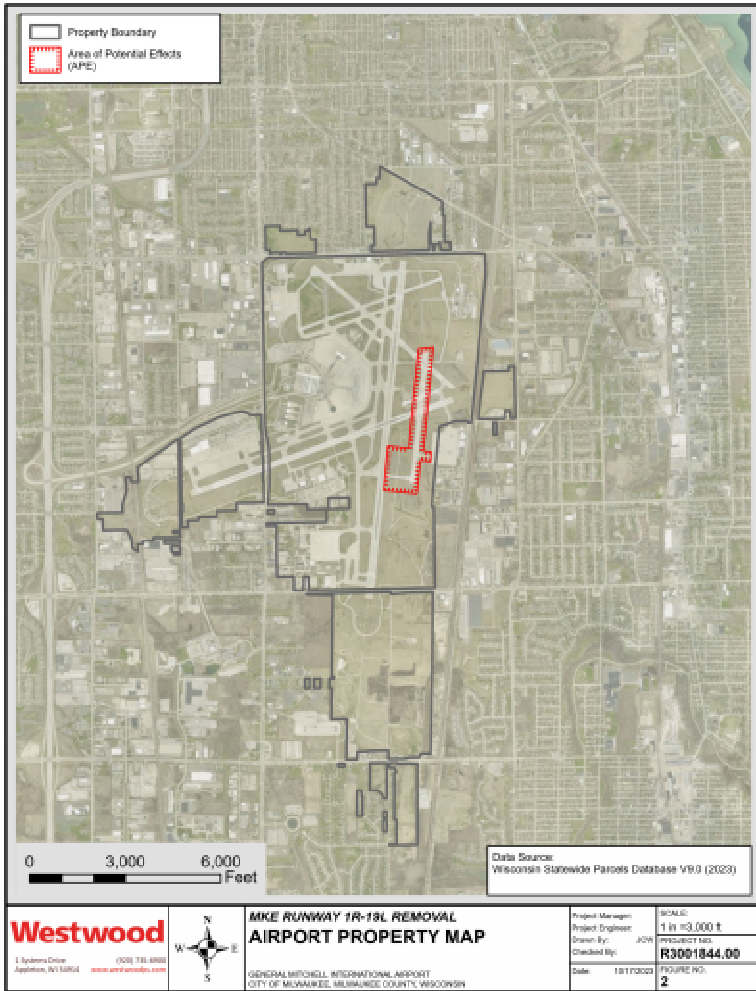


Kaitlyn Wehner
Airport Engineer
Westwood Professional Services

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)





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 1-888-436-7463
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/ERRReview/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.

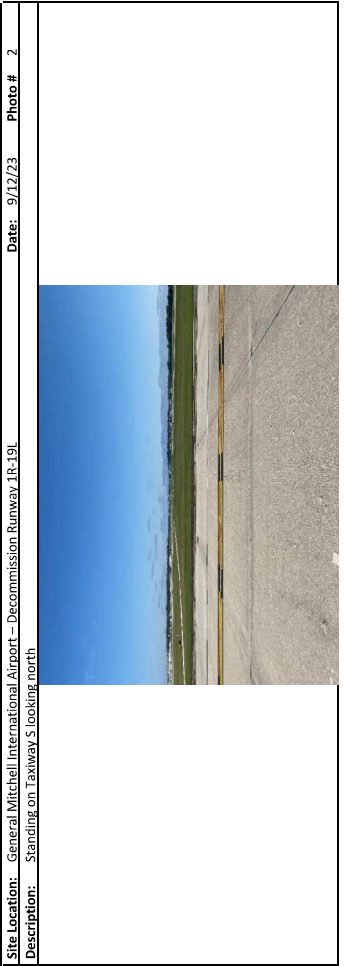
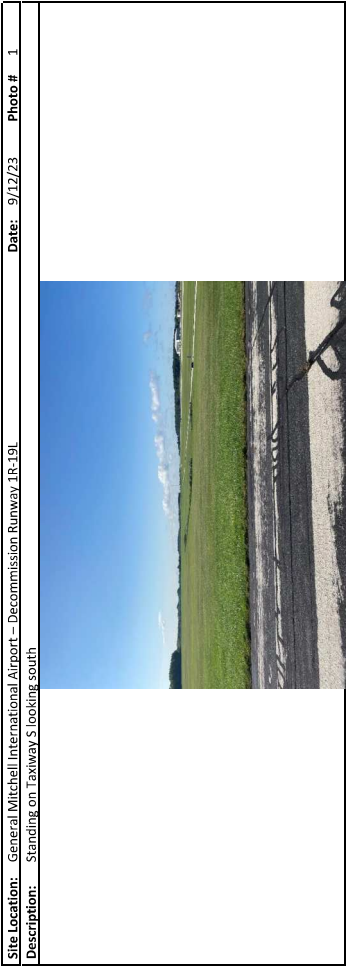
If you have any questions, please call me at (414) 306-6780 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely,

Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure


Email CC: USACE Project Manager
Brian Krostedt, Quest




| | | |
|---|----------------------|------------------|
| 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 | | |
|  | | |

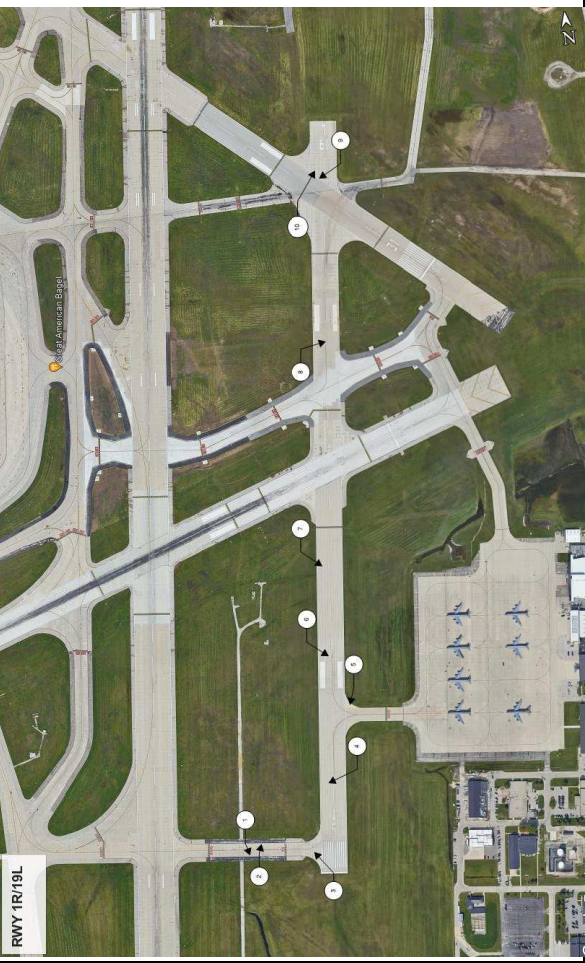
| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Runway 1R-19L north of Taxiway W looking south | | |
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| | | |
|---|----------------------|------------------|
| 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 | | |
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|--|----------------------|-------------------|
| 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 | | |
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|---|----------------------|------------------|
| 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: N/A | Photo # 11 |
| Description: Site Aerial Overview | | |
|  | | |

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 13-31 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 13-31 (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 improve safety by removing non-standard runway/taxiway intersections.

Currently, Runway 13-31 is 5,537 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 13-31 primarily services general aviation aircraft. Currently the intersection of Runway 13-31, Taxiway G, and Taxiway E can be classified as non-standard and has a greater potential for pilot confusion.

The proposed project undertaking will consist of the following:
(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.

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 southwest of Runway 1R-19L and is located outside of the Area of Potential Effects for the proposed Runway 13-31 project. (See Attachment 5 – Wetland Delineation Confirmation).

The proposed project is located within airport property, specifically in Sections 27 and 28 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 or Kaitlyn Wehner at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com. Thank you for your assistance.

Sincerely,

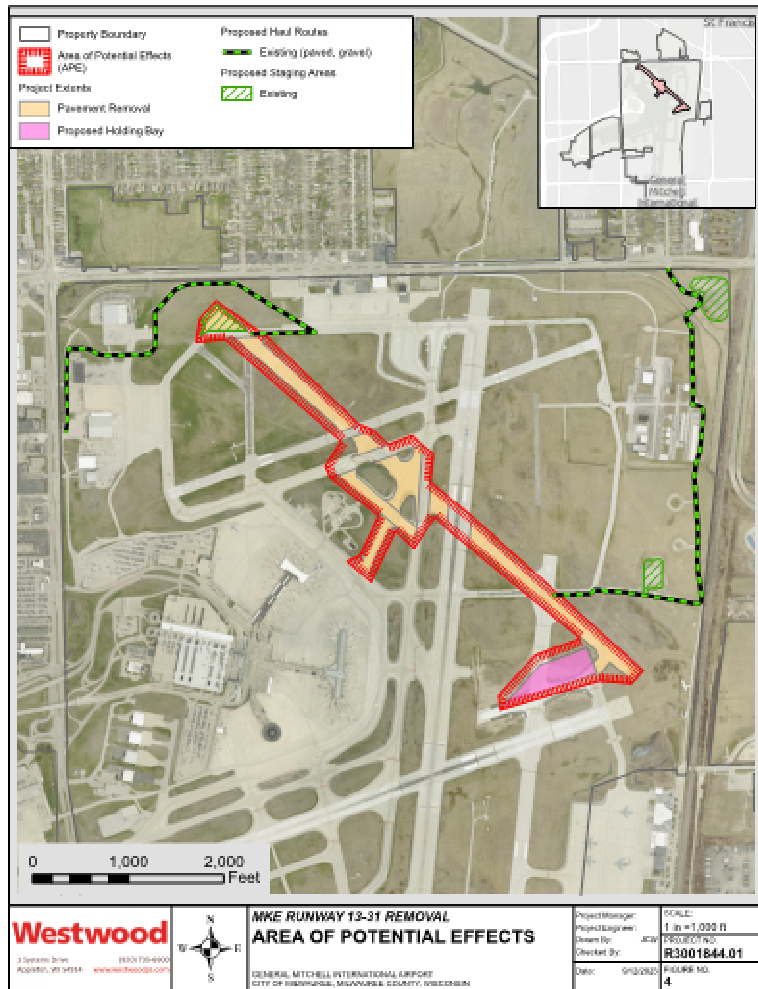
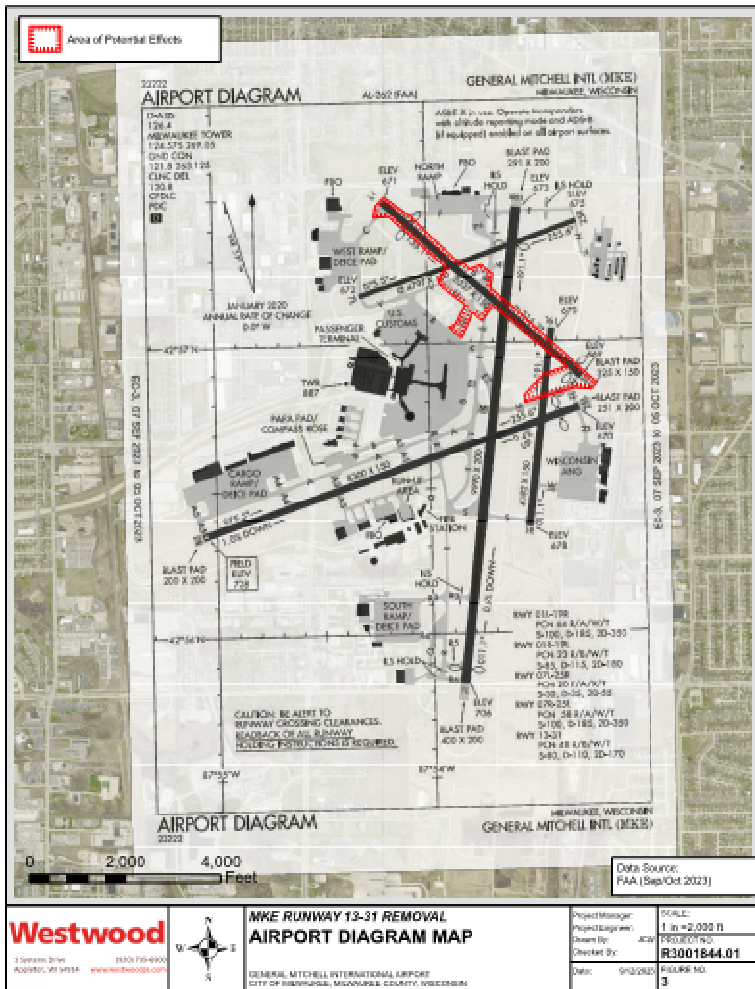
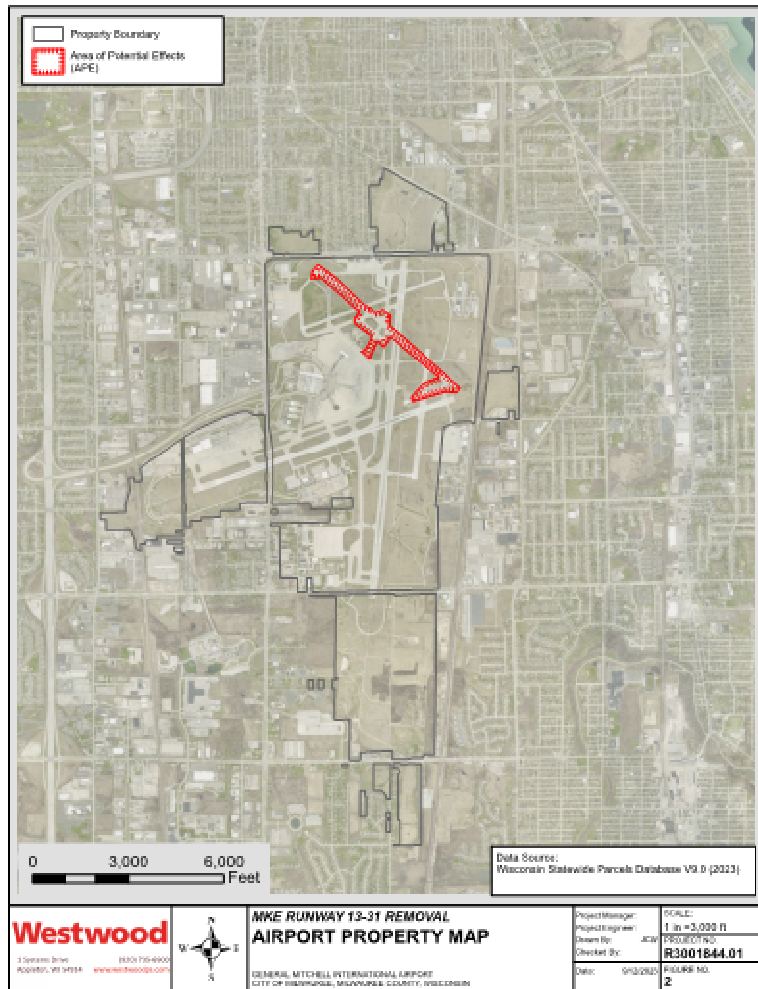
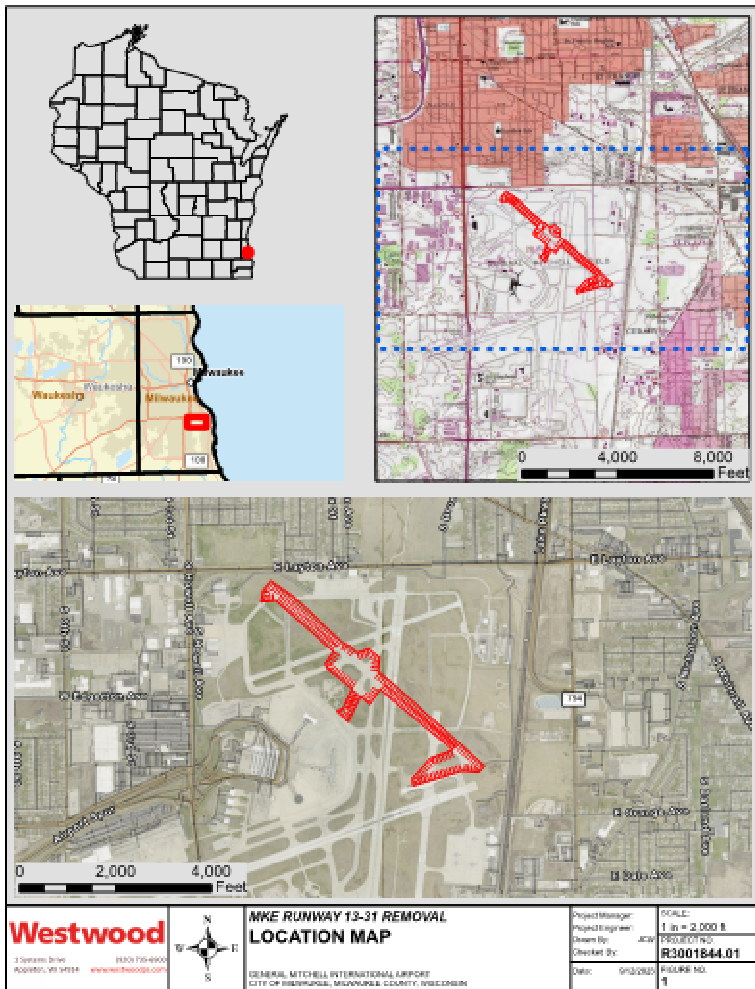


Kaitlyn Wehner
Airport Engineer
Westwood Professional Services

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)



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/ERRReview/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.

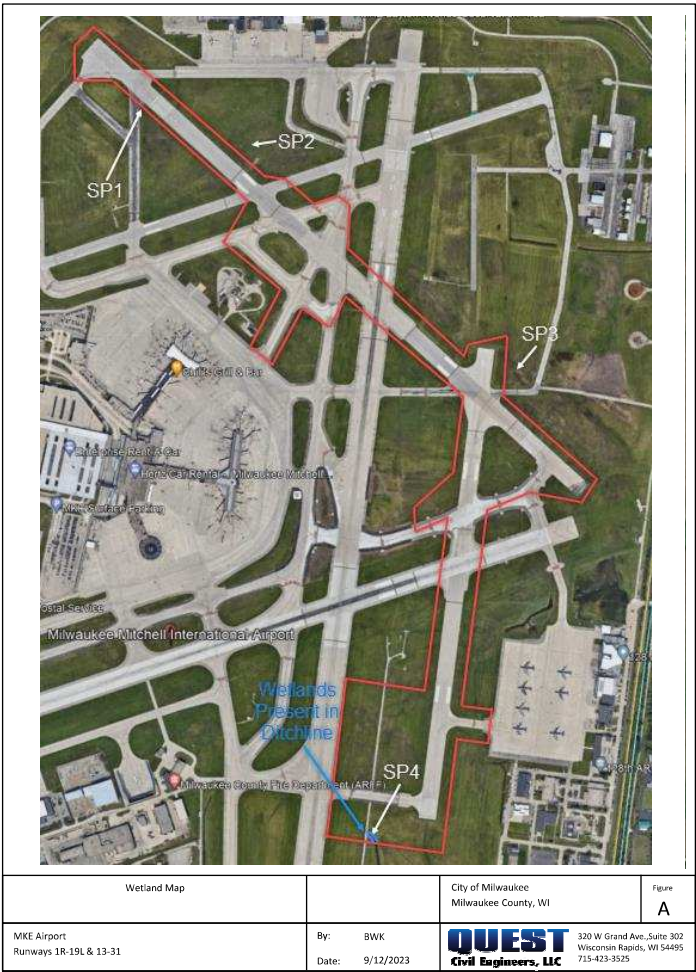
In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

If you have any questions, please call me at (414) 306-6780 or you can reach me by email at 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



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 7 |
| Description: Standing on at intersection of Taxiway U and Taxiway G looking southwest towards passenger terminal. | | |



| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 8 |
| Description: Standing on Runway 13-31 near Runway 7L-25R looking northeast at PAPIs. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 5 |
| Description: Standing on Runway 13-31 near Taxiway G looking northeast. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Taxiway U looking northeast at Taxiway G. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 11 |
| Description: Standing on Runway 13-31 near Taxiway F looking southeast. | | |



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|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 12 |
| Description: Proposed Staging Area northeast of proposed project, looking east. | | |



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|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 9 |
| Description: Standing on Runway 13-31 looking northwest towards Taxiway F. | | |



| | | |
|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 10 |
| Description: Standing on Runway 13-31 near Taxiway F looking northwest. | | |

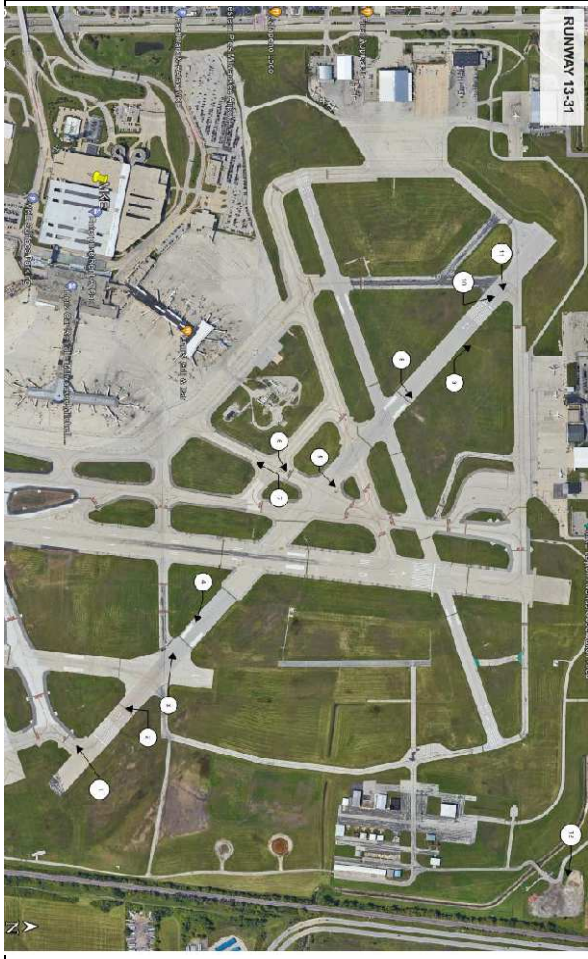


Site Location: General Mitchell International Airport – Decommission Runway 13-31

Description: Site Aerial Overview

Date: N/A

Photo # 13





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

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>
Sent: Wednesday, January 10, 2024 9:14 AM
To: Huff, Leah A CIV CEMVP <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

Westwood
1 Systems Drive
Appleton, WI 54914

westwoodps.com
(888) 937-5150

From: Huff, Leah A CIV CEMVP <Leah.A.Huff@usace.army.mil>
Sent: Wednesday, January 10, 2024 8:55 AM
To: Kaitlyn Wehner <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



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 authorized¹ 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 placements²; 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 activities².

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).

¹ Previously authorized under 33 CFR 330.3 or by a Corps permit.

² 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.³

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 feet⁴ 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.

³ 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.

⁴ 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^{5, 6};
2. Bogs and fens^{5, 7};
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)⁵;
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 Waters⁸, 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

⁵ Information about Wisconsin plant community types may be obtained from <http://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=group&Type=Wetland>.

⁶ 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).

⁷ 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>.

⁸ 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, wetlands@badriver-nsn.gov, and 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. Information regarding existing banks and in-lieu fee programs is available online at 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/.

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.
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. 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 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, nrdirector@badriver-nsn.gov, and 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

St. Paul District Corps of Engineers, Regulatory Division
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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

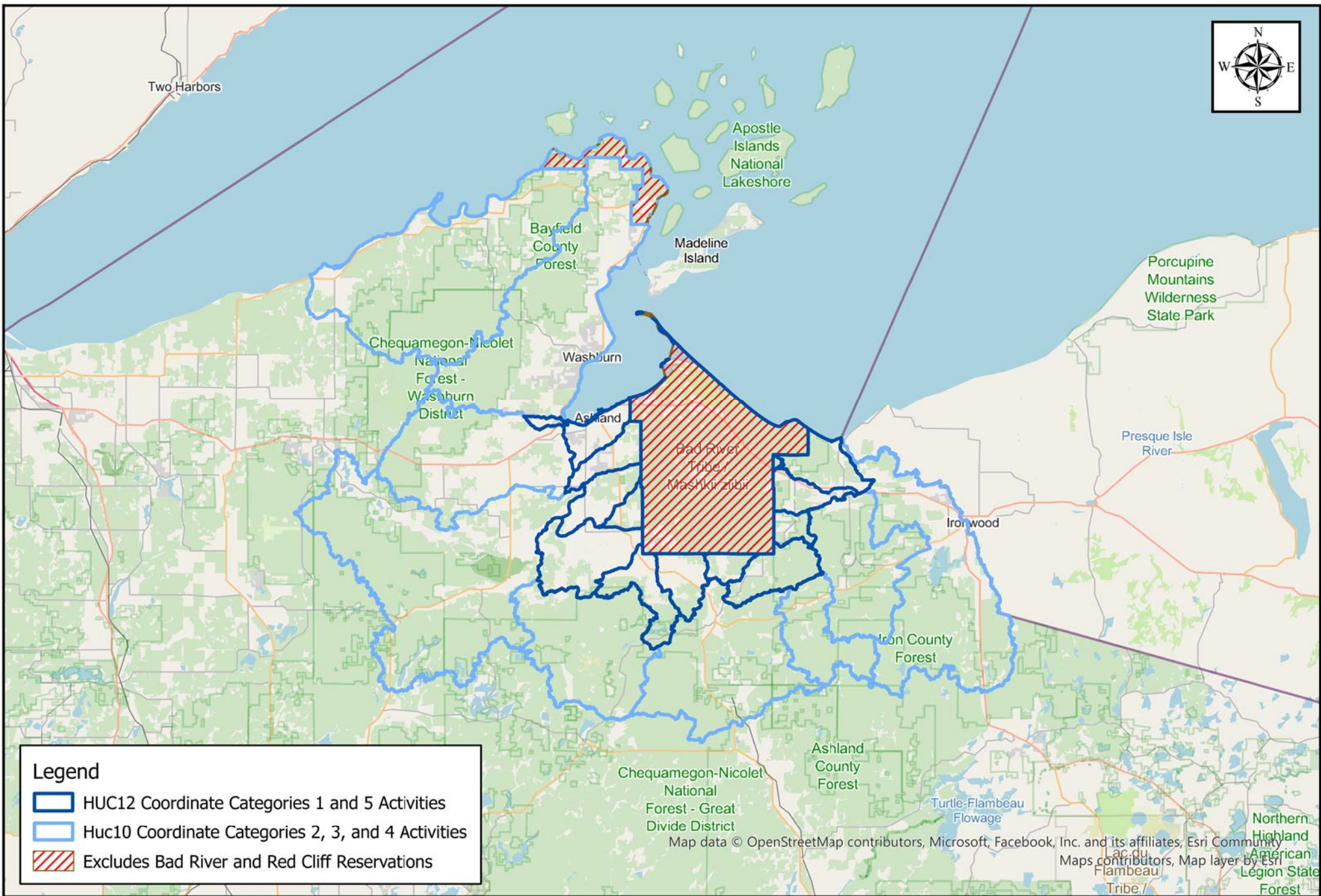
In reviewing the PCN for the proposed activity, the Corps will determine whether the activity authorized by the RGP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific 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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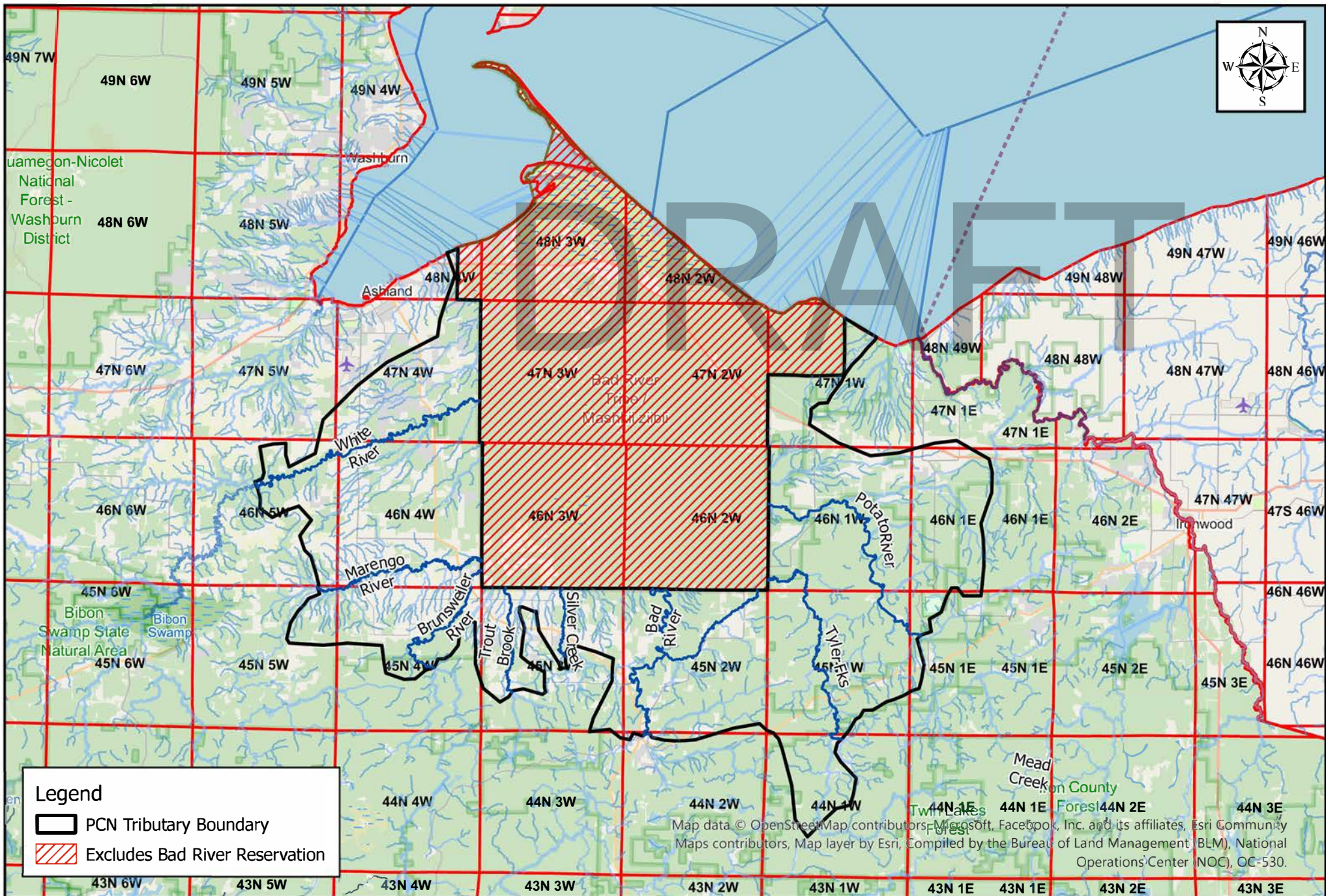


Feet

Map Center: 90.761717°W 46.548825°N

Date: 10/19/2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere



Tributaries subject to PCN in Aquatic Resources item 6, sub 5.

Transportation GP, Map 2

0 12,500 25,000 50,000
Feet

Map Center: 90.639334°W 46.497083°N

Date: 10/23/2023

Coordinate System: NAD 1983 HARN Wisconsin TM
Projection: Transverse Mercator

April 26, 2024

U.S. Army Corps of Engineers – Brookfield Team
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, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Brookfield Team:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Condensed Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Leah Huff, Regulatory Specialist, US Army Corps of Engineers (via email)
Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

U.S. Army Corps of Engineers – Brookfield Team
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, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Brookfield Team:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

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If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Leah Huff, Regulatory Specialist, US Army Corps of Engineers (via email)
Vladimir Jovic, General Mitchell International Airport (via email)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)

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Kaitlyn Wehner

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 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 wetland delineation was performed at the proposed location and submitted to the Wisconsin Department of Natural Resources (WDNR). 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 WDNR 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. Thank you for your assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "Christine Turk".

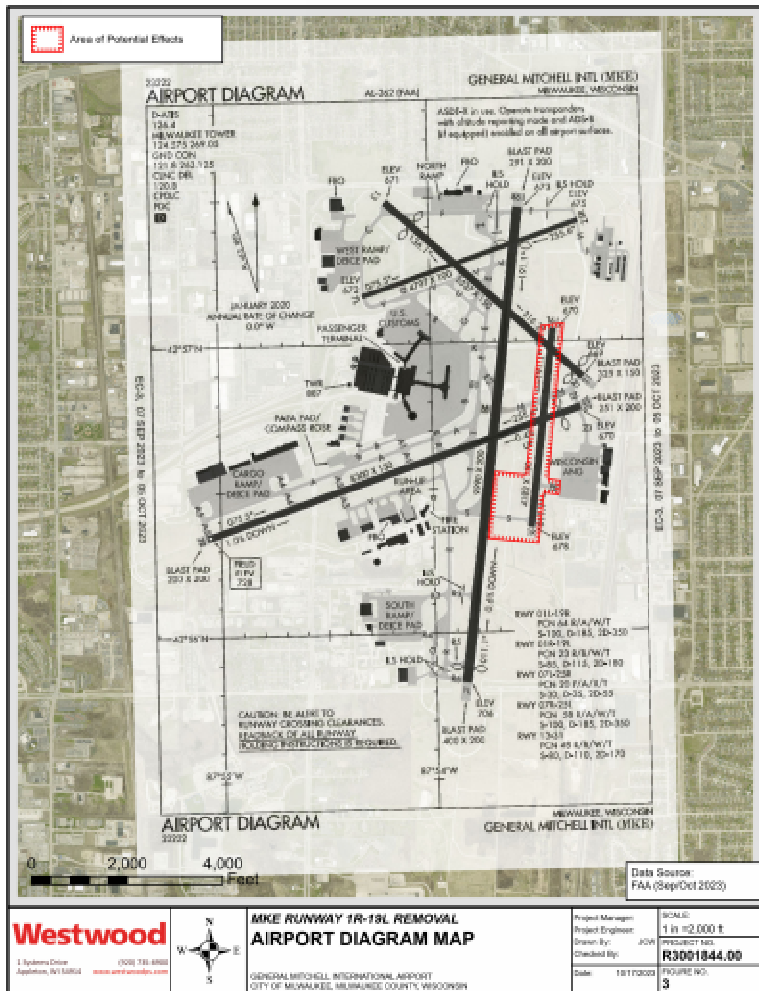
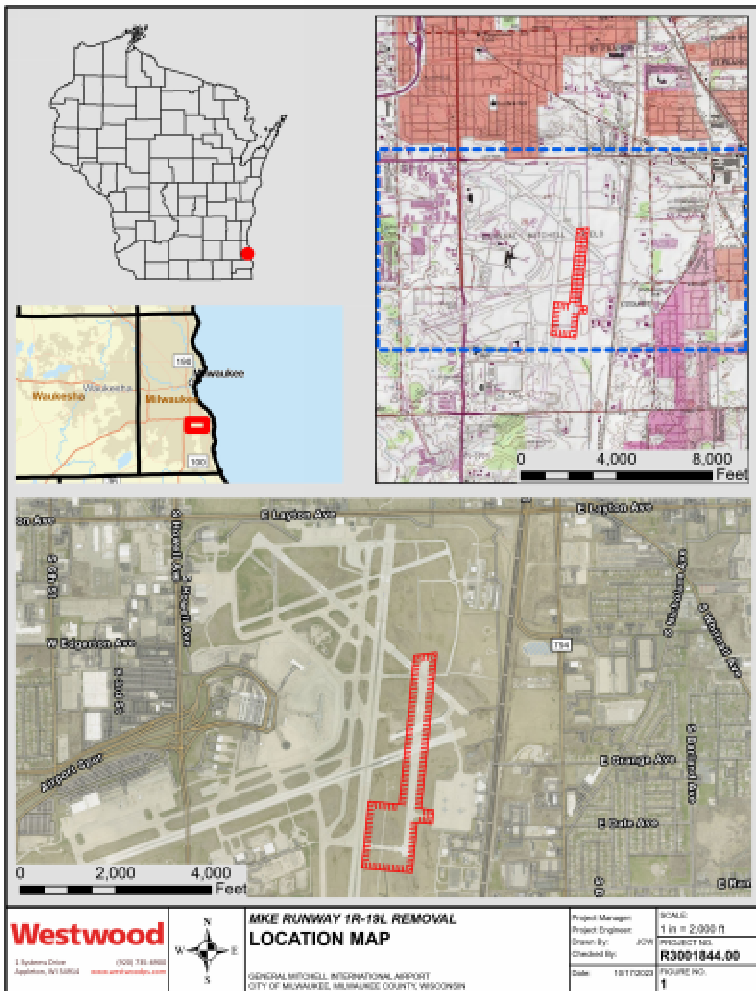
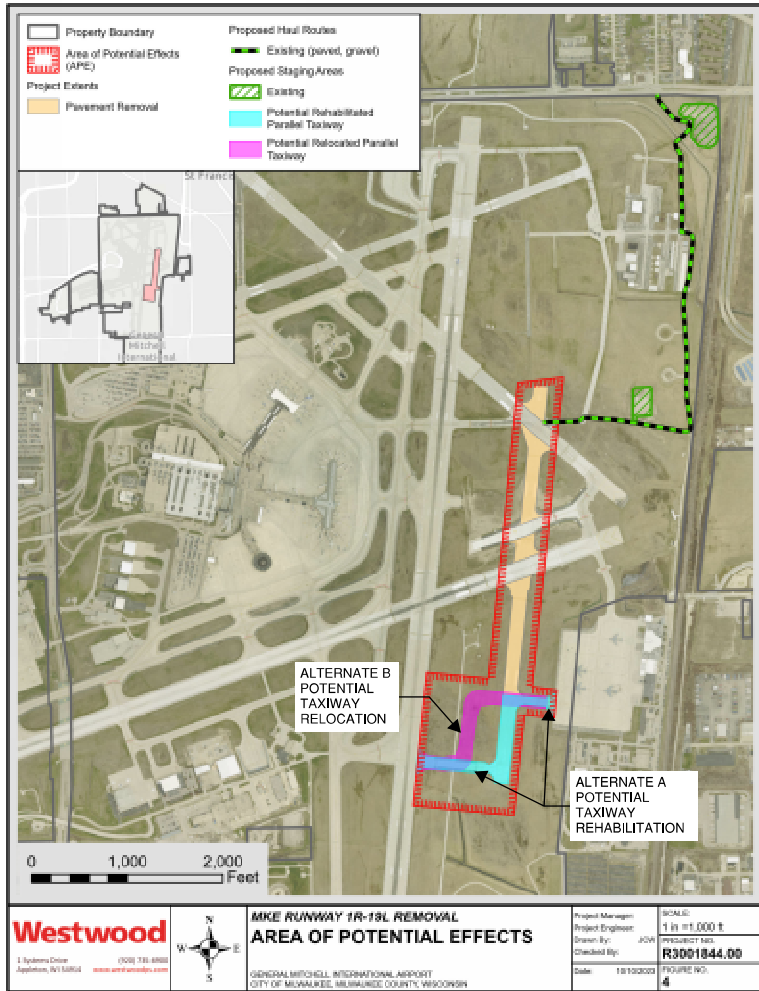
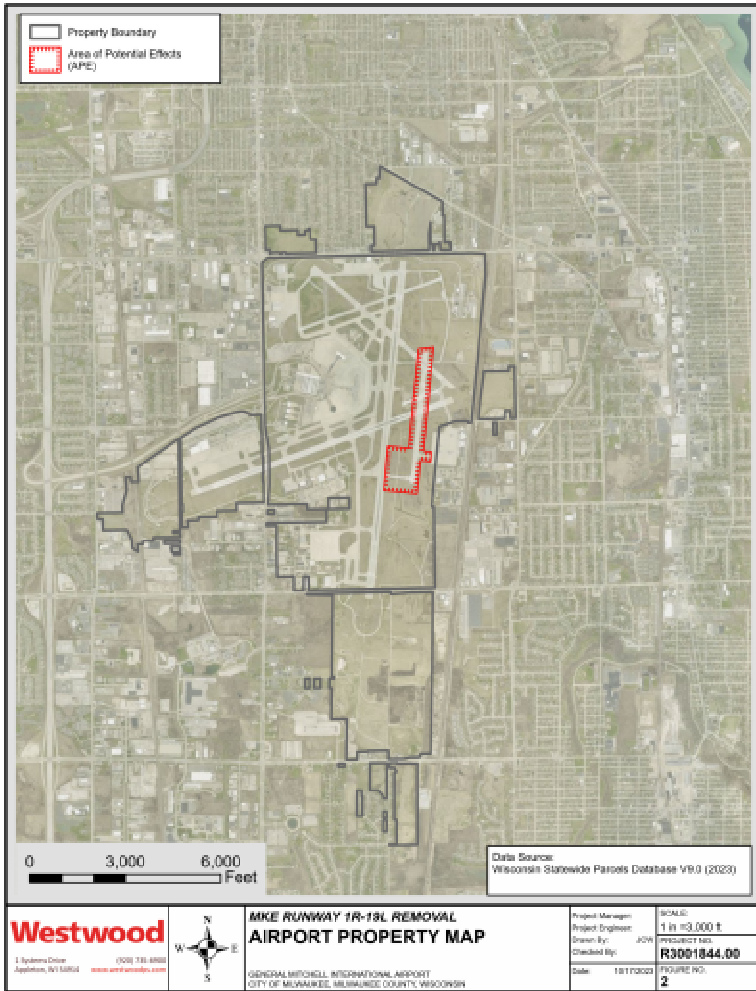
Christine Turk, ACE
Airport Planning Manager
General Mitchell International Airport



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)





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 1-888-436-7463
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/ERRReview/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.

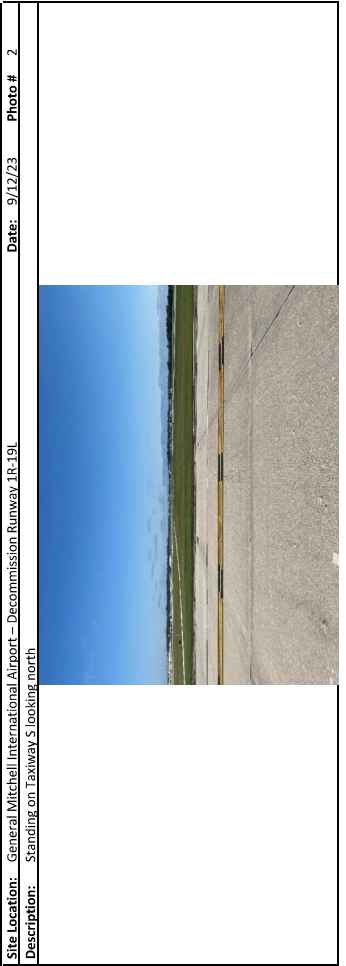
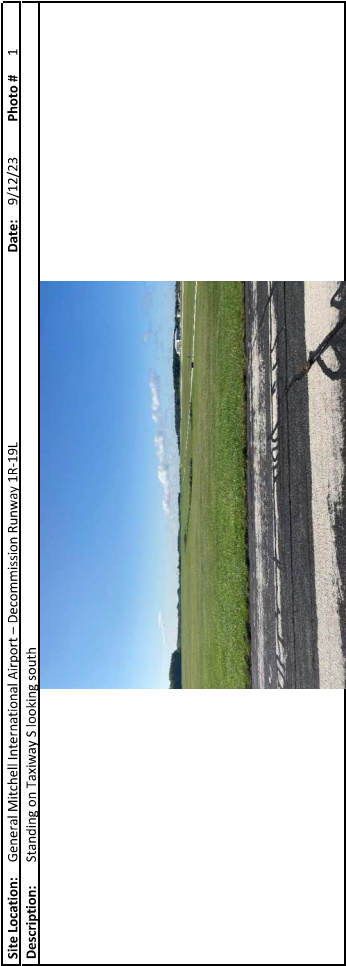
If you have any questions, please call me at (414) 306-6780 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely,

Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure


Email CC: USACE Project Manager
Brian Krostedt, Quest




| | | |
|---|----------------------|------------------|
| 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 | | |
|  | | |

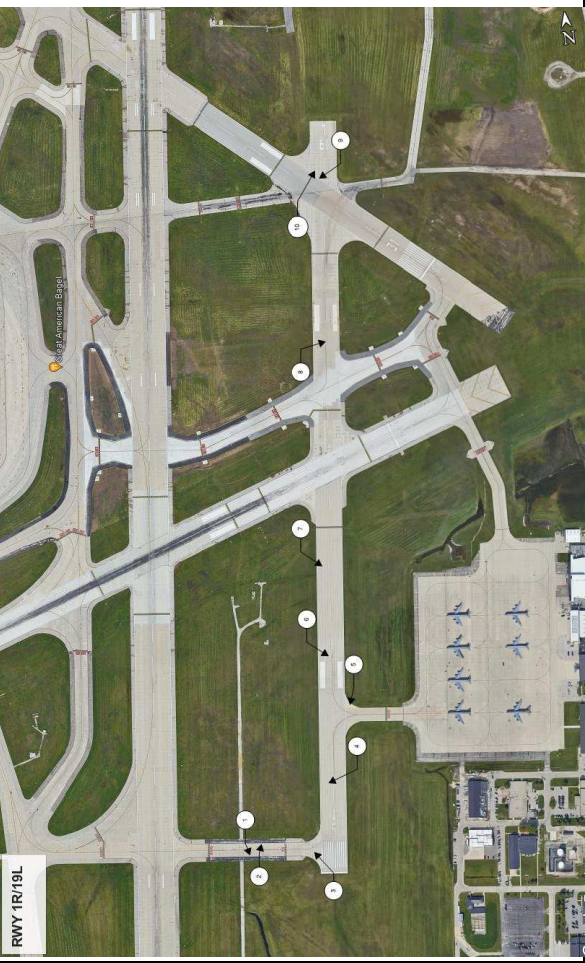
| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Runway 1R-19L north of Taxiway W looking south | | |
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|---|----------------------|------------------|
| 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 | | |
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|--|----------------------|-------------------|
| 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 | | |
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|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 7 |
| Description: Standing on Runway 1R-19L looking south | | |
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|---|----------------------|------------------|
| 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: N/A | Photo # 11 |
| Description: Site Aerial Overview | | |
|  | | |

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



Kaitlyn Wehner

From: Turk, Christine <cturk@mitchellairport.com>
Sent: Wednesday, November 8, 2023 3:32 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 13-31 Decommissioning and Removal Project
Attachments: MKE RWY 13-31 - EPA Initial Project Review Letter.pdf; Attachment 1 - RWY 13-31 Location Map.pdf; Attachment 2 - RWY 13-31 Airport Property Map.pdf; Attachment 3 - RWY 13-31 Airport Diagram Map.pdf; Attachment 4 - RWY 13-31 Area of Potential Effects Map.pdf; Attachment 5 - Wetland Delineation Confirmation.pdf; Attachment 6 - RWY 13-31 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 13-31 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 13-31 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 13-31 (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 improve safety by removing non-standard runway/taxiway intersections.

Currently, Runway 13-31 is 5,537 feet long and 150 feet wide with numerous connecting taxiways (See Attachment 3 – Airport Diagram Map). Runway 13-31 primarily serves general aviation aircraft. Currently the intersection of Runway 13-31, Taxiway G, and Taxiway E can be classified as non-standard and has a greater potential for pilot confusion.

The proposed project undertaking will consist of the following:

(See Attachment 4 – Area of Potential Effects)

- Decommissioning of Runway 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.



A wetland delineation was performed at the proposed location and submitted to the Wisconsin Department of Natural Resources (WDNR). The delineation identified wetlands present in a ditch line southwest of Runway 1R-19L and is located outside of the Area of Potential Effects for the proposed project. (See Attachment 5 – Wetland Delineation Confirmation).

The proposed project area was entered into the WDNR 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 the existing operational conditions, no project forecast year, and with project forecast year.

The proposed project is located within airport property, specifically in Sections 27 and 28 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. Thank you for your assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "Christine Turk".

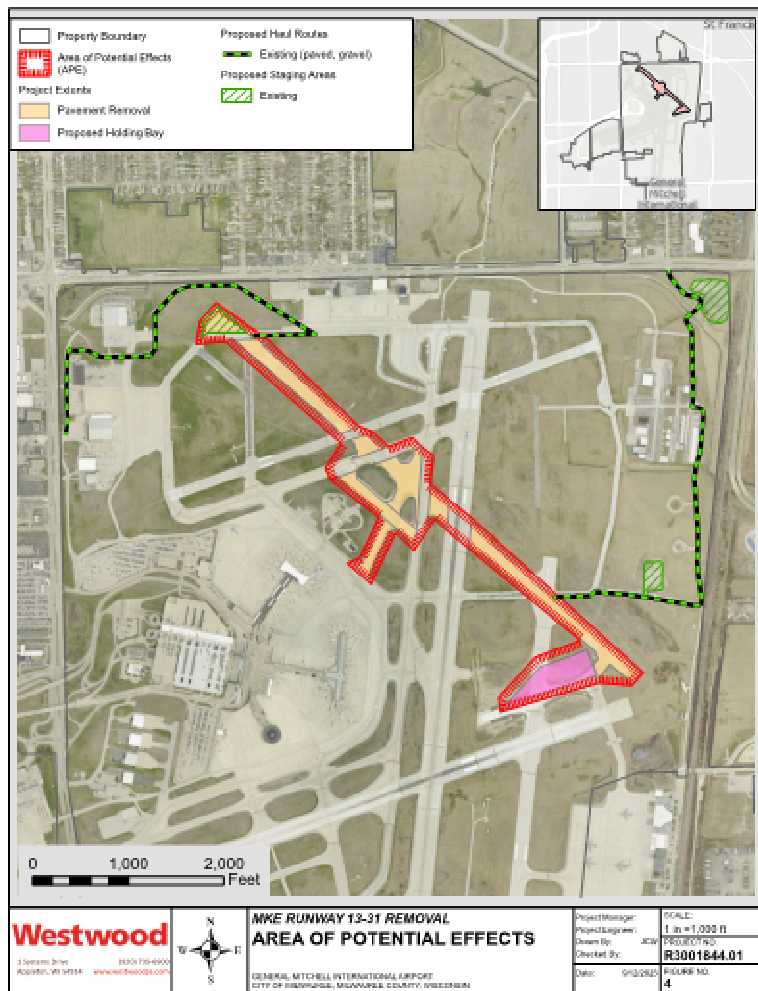
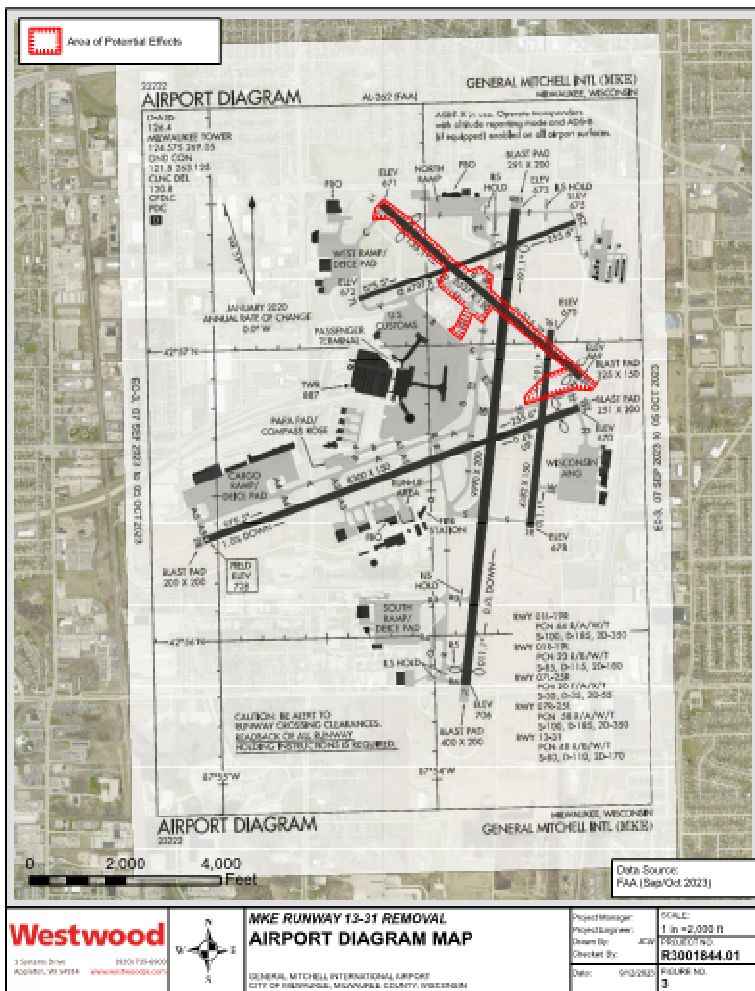
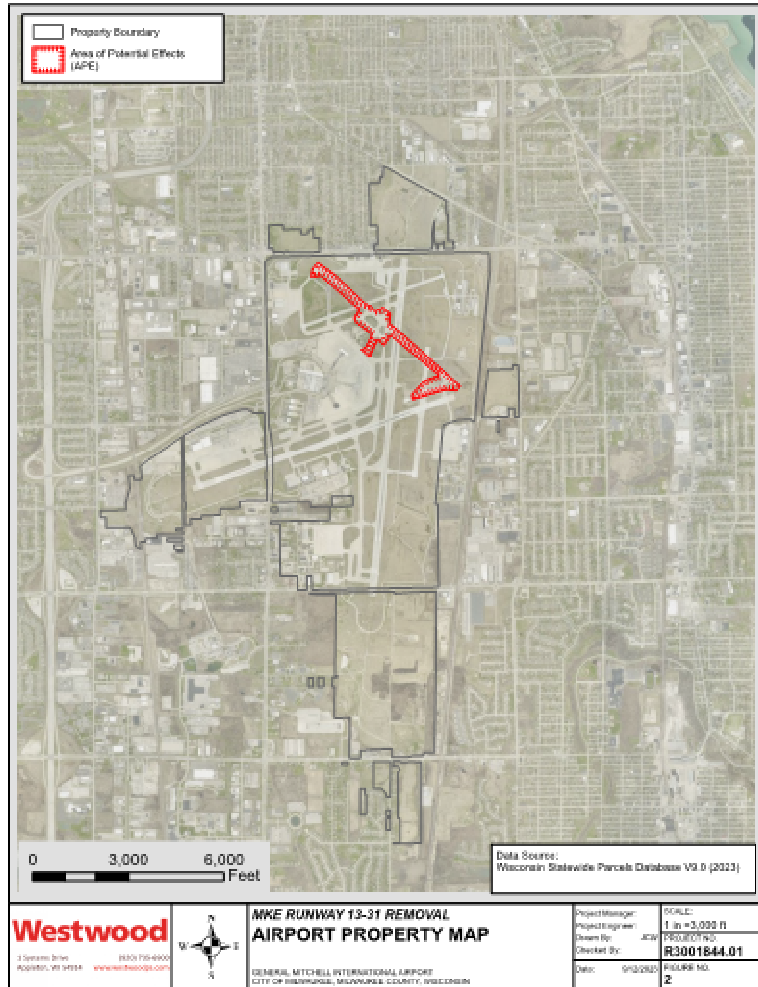
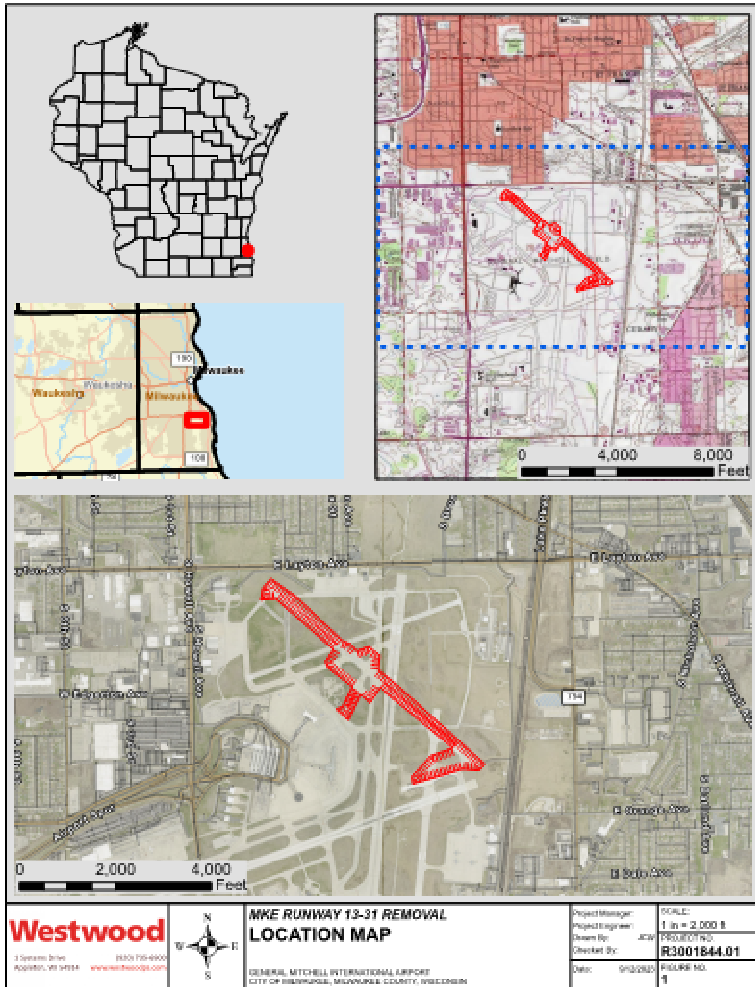
Christine Turk, ACE
Airport Planning Manager
General Mitchell International Airport



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)



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/ERRReview/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) 306-6780 or you can reach me by email at 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



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 7 |
| Description: Standing on at intersection of Taxiway U and Taxiway G looking southwest towards passenger terminal. | | |



| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 8 |
| Description: Standing on Runway 13-31 near Runway 7L-25R looking northeast at PAPIs. | | |



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 5 |
| Description: Standing on Runway 13-31 near Taxiway G looking northeast. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Taxiway U looking northeast at Taxiway G. | | |



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|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 11 |
| Description: Standing on Runway 13-31 near Taxiway F looking southeast. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 12 |
| Description: Proposed Staging Area northeast of proposed project, looking east. | | |



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| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 9 |
| Description: Standing on Runway 13-31 looking northwest towards Taxiway F. | | |



| | | |
|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 10 |
| Description: Standing on Runway 13-31 near Taxiway F looking northwest. | | |

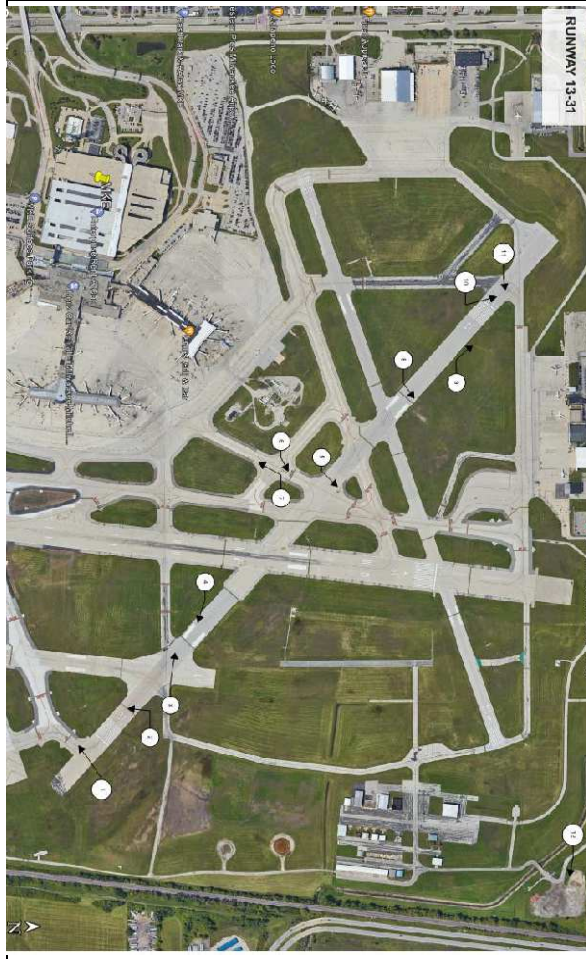


Site Location: General Mitchell International Airport – Decommission Runway 13-31

Description: Site Aerial Overview

Date: N/A

Photo # 13



April 26, 2024

Krystle Z. McClain
NEPA & EJ Programs Supervisor
U.S. Environmental Protection Agency, Region 5
77 W Jackson Blvd.
Chicago, IL 60604
Via Electronic Mail Only to r5nepa@epa.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. McClain:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for a proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Krystle Z. McClain
NEPA & EJ Programs Supervisor
U.S. Environmental Protection Agency, Region 5
77 W Jackson Blvd.
Chicago, IL 60604
Via Electronic Mail Only to r5nepa@epa.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. McClain:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for a proposed Runway 13/31 decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

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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
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@stcroixojibwe-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. [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, 5th Floor South, Madison, WI 53705

Thank you,

Bureau of Aeronautics Environmental Team

DOTBOAEnvironmental@dot.wi.gov

Mallory Palmer | (608) 261-5861 | malloryk.palmer@dot.wi.gov

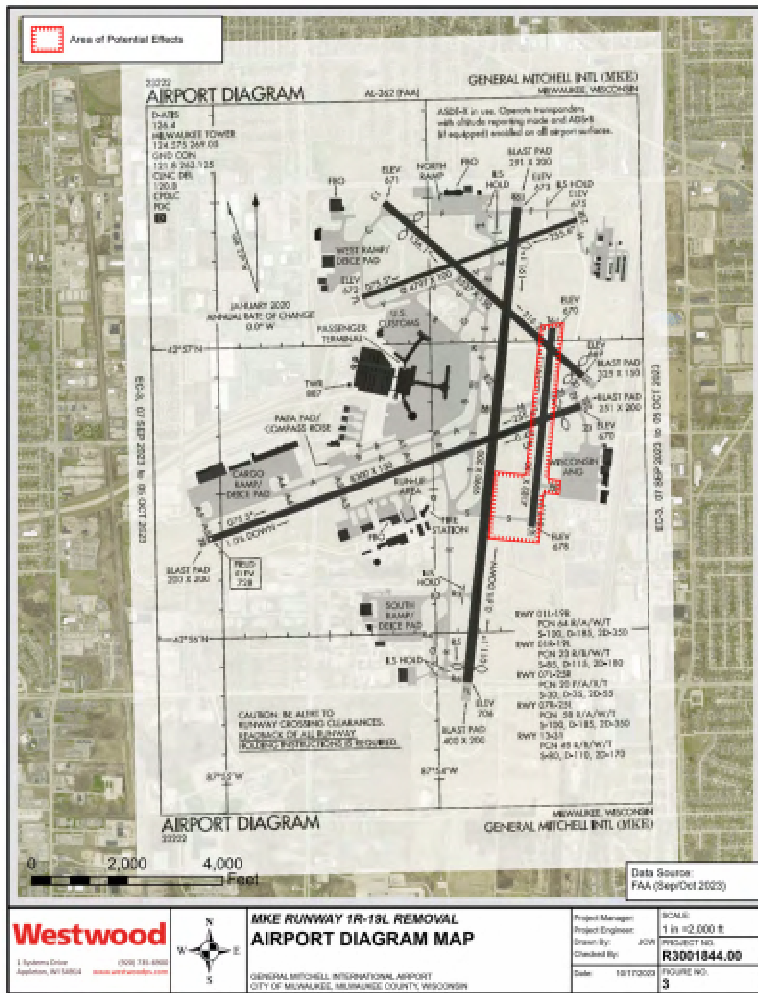
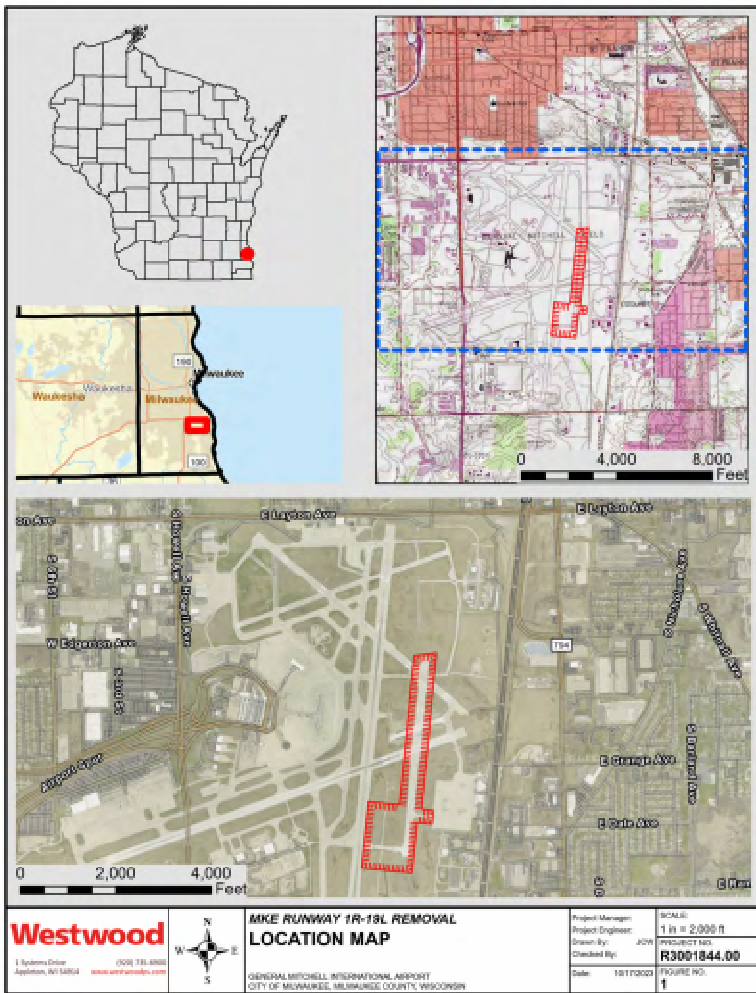
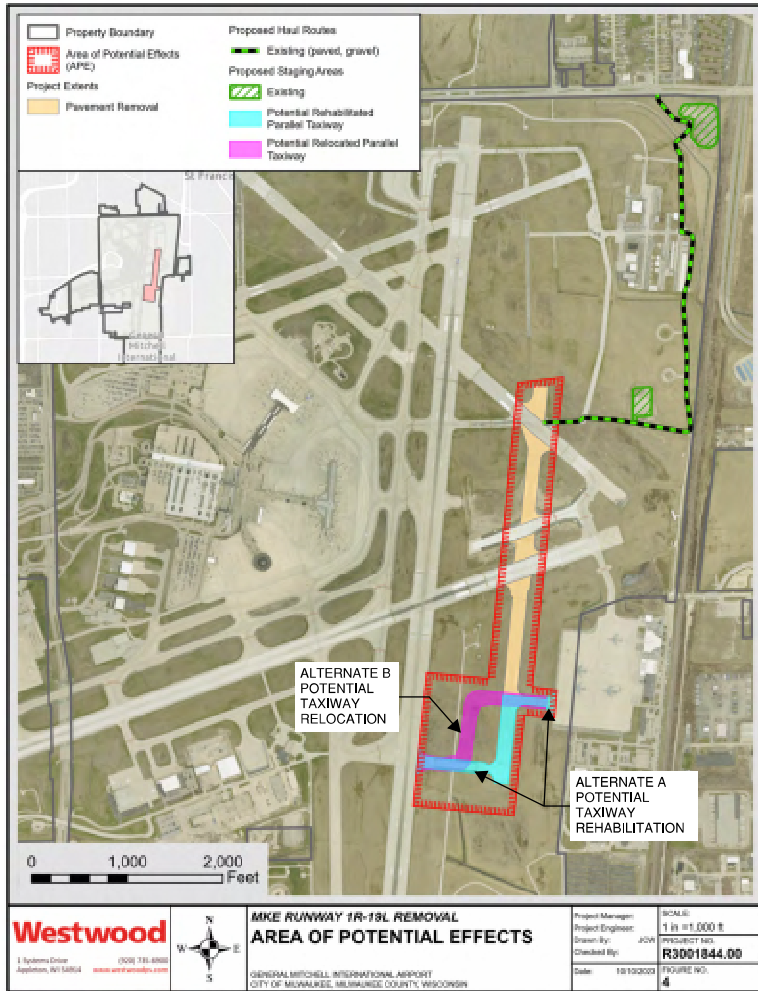
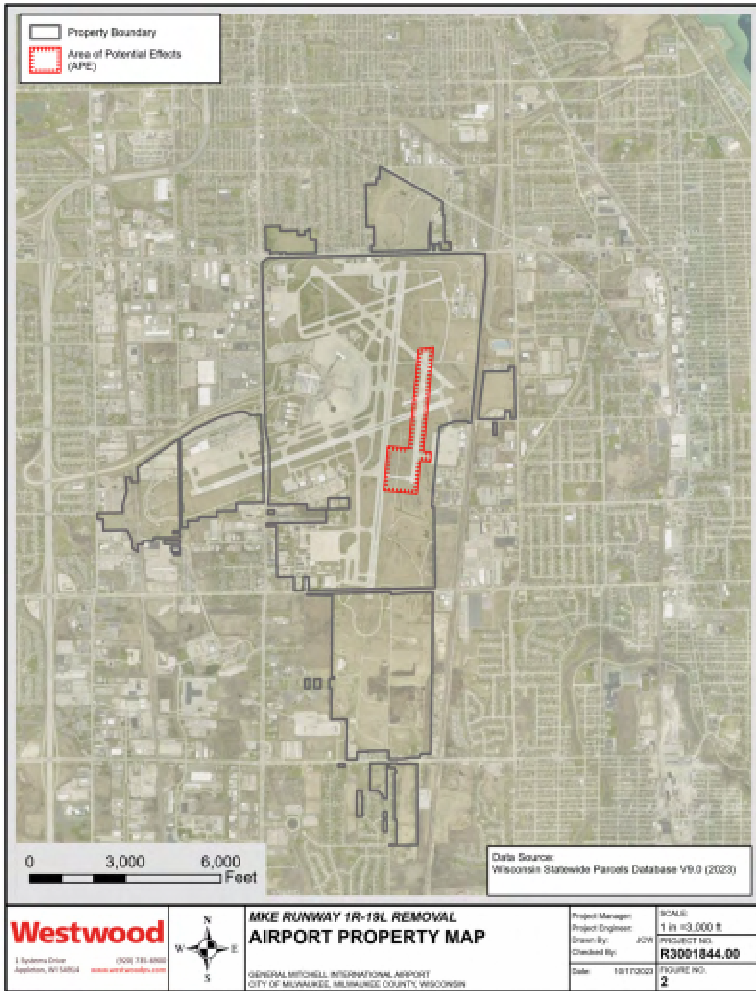
Kelly Halada | (608) 267-3633 | kelly.halada@dot.wi.gov

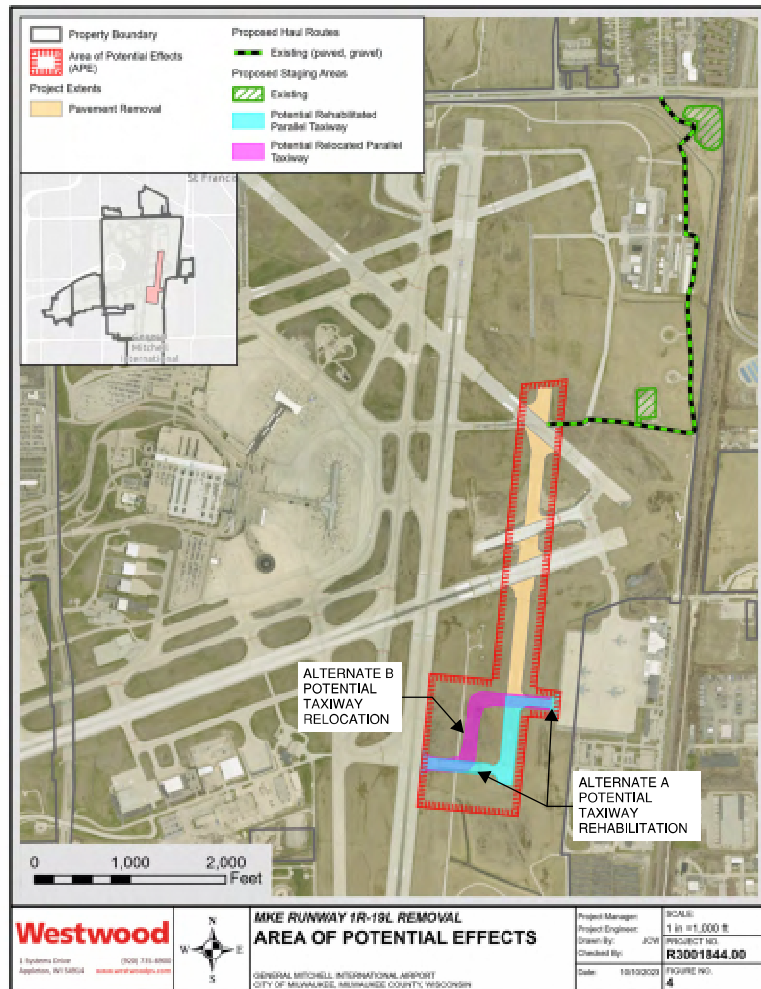
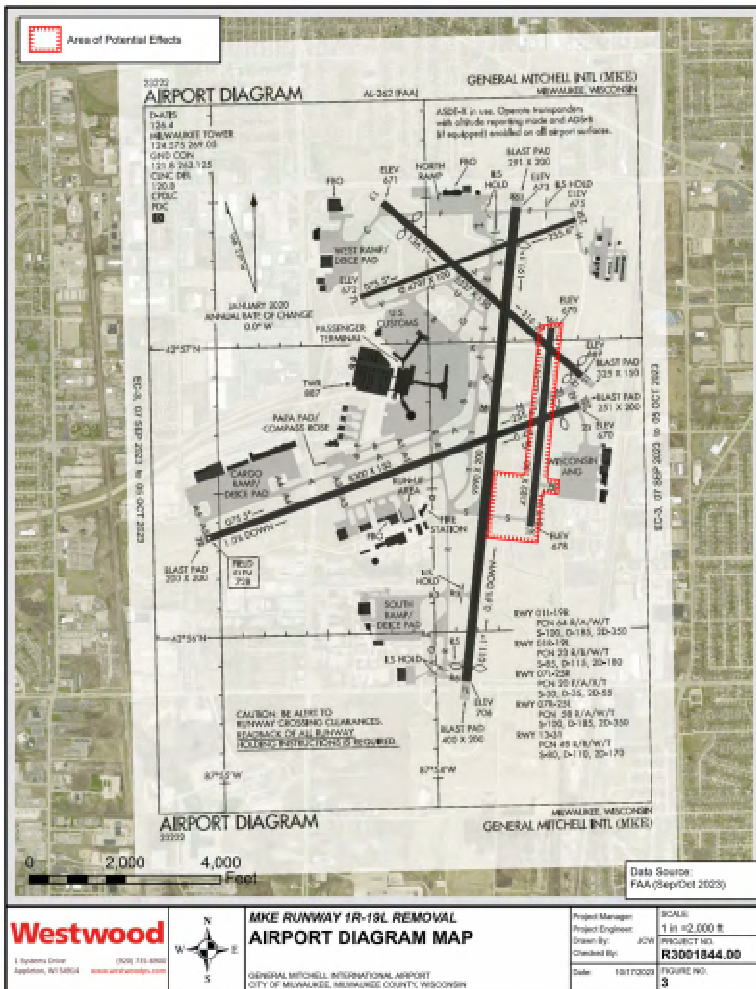
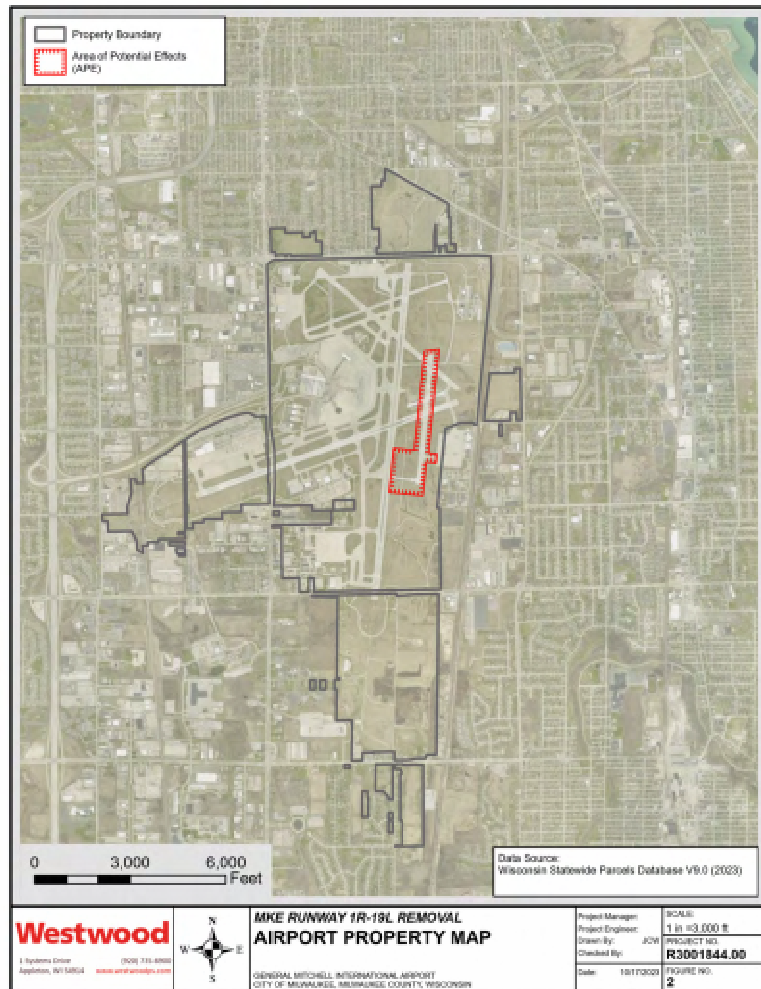
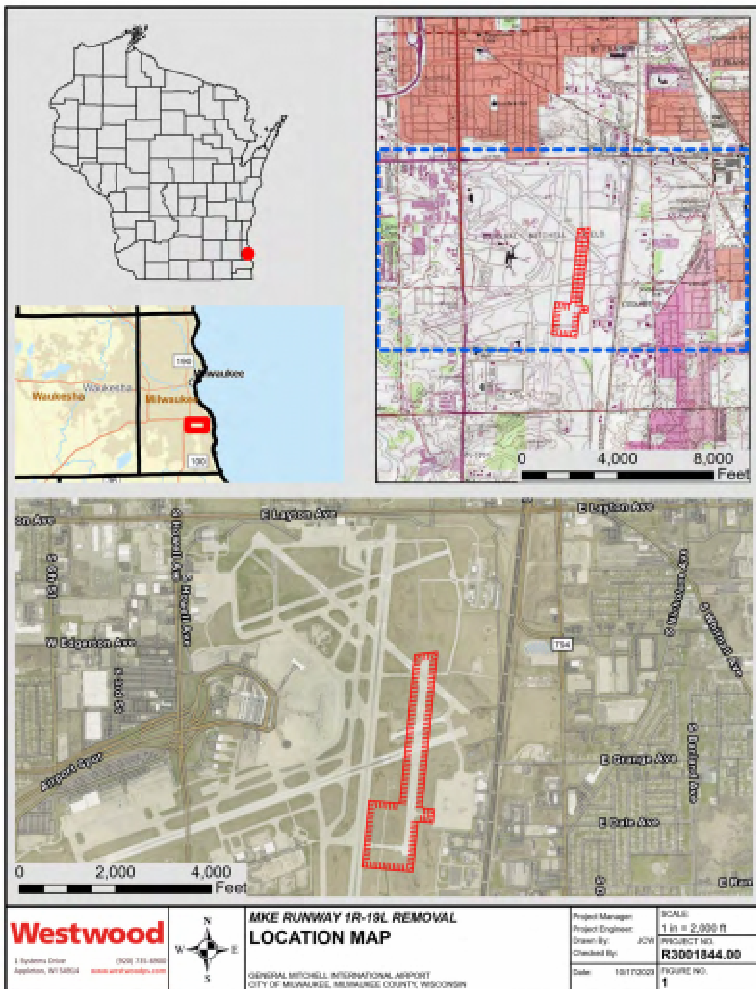


Attachments: Project Location Maps (Site Location Map, Airport Property Map, Airport Diagram Map, Area of Potential Effects Map)

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





Kaitlyn Wehner

From: Weiss, Justin <jweiss@mitchellairport.com>
Sent: Friday, February 2, 2024 12:28 PM
To: Kaitlyn Wehner
Subject: FW: WisDOT request for comment and notification of Federal undertaking under 36 CFR 800 (0740-40-114)

Follow Up Flag: Follow up
Flag Status: Completed

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

Kaitlyn,

Organizing some emails today and not sure if I ever passed this one along. See below for a response to the tribal letters for the EAs

Thanks,

Justin Weiss, P.E.

Project Manager – General Mitchell International Airport
5300 South Howell Avenue
Milwaukee, WI 53207
Email: jweiss@mitchellairport.com
Office: 414-747-6233
Cell: 414-309-4694

From: Palmer, Mallory K - DOT <malloryk.palmer@dot.wi.gov>
Sent: Monday, December 11, 2023 10:24 AM
To: Turk, Christine <cturk@mitchellairport.com>; Weiss, Justin <jweiss@mitchellairport.com>
Subject: FW: WisDOT request for comment and notification of Federal undertaking under 36 CFR 800 (0740-40-114)

No action needed on this other than to save a copy of the email and add it to the environmental documentation.

Mallory K. Palmer

Aeronautical Environmental Coordinator

Wisconsin Department of Transportation | Bureau of Aeronautics
malloryk.palmer@dot.wi.gov | 608.261.5861



From: Benjamin Rhodd <Benjamin.Rhodd@fcp-nsn.gov>
Sent: Monday, December 11, 2023 10:11 AM

To: Palmer, Mallory K - DOT <malloryk.palmer@dot.wi.gov>

Subject: RE: WisDOT request for comment and notification of Federal undertaking under 36 CFR 800 (0740-40-114)

CAUTION: This email originated from outside the organization.

Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Palmer,

Pursuant to consultation under Section 106 of the National Historic Preservation Act (1966 as amended) the Forest County Potawatomi Community (FCPC), a Federally Recognized Native American Tribe, reserves the right to comment on Federal undertakings, as defined under the act inclusive of licensing, permitting or use of federal funds by a delegated agency.

The Tribal Historic Preservation Office (THPO) staff has reviewed the information you provided for this project. Upon review of site data and supplemental cultural history within our Office, the FCPC THPO is pleased to offer a finding of No Historic Properties affected of significance to the FCPC, however, we request to remain as a consulting party for this project.

As a standard caveat sent with each proposed project reviewed by the FCPC THPO, the following applies. In the event an Inadvertent Discovery (ID) occurs at any phase of a project or undertaking as defined, and human remains or archaeologically significant materials are exposed as a result of project activities, work should cease immediately. The Tribe(s) must be included with the SHPO in any consultation regarding treatment and disposition of an ID find.

Thank you for protecting cultural and historic properties and if you have any questions or concerns, please contact me at the email or number listed below.

Respectfully,

Ben Rhodd, MS, RPA, Tribal Historic Preservation Officer
Forest County Potawatomi
Historic Preservation Office
8130 Mish ko Swen Drive, P.O. Box 340, Crandon, Wisconsin 54520
P: 715-478-7354 C: 715-889-0202 Main: 715-478-7474
Email: Benjamin.Rhodd@fcp-nsn.gov
www.fcpotawatomi.com

From: DOT BOA Environmental <DOTBOAEnvironmental@dot.wi.gov>

Sent: Friday, December 8, 2023 8:41:43 AM (UTC-06:00) Central Time (US & Canada)

To: DOT DL THPOs <DOTDLTHPOs@dot.wi.gov>

Cc: MikeW <Mikew@badriver-nsn.gov>; FCP Grants Chairman <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@stcroixjibwe-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)

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, 5th Floor South, Madison, WI 53705

Thank you,

Bureau of Aeronautics Environmental Team

DOTBOAEnvironmental@dot.wi.gov

Mallory Palmer | (608) 261-5861 | malloryk.palmer@dot.wi.gov

Kelly Halada | (608) 267-3633 | 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

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MILWAUKEE COUNTY HISTORICAL SOCIETY

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Kaitlyn Wehner

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

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 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 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. Thank you for your assistance.

Sincerely,

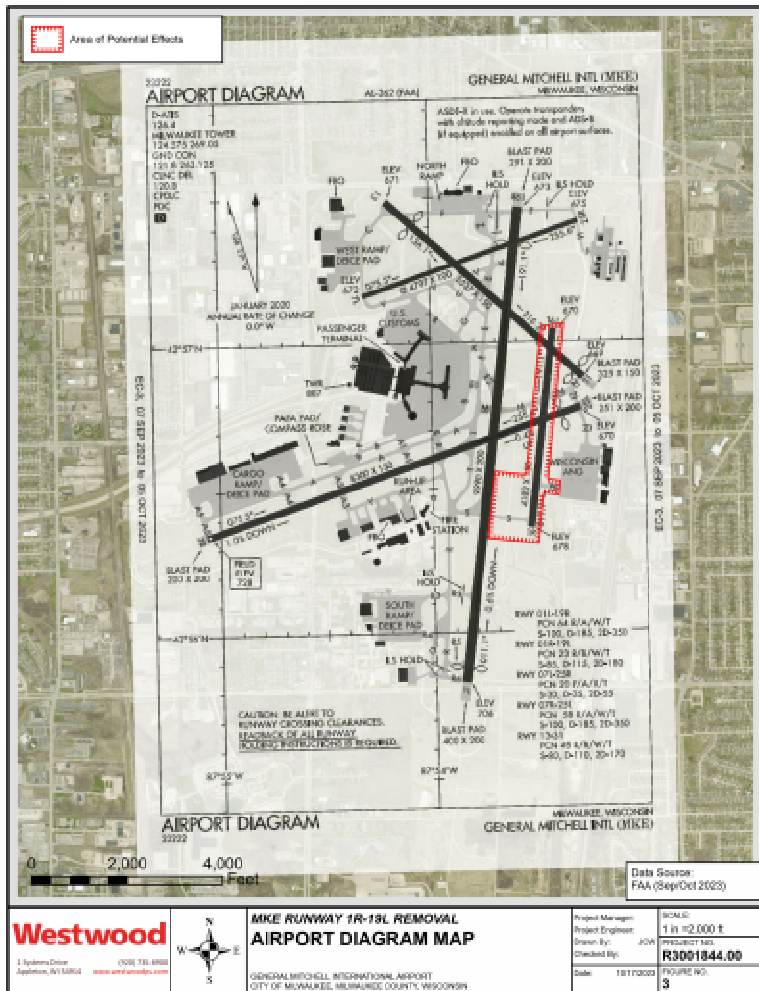
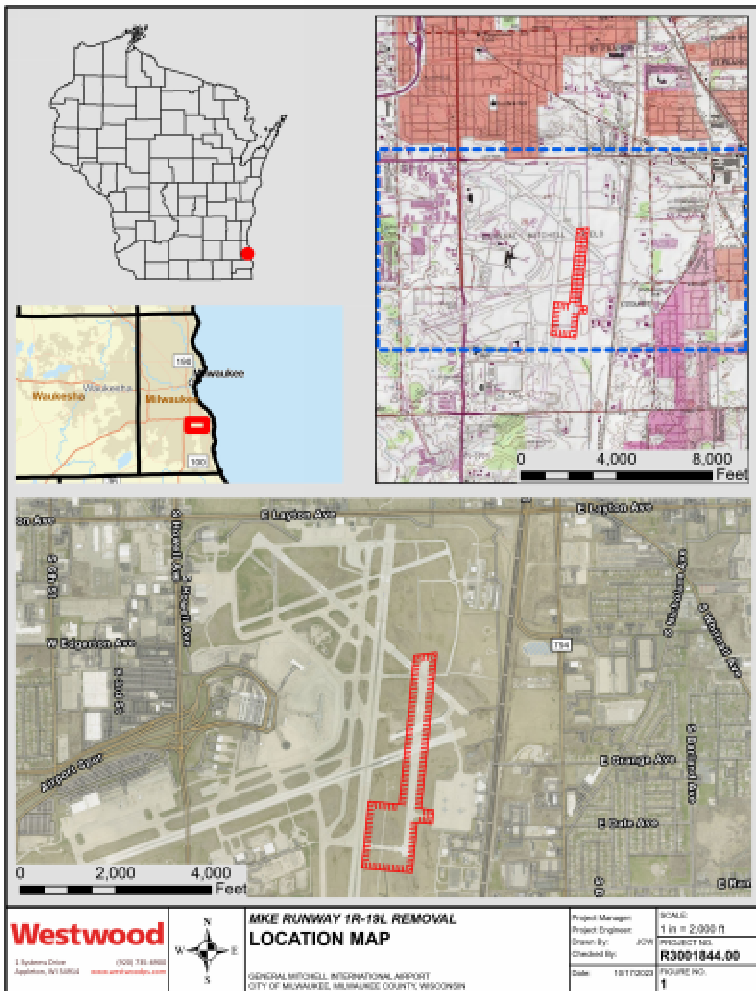
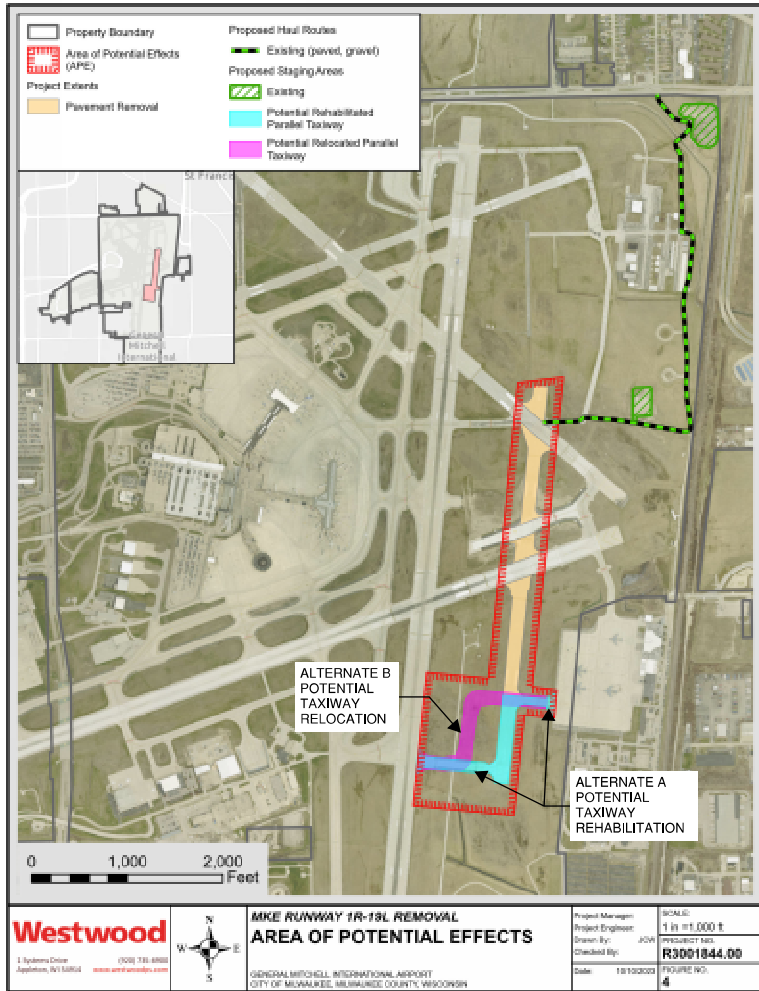
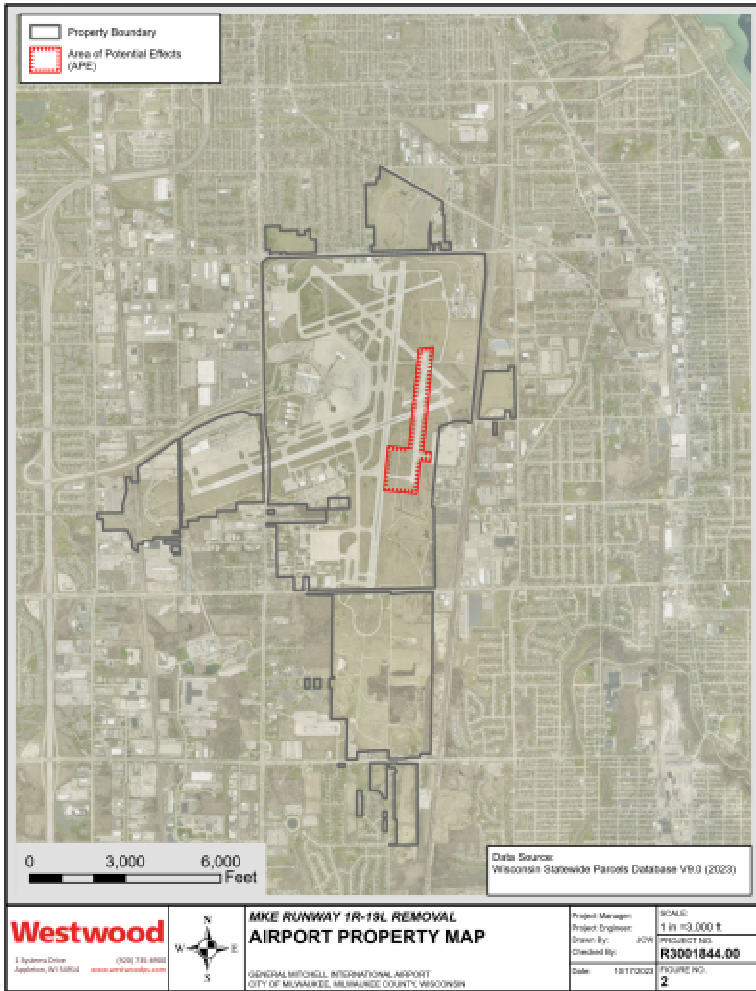
A handwritten signature in black ink, appearing to read "Christine Turk".

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)



Kaitlyn Wehner

From: Turk, Christine <cturk@mitchellairport.com>
Sent: Wednesday, November 8, 2023 12:56 PM
To: info@milwaukeehistory.net
Cc: Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner
Subject: Milwaukee Mitchell International Airport Proposed Runway 13-31 Decommissioning and Removal Project
Attachments: MKE RWY 13-31 - Milwaukee Co Historical Society Letter.pdf; Attachment 1 - RWY 13-31 Location Map.pdf; Attachment 2 - RWY 13-31 Airport Property Map.pdf; Attachment 3 - RWY 13-31 Airport Diagram Map.pdf; Attachment 4 - RWY 13-31 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 13-31 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

RE: Milwaukee General Mitchell International Airport
Proposed Runway 13-31 Decommissioning and Removal

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- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.

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. Thank you for your assistance.

Sincerely,

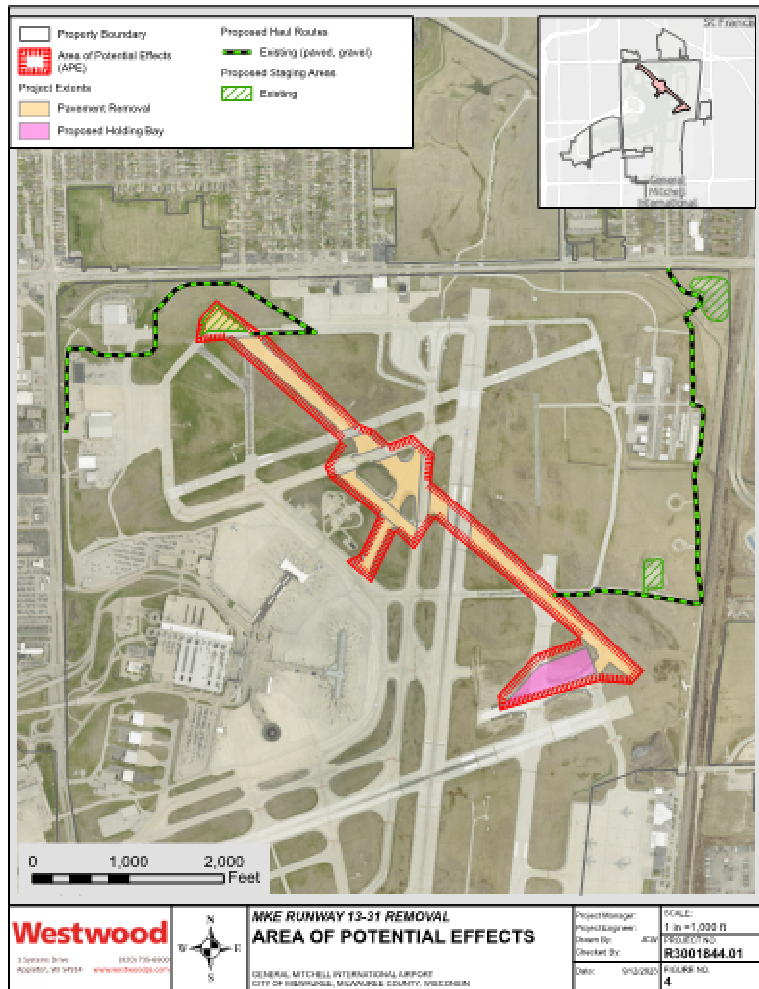
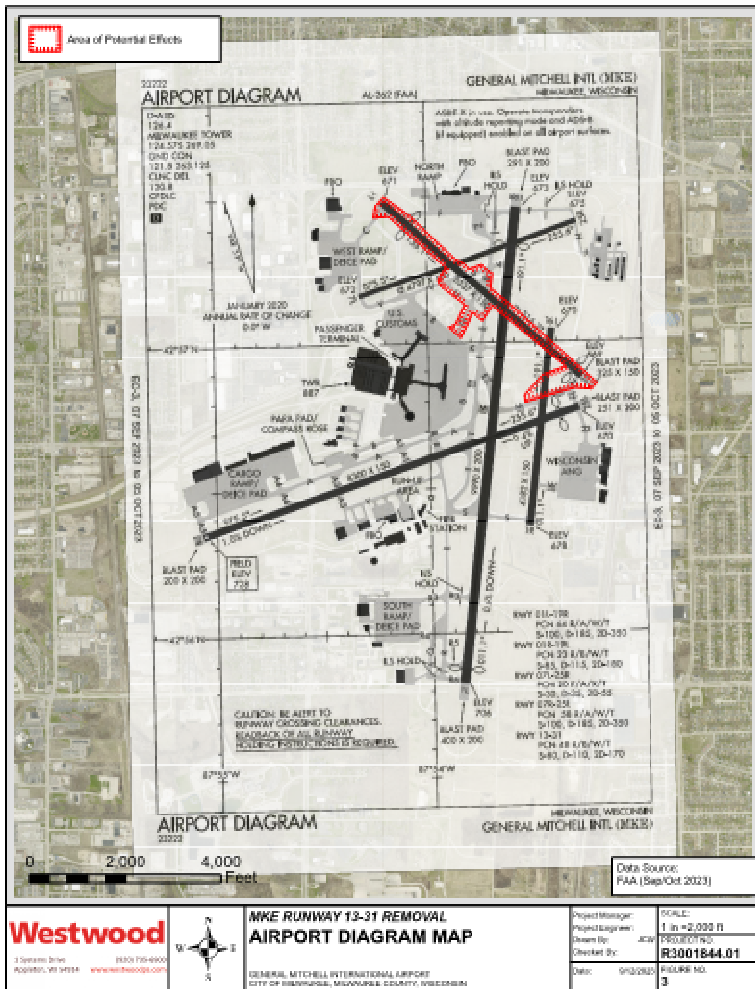
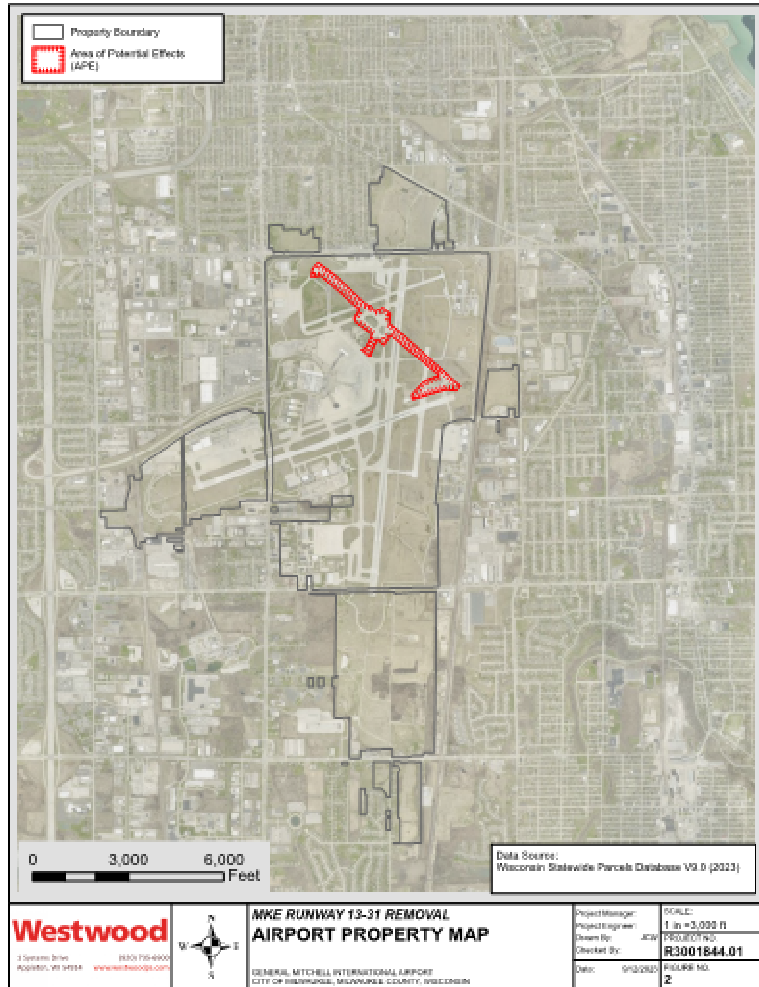
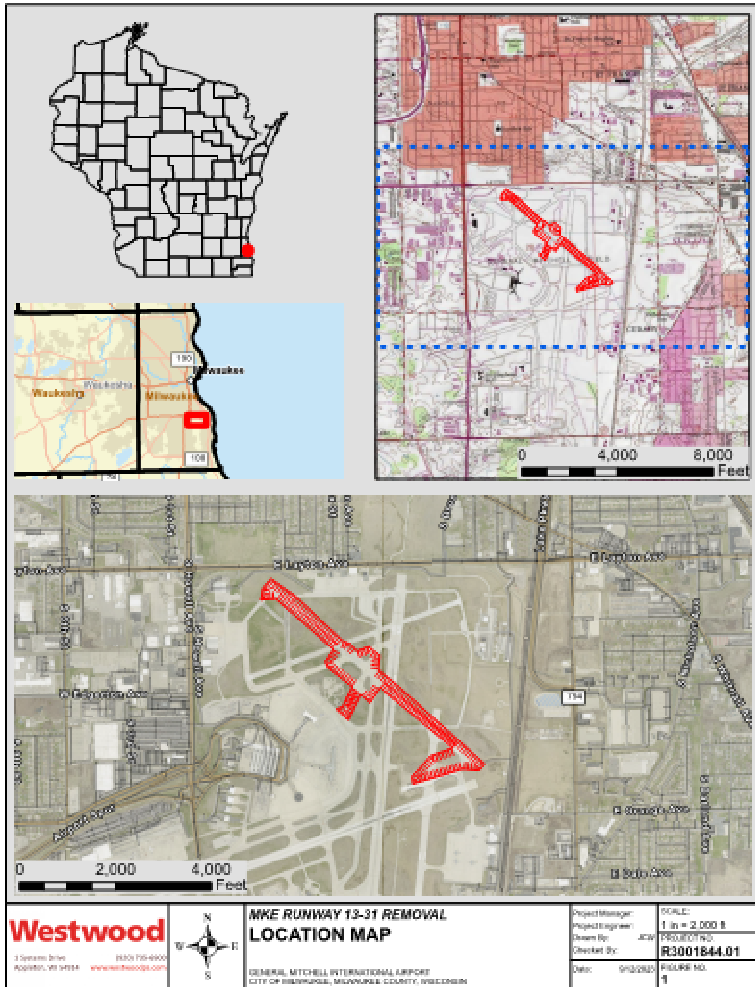
A handwritten signature in black ink, appearing to read "Christine Turk". The signature is fluid and cursive, with the first name "Christine" written in a larger, more prominent script than the last name "Turk".

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)



MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

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Kaitlyn Wehner

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

RE: Milwaukee General Mitchell International Airport

Proposed Runway 1R-19L Decommissioning and Removal

Dear Ms. Klappa-Sullivan:

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(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 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. Thank you for your assistance.

Sincerely,

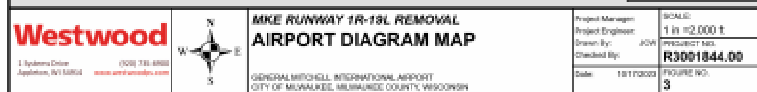
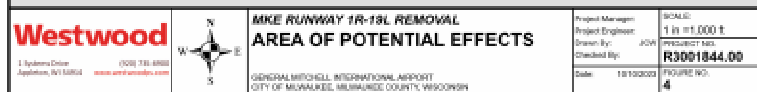
A handwritten signature in blue ink, appearing to read "Christine Turk", is written over a light blue horizontal line.

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)





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 1-888-436-7463
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/ERRReview/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.

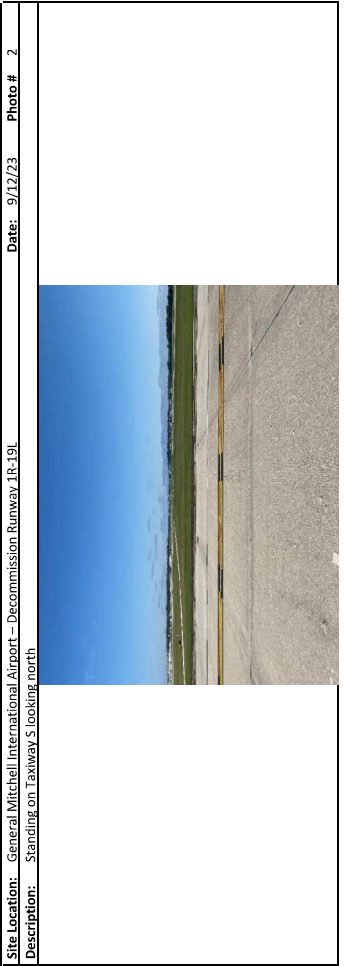
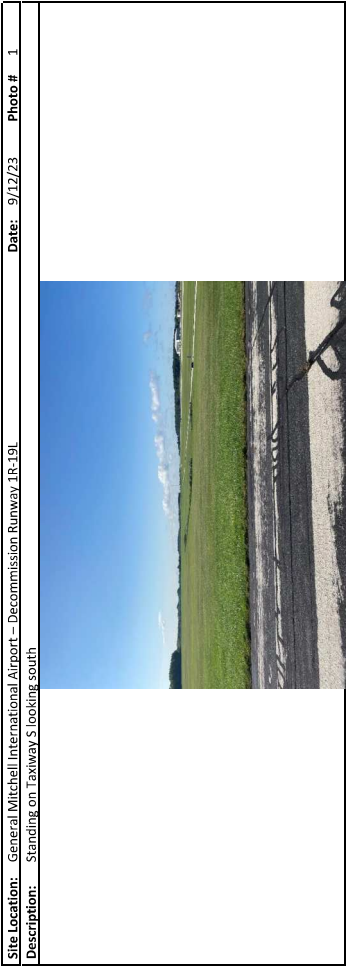
If you have any questions, please call me at (414) 306-6780 or you can reach me by email at kara.brooks@wisconsin.gov.

Sincerely,

Kara Brooks
Wetland Identification Specialist

Enclosures: Project Location Figure
Wetland Delineation Figure


Email CC: USACE Project Manager
Brian Krostedt, Quest




| | | |
|---|----------------------|------------------|
| 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 | | |
|  | | |

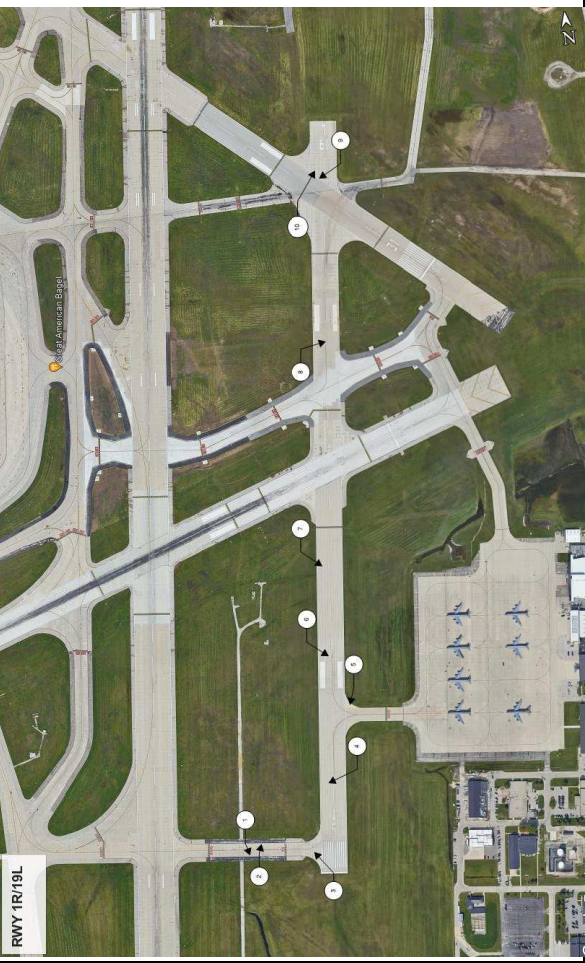
| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Runway 1R-19L north of Taxiway W looking south | | |
|  | | |

| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 1R-19L | Date: 9/12/23 | Photo # 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 # 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: N/A | Photo # 11 |
| Description: Site Aerial Overview | | |
|  | | |

Kaitlyn Wehner

From: Turk, Christine <cturk@mitchellairport.com>
Sent: Wednesday, November 8, 2023 3:20 PM
To: mklappasullivan@mmsd.com
Cc: Weiss, Justin; Hottenstein, Wendy - DOT; Palmer, Mallory K - DOT; Kaitlyn Wehner
Subject: Milwaukee Mitchell International Airport Proposed Runway 13-31 Decommissioning and Removal Project
Attachments: MKE RWY 13-31 - MMSD Initial Letter.pdf; Attachment 1 - RWY 13-31 Location Map.pdf; Attachment 2 - RWY 13-31 Airport Property Map.pdf; Attachment 3 - RWY 13-31 Airport Diagram Map.pdf; Attachment 4 - RWY 13-31 Area of Potential Effects Map.pdf; Attachment 5 - Wetland Delineation Confirmation.pdf; Attachment 6 - RWY 13-31 Photo log.pdf

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Good afternoon,

Please see the attached letter and corresponding documents regarding the proposed decommissioning and removal of runway 13-31 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

RE: Milwaukee General Mitchell International Airport
Proposed Runway 13-31 Decommissioning and Removal

Dear Ms. Klappa-Sullivan:

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(See Attachment 4 – Area of Potential Effects)

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- Removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Proposed addition of a holding bay adjacent to Taxiway M including associated lighting.



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 southwest of Runway 1R-19L and is located outside of the Area of Potential Effects for the proposed project. (See Attachment 5 – Wetland Delineation Confirmation).

The proposed project is located within airport property, specifically in Sections 27 and 28 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. Thank you for your assistance.

Sincerely,

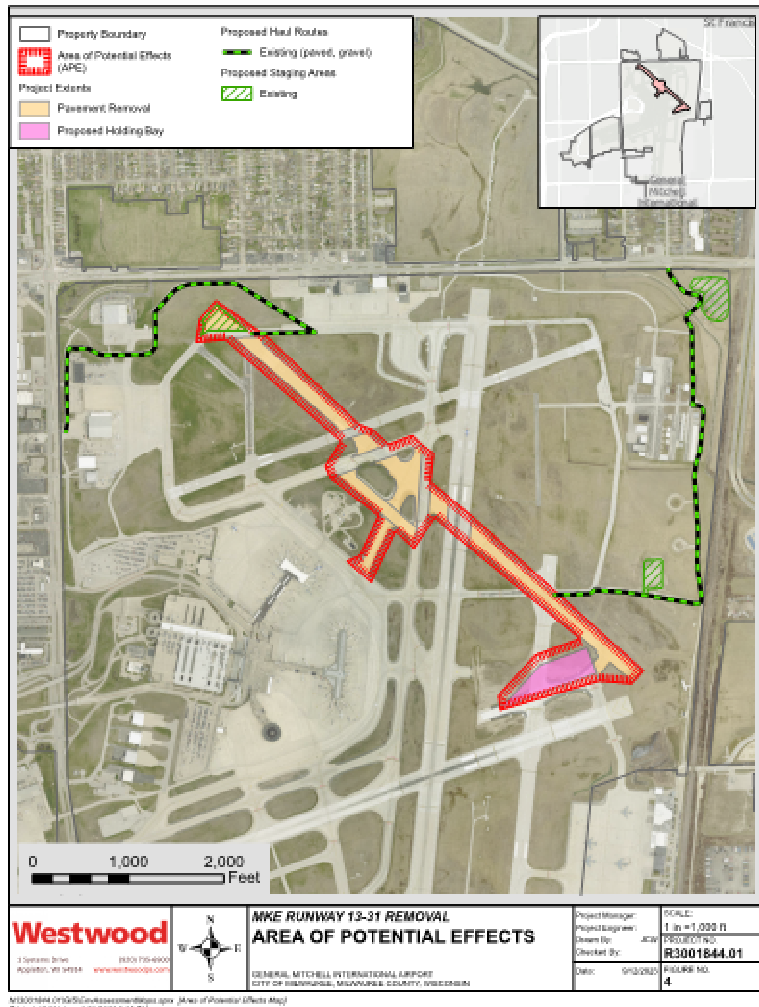
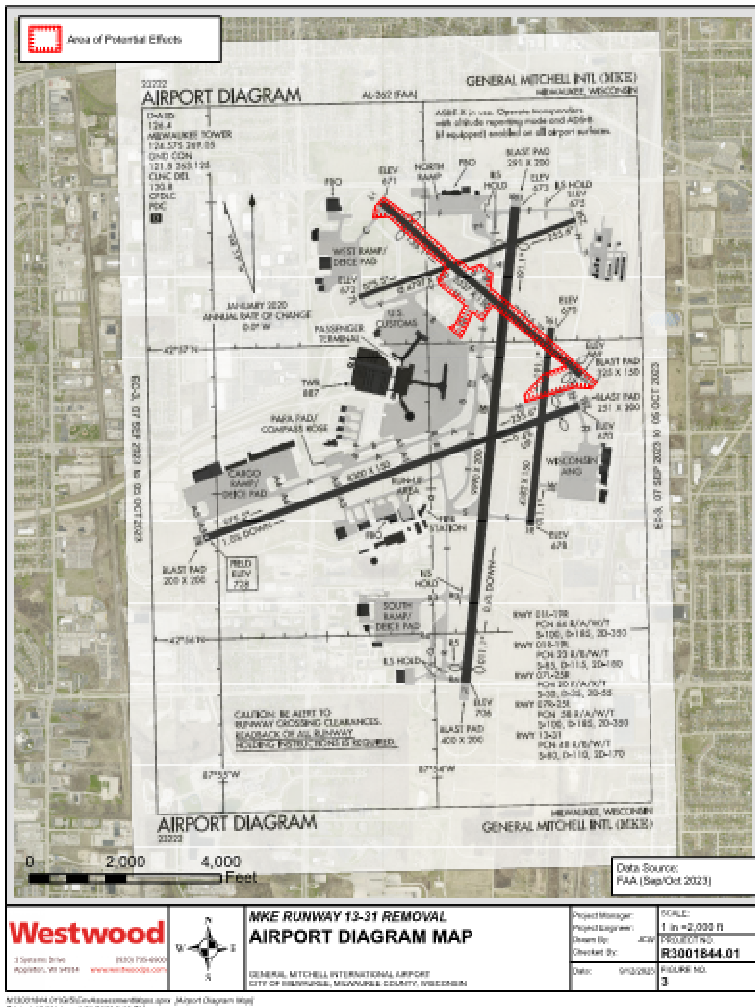
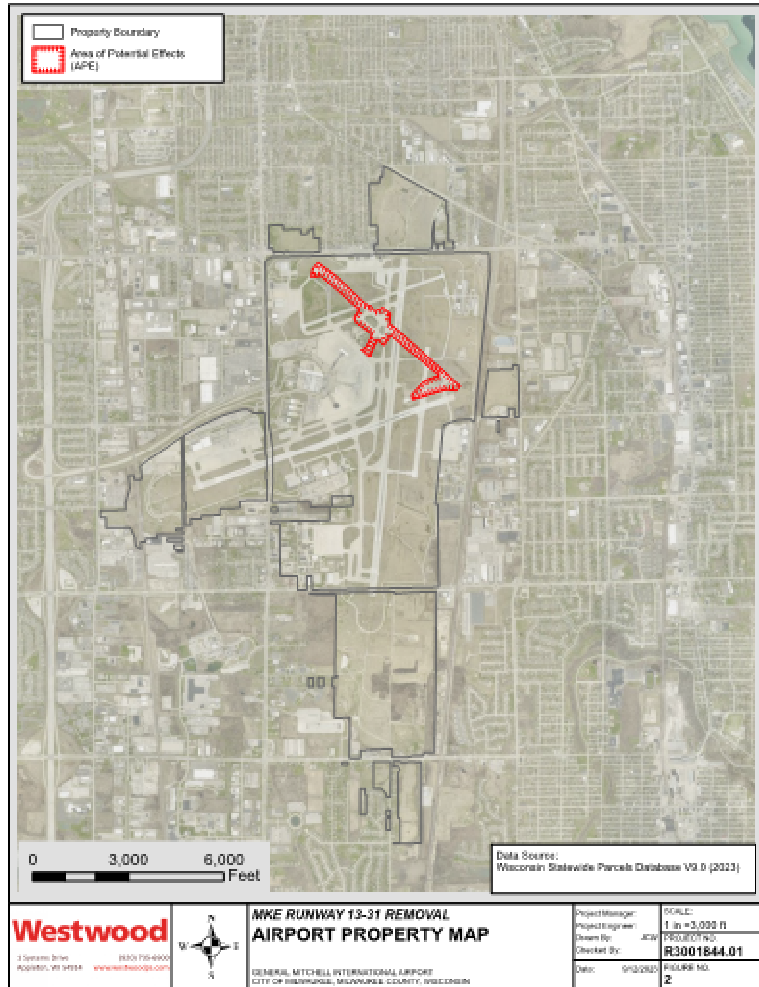
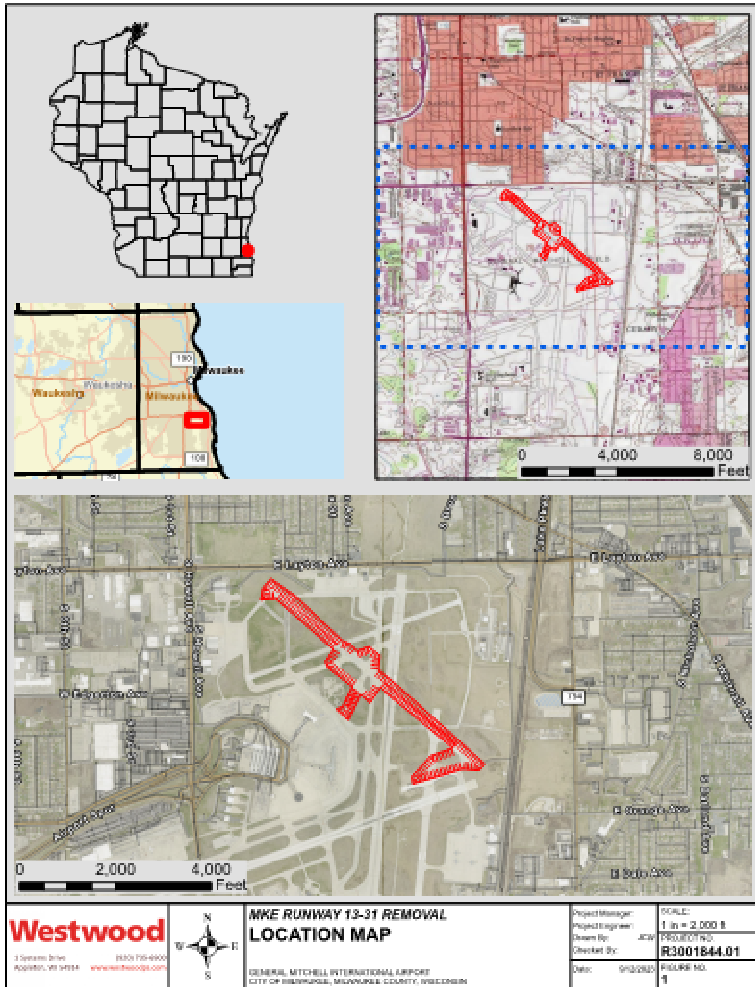
A handwritten signature in blue ink, appearing to read "Christine Turk".

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)



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/ERRReview/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) 306-6780 or you can reach me by email at 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



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 7 |
| Description: Standing on at intersection of Taxiway U and Taxiway G looking southwest towards passenger terminal. | | |



| | | |
|---|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 8 |
| Description: Standing on Runway 13-31 near Runway 7L-25R looking northeast at PAPIs. | | |



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 5 |
| Description: Standing on Runway 13-31 near Taxiway G looking northeast. | | |



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 6 |
| Description: Standing on Taxiway U looking northeast at Taxiway G. | | |



| | | |
|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 11 |
| Description: Standing on Runway 13-31 near Taxiway F looking southeast. | | |



| | | |
|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 12 |
| Description: Proposed Staging Area northeast of proposed project, looking east. | | |



| | | |
|--|----------------------|------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 9 |
| Description: Standing on Runway 13-31 looking northwest towards Taxiway F. | | |



| | | |
|--|----------------------|-------------------|
| Site Location: General Mitchell International Airport – Decommission Runway 13-31 | Date: 9/12/23 | Photo # 10 |
| Description: Standing on Runway 13-31 near Taxiway F looking northwest. | | |

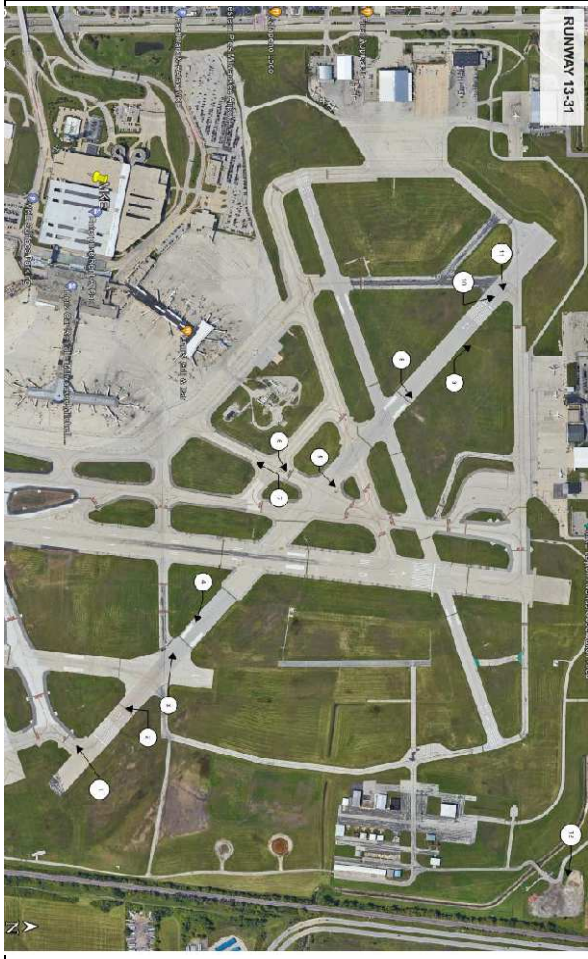


Site Location: General Mitchell International Airport – Decommission Runway 13-31

Description: Site Aerial Overview

Date: N/A

Photo # 13



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

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



April 26, 2024

Micki Klappa-Sullivan, PE, ENV SP
Manager of Engineering Planning
Milwaukee Metropolitan Sewerage District
260 W. Seeboth Street
Milwaukee, WI 53204
Via Electronic Mail Only to mklappasullivan@mmsd.com

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Klappa-Sullivan:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Hearing and Notice of Availability of the Preliminary Environmental Assessment for the proposed project will be published in the Milwaukee Journal Sentinel.

If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Micki Klappa-Sullivan, PE, ENV SP
Manager of Engineering Planning
Milwaukee Metropolitan Sewerage District
260 W. Seeboth Street
Milwaukee, WI 53204
Via Electronic Mail Only to mklappasullivan@mmsd.com

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Klappa-Sullivan:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

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Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

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SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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April 26, 2024

Laura K. Herrick
Chief Environmental Engineer
Southeastern Wisconsin Regional Planning Commission
P.O. Box 1607
Waukesha, WI 53187
Via Electronic Mail Only to LHerrick@sewrpc.org

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Herrick:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

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Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Stephanie Hacker
Executive Director
Southeastern Wisconsin Regional Planning Commission
P.O. Box 1607
Waukesha, WI 53187
Via Electronic Mail Only to SHacker@sewrpc.org

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Hacker:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

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Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Laura K. Errick
Chief Environmental Engineer
Southeastern Wisconsin Regional Planning Commission
P.O. Box 1607
Waukesha, WI 53187
Via Electronic Mail Only to LHerrick@sewrpc.org

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Herrick:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

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Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Stephanie Hacker
Executive Director
Southeastern Wisconsin Regional Planning Commission
P.O. Box 1607
Waukesha, WI 53187
Via Electronic Mail Only to SHacker@sewrpc.org

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Ms. Hacker:

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Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

Kaitlyn Wehner

From: Herrick, Laura K. <lherrick@sewrpc.org>
Sent: Wednesday, May 1, 2024 1:58 PM
To: Kaitlyn Wehner
Cc: Jovic, Vladimir
Subject: RE: Milwaukee Mitchell Airport - Runway 1R/19L Preliminary Environmental Assessment

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

Kaitlyn,

We have briefly reviewed the EA internally and do not have any comments.



**Southeastern
Wisconsin
Regional
Planning
Commission**

Laura K. Herrick PE, CFM | Chief Environmental Engineer
lherrick@sewrpc.org | 262.953.3224
sewrpc.org

From: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>
Sent: Friday, April 26, 2024 7:35 PM
To: Herrick, Laura K. <lherrick@sewrpc.org>
Cc: Jovic, Vladimir <vjovic@mitchellairport.com>
Subject: Milwaukee Mitchell Airport - Runway 1R/19L Preliminary Environmental Assessment

You don't often get email from kaitlyn.wehner@westwoodps.com. [Learn why this is important](#)

CAUTION: This e-mail originated from outside the Commission. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

Attached is a cover letter and for the proposed Runway 1R/19L Decommissioning and Removal Project Preliminary Environmental Assessment at Milwaukee Mitchell International Airport.

The Preliminary Environmental Assessment can be found at the following link: [MKE RWY 1R-19L PEA.pdf \(westwoodps.com\)](#). Please let me know if you are having trouble accessing the document.

Thank you,

Kaitlyn Wehner
Airport Engineer
kaitlyn.wehner@westwoodps.com

main (920)-735-6900

Westwood
1 Systems Drive
Appleton, WI 54914

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UNITED STATES FISH AND WILDLIFE SERVICE

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April 26, 2024

Darin Simpkins
U.S. Fish and Wildlife Service
2611 Scott Tower Dr.
New Franken, WI 54299
Via Electronic Mail Only to darin_simpkins@fws.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 1R/19L Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Mr. Simpkins:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 1R/19L decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

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Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

April 26, 2024

Darin Simpkins
U.S. Fish and Wildlife Service
2611 Scott Tower Dr.
New Franken, WI 54299
Via Electronic Mail Only to darin_simpkins@fws.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway 13/31 Decommissioning and Removal
Preliminary Environmental Assessment**

Dear Mr. Simpkins:

The Milwaukee General Mitchell International Airport is soliciting comments on a Preliminary Environmental Assessment for the proposed Runway 13/31 decommissioning and removal project.

Enclosed for your review and comment is a copy of the Preliminary Environmental Assessment. We are requesting that you submit your comments on the Preliminary Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by June 1st, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

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If you have any questions or would like a paper copy of the Preliminary Environmental Assessment mailed, please contact me at 920-830-6183 or at Kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.



Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

Kaitlyn Wehner

From: Simpkins, Darin <Darin_Simpkins@fws.gov>
Sent: Thursday, May 2, 2024 11:06 AM
To: Kaitlyn Wehner
Cc: Jovic, Vladimir
Subject: Re: [EXTERNAL] Milwaukee Mitchell Airport - Runway 1R/19L Preliminary Environmental Assessment

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

Good Day -

The Service has no comment at this time regarding the Preliminary Environmental Assessment for Milwaukee Mitchell Airport - Runway 1R/19L Project.

Best -

Darin Simpkins

From: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>
Sent: Friday, April 26, 2024 7:35 PM
To: Simpkins, Darin <Darin_Simpkins@fws.gov>
Cc: Jovic, Vladimir <vjovic@mitchellairport.com>
Subject: [EXTERNAL] Milwaukee Mitchell Airport - Runway 1R/19L Preliminary Environmental Assessment

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hello,

Attached is a cover letter and for the proposed Runway 1R/19L Decommissioning and Removal Project Preliminary Environmental Assessment at Milwaukee Mitchell International Airport.

The Preliminary Environmental Assessment can be found at the following link: [MKE RWY 1R-19L PEA.pdf \(westwoodps.com\)](#) . Please let me know if you are having trouble accessing the document.

Thank you,

Kaitlyn Wehner
Airport Engineer
kaitlyn.wehner@westwoodps.com

main (920)-735-6900

Westwood
1 Systems Drive
Appleton, WI 54914

Kaitlyn Wehner

From: Simpkins, Darin <Darin_Simpkins@fws.gov>
Sent: Thursday, May 2, 2024 11:06 AM
To: Kaitlyn Wehner
Cc: Jovic, Vladimir
Subject: Re: [EXTERNAL] Milwaukee Mitchell Airport - Runway 13/31 Preliminary Environmental Assessment

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

Good Day -

The Service has no comment at this time regarding the Preliminary Environmental Assessment for Milwaukee Mitchell Airport - Runway 13/31 Project.

Best -

Darin Simpkins

From: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>
Sent: Friday, April 26, 2024 7:35 PM
To: Simpkins, Darin <Darin_Simpkins@fws.gov>
Cc: Jovic, Vladimir <vjovic@mitchellairport.com>
Subject: [EXTERNAL] Milwaukee Mitchell Airport - Runway 13/31 Preliminary Environmental Assessment

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hello,

Attached is a cover letter and for the proposed Runway 13/31 Decommissioning and Removal Project Preliminary Environmental Assessment at Milwaukee Mitchell International Airport.

The Preliminary Environmental Assessment can be found at the following link: [MKE RWY 13-31 PEA.pdf \(westwoodps.com\)](#) . Please let me know if you are having trouble accessing the document.

Thank you,

Kaitlyn Wehner
Airport Engineer
kaitlyn.wehner@westwoodps.com

main (920)-735-6900

Westwood
1 Systems Drive
Appleton, WI 54914



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793



In Reply Refer To:

09/05/2024 18:17:31 UTC

Project Code: 2024-0109018

Project Name: MKE Runway Decommissioning

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

Minnesota-Wisconsin Ecological Services Field Office

3815 American Blvd East

Bloomington, MN 55425-1659

(952) 858-0793

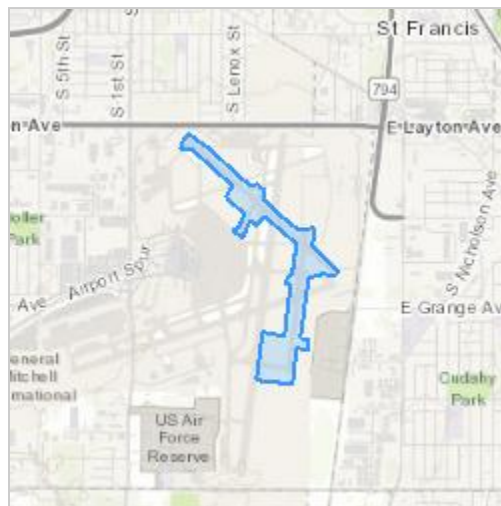
PROJECT SUMMARY

Project Code: 2024-0109018
Project Name: MKE Runway Decommissioning
Project Type: Airport - Maintenance/Modification
Project Description: The proposed project undertaking at General Mitchell International Airport will consist of the following:

- Decommissioning of Runway 1R-19L
- Decommissioning of Runway 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
- Removal of pavement between the north end of the Runway 1R/19L and Taxiway W and associated electrical utilities and NAVAIDs.
- Removal of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N
- Two alternatives to maintain airfield access for the 128th WI Air National Guard Unit located east of Runway 1R-19L. Alternatives include the conversion of Runway 1R-19L south of Taxiway W to a parallel taxiway including associated lighting and taxiway connector rehabilitation. Or a of 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.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.94851815,-87.88999294226738,14z>



Counties: Milwaukee County, Wisconsin

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

| NAME | STATUS |
|---|------------------------|
| Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

INSECTS

| NAME | STATUS |
|---|------------------------|
| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |
| Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017 | Proposed Threatened |

CRITICAL HABITATS

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

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

IPAC USER CONTACT INFORMATION

Agency: County of Milwaukee
Name: Kaitlyn Wehner
Address: 1N Systems Drive
City: Appleton
State: WI
Zip: 54914
Email: kaitlyn.wehner@westwoodps.com
Phone: 9208306183

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Aviation Administration
Name: Vladimir Jovic
Email: vjovic@mitchellairport.com
Phone: 4147475394



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793



In Reply Refer To:
Project code: 2024-0109018
Project Name: MKE Runway Decommissioning

07/12/2024 12:40:22 UTC

Subject:

Dear Kaitlyn Wehner:

The U.S. Fish and Wildlife Service (Service) received on **July 12, 2024** your effect determination(s) for the 'MKE Runway Decommissioning' (Action) using the Minnesota-Wisconsin DKey within the Information for Planning and Consultation (IPaC) system. You have submitted this key to satisfy requirements under Section 7(a)(2). The Service developed this system in accordance of with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.).

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

| Species | Listing Status | Determination |
|--|----------------|---------------|
| Monarch Butterfly (<i>Danaus plexippus</i>) | Candidate | No effect |
| Tricolored Bat (<i>Perimyotis subflavus</i>) | Proposed | NLAA |
| | Endangered | |

Determination Information

Additional Information

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

Future project changes: The Service recommends that you contact the Minnesota-Wisconsin Ecological Services Field Office or re-evaluate the project in IPaC if: 1) the scope or location of the proposed Action is changed; 2) new information reveals that the action may affect listed species or designated critical habitat in a manner or to an extent not previously considered; 3) the

Action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project changes are final or resources committed.

For non-Federal representatives: Please note that when a project requires consultation under section 7 of the Act, the Service must consult directly with the Federal action agency unless that agency formally designates a non-Federal representative (50 CFR 402.08). Non-Federal representatives may prepare analyses or conduct informal consultations; however, the ultimate responsibility for section 7 compliance under the Act remains with the Federal agency. Please include the Federal action agency in additional correspondence regarding this project.

Species-specific information

Bald and Golden Eagles: Bald eagles, golden eagles, and their nests are protected under the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (Eagle Act). The Eagle Act prohibits, except when authorized by an Eagle Act permit, the “taking” of bald and golden eagles and defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” The Eagle Act’s implementing regulations define disturb as “... to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

The following species and/or critical habitats may also occur in your project area and **are not** covered by this conclusion:

- Northern Long-eared Bat *Myotis septentrionalis* Endangered

Coordination with the Service is not complete if additional coordination is advised above for any species.

Action Description

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

1. Name

MKE Runway Decommissioning

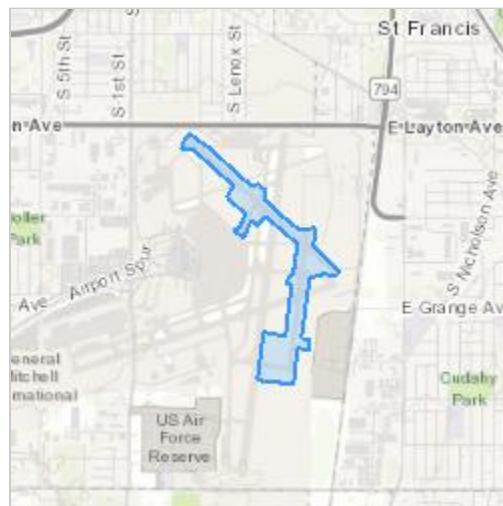
2. Description

The following description was provided for the project 'MKE Runway Decommissioning':

The proposed project undertaking at General Mitchell International Airport will consist of the following:

- Decommissioning of Runway 1R-19L
- Decommissioning of Runway 13-31
- Removal of Taxiway G, Taxiway U, and Taxiway N connectors
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The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.94851815,-87.88999294226738,14z>



QUALIFICATION INTERVIEW

1. This determination key is intended to assist the user in evaluating the effects of their actions on Federally listed species in Minnesota and Wisconsin. It does not cover other prohibited activities under the Endangered Species Act (e.g., for wildlife: import/export, Interstate or foreign commerce, possession of illegally taken wildlife, etc.; for plants: import/export, reduce to possession, malicious destruction on Federal lands, commercial sale, etc.) or other statutes. Additionally, this key DOES NOT cover wind development, purposeful take (e.g., for research or surveys), communication towers that have guy wires or are over 450 feet in height, aerial or other large-scale application of any chemical (such as insecticide or herbicide), and approval of long-term permits or plans (e.g., FERC licenses, HCP's).

Click **YES** to acknowledge that you must consider other prohibitions of the ESA or other statutes outside of this determination key.

Yes

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

Yes

3. Are you the Federal agency or designated non-federal representative?

No

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

No

5. Does the action involve purposeful take of a listed animal?

No

6. Does the action involve a new communications tower?

No

7. Does the activity involve aerial or other large-scale application of ANY chemical, including pesticides (insecticide, herbicide, fungicide, rodenticide, etc)?

No

8. Will your action permanently affect local hydrology?

No

9. Will your action temporarily affect local hydrology?

No

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

No

11. Does your project have the potential to impact the riparian zone or indirectly impact a stream/river (e.g., cut and fill; horizontal directional drilling; construction; vegetation removal; pesticide or fertilizer application; discharge; runoff of sediment or pollutants; increase in erosion, etc.)?

Note: Consider all potential effects of the action, including those that may happen later in time and outside and downstream of the immediate area involved in the action.

Endangered Species Act regulation defines "effects of the action" to include all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (50 CFR 402.02).

No

12. Will your action disturb the ground or existing vegetation?

Note: This includes any off-road vehicle access, soil compaction (enough to collapse a rodent burrow), digging, seismic survey, directional drilling, heavy equipment, grading, trenching, placement of fill, pesticide application (herbicide, fungicide), vegetation management (including removal or maintenance using equipment or prescribed fire), cultivation, development, etc.

Yes

13. Will your action include spraying insecticides?

No

14. Does your action area occur entirely within an already developed area?

Note: Already developed areas are already paved, covered by existing structures, manicured lawns, industrial sites, or cultivated cropland, AND do not contain trees that could be roosting habitat. Be aware that listed species may occur in areas with natural, or semi-natural, vegetation immediately adjacent to existing utilities (e.g. roadways, railways) or within utility rights-of-way such as overhead transmission line corridors, and can utilize suitable trees, bridges, or culverts for roosting even in urban dominated landscapes (so these are not considered "already developed areas" for the purposes of this question). If unsure, select NO..

Yes

15. Does the action have potential indirect effects to listed species or the habitats they depend on (e.g., water discharge into adjacent habitat or waterbody, changes in groundwater elevation, introduction of an exotic plant species)?

Yes

16. [Hidden Semantic] Does the action area intersect the monarch butterfly species list area?

Automatically answered

Yes

17. Under the ESA, monarchs remain warranted but precluded by listing actions of higher priority. The monarch is a candidate for listing at this time. The Endangered Species Act does not establish protections or consultation requirements for candidate species. Some Federal and State agencies may have policy requirements to consider candidate species in planning. We encourage implementing measures that will remove or reduce threats to these species and possibly make listing unnecessary.

If your project will have no effect on monarch butterflies (for example, if your project won't affect their habitat or individuals), then you can make a "no effect" determination for this project.

Are you making a "no effect" determination for monarch?

Yes

18. [Hidden semantic] Does the action intersect the Tricolored bat species list area?

Automatically answered

Yes

19. The tricolored bat was proposed for listing as endangered on September 13, 2022. During winter, tricolored bats hibernate in caves, abandoned mines, and abandoned tunnels ranging from small to large in size. During spring, summer and fall months, they roost primarily among leaf clusters of live or recently dead deciduous/hardwood trees.

What effect determination do you want to make for the tricolored bat (Only make a "may affect" determination if you think the project is likely to jeopardize the continued existence of the species)?

2. *"May affect – not likely to adversely affect"*

IPAC USER CONTACT INFORMATION

Agency: County of Milwaukee
Name: Kaitlyn Wehner
Address: 1N Systems Drive
City: Appleton
State: WI
Zip: 54914
Email: kaitlyn.wehner@westwoodps.com
Phone: 9208306183

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Aviation Administration
Name: Vladimir Jovic
Email: vjovic@mitchellairport.com
Phone: 4147475394



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793



In Reply Refer To:

11/04/2024 22:15:54 UTC

Project Code: 2024-0109018

Project Name: MKE Runway Decommissioning

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

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

Threatened and Endangered Species

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

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Please refer to our [Section 7 website](#) for guidance and technical assistance, including [step-by-step instructions](#) for making effects determinations for each species that might be present and for specific guidance on the following types of projects: projects in developed areas, HUD, CDBG, EDA, USDA Rural Development projects, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

We recommend running the project (if it qualifies) through our **Minnesota-Wisconsin Federal Endangered Species Determination Key (Minnesota-Wisconsin ("D-key"))**. A [demonstration video](#) showing how-to access and use the determination key is available. Please note that the Minnesota-Wisconsin D-key is the third option of 3 available d-keys. D-keys are tools to help Federal agencies and other project proponents determine if their proposed action has the potential to adversely affect federally listed species and designated critical habitat. The Minnesota-Wisconsin D-key includes a structured set of questions that assists a project proponent in determining whether a proposed project qualifies for a certain predetermined consultation outcome for all federally listed species found in Minnesota and Wisconsin (except for the northern long-eared bat- see below), which includes determinations of "no effect" or "may affect, not likely to adversely affect." In each case, the Service has compiled and analyzed the best available information on the species' biology and the impacts of certain activities to support these determinations.

If your completed d-key output letter shows a "No Effect" (NE) determination for all listed species, print your IPaC output letter for your files to document your compliance with the Endangered Species Act.

For Federal projects with a "Not Likely to Adversely Affect" (NLAA) determination, our concurrence becomes valid if you do not hear otherwise from us after a 30-day review period, as indicated in your letter.

If your d-key output letter indicates additional coordination with the Minnesota-Wisconsin Ecological Services Field Office is necessary (i.e., you get a "May Affect" determination), you will be provided additional guidance on contacting the Service to continue ESA coordination outside of the key; ESA compliance cannot be concluded using the key for "May Affect" determinations unless otherwise indicated in your output letter.

Note: Once you obtain your official species list, you are not required to continue in IPaC with d-keys, although in most cases these tools should expedite your review. If you choose to make an effects determination on your own, you may do so. If the project is a Federal Action, you may want to review our section 7 step-by-step instructions before making your determinations.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of "There are no listed species found within the vicinity of the project," then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **no effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see below) – then project proponents must determine if proposed activities will have **no effect** on or **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain [Life History Information for Listed and Candidate Species](#) on our office website. If no impacts will occur to a species on the IPaC species list (e.g., there is no habitat present in the project area), the appropriate determination is **no effect**. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

3. Should you determine that project activities **may affect** any federally listed, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

Northern Long-Eared Bats

Northern long-eared bats occur throughout Minnesota and Wisconsin and the information below may help in determining if your project may affect these species.

Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected. For bat activity dates, please review Appendix L in the [Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#).

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas,
- Trees found in highly developed urban areas (e.g., street trees, downtown areas),
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees, and
- A monoculture stand of shrubby vegetation with no potential roost trees.

If IPaC returns a result that northern long-eared bats are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** this species **IF** one or more of the following activities are proposed:

- Clearing or disturbing suitable roosting habitat, as defined above, at any time of year,
- Any activity in or near the entrance to a cave or mine,
- Mining, deep excavation, or underground work within 0.25 miles of a cave or mine,
- Construction of one or more wind turbines, or
- Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC

species list report for your records.

If any of the above activities are proposed, and the northern long-eared bat appears on the user's species list, the federal project user will be directed to either the northern long-eared bat and tricolored bat range-wide D-key or the Federal Highways Administration, Federal Railways Administration, and Federal Transit Administration Indiana bat/Northern long-eared bat D-key, depending on the type of project and federal agency involvement. Similar to the Minnesota-Wisconsin D-key, these d-keys help to determine if prohibited take might occur and, if not, will generate an automated verification letter. Additional information about available tools can be found on the Service's [northern long-eared bat website](#).

Whooping Crane

Whooping crane is designated as a non-essential experimental population in Wisconsin and consultation under Section 7(a)(2) of the Endangered Species Act is only required if project activities will occur within a National Wildlife Refuge or National Park. If project activities are proposed on lands outside of a National Wildlife Refuge or National Park, then you are not required to consult. For additional information on this designation and consultation requirements, please review "[Establishment of a Nonessential Experimental Population of Whooping Cranes in the Eastern United States](#)."

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. It is the responsibility of the project proponent to survey the area for any migratory bird nests. If there is an eagle nest on-site while work is on-going, eagles may be disturbed. We recommend avoiding and minimizing disturbance to eagles whenever practicable. If you cannot avoid eagle disturbance, you may seek a [permit](#). A [nest take permit](#) is always required for removal, relocation, or obstruction of an eagle nest. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of [recommendations that minimize potential impacts to migratory birds](#). Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed [voluntary guidelines for minimizing impacts](#).

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to [guidelines](#) developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's [Wind Energy Guidelines](#). In addition, please refer to the Service's [Eagle Conservation Plan Guidance](#), which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

State Department of Natural Resources Coordination

While it is not required for your Federal section 7 consultation, please note that additional state endangered or threatened species may also have the potential to be impacted. **Please contact the Minnesota or Wisconsin Department of Natural Resources for information on state listed species that may be present in your proposed project area.**

Minnesota

[Minnesota Department of Natural Resources - Endangered Resources Review Homepage](#)

Email: Review.NHIS@state.mn.us

Wisconsin

[Wisconsin Department of Natural Resources - Endangered Resources Review Homepage](#)

Email: DNRERReview@wi.gov

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

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

OFFICIAL SPECIES LIST

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

This species list is provided by:

Minnesota-Wisconsin Ecological Services Field Office

3815 American Blvd East

Bloomington, MN 55425-1659

(952) 858-0793

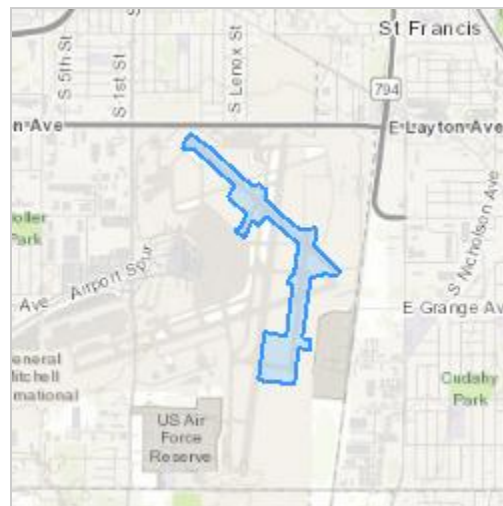
PROJECT SUMMARY

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Project Location:

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Counties: Milwaukee County, Wisconsin

ENDANGERED SPECIES ACT SPECIES

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

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

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

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

MAMMALS

| NAME | STATUS |
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| Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

INSECTS

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| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |
| Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017 | Proposed Threatened |

CRITICAL HABITATS

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

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.

3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

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

| NAME | BREEDING SEASON |
|--|------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626 | Breeds Dec 1 to Aug 31 |

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

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

■ probability of presence ■ breeding season | survey effort — no data

| SPECIES | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bald Eagle | + | + | + | + | + | + | + | + | + | + | + | + |
| Non-BCC | + | + | + | + | + | + | + | + | + | + | + | + |
| Vulnerable | + | + | + | + | + | + | + | + | + | + | + | + |

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

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

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

| NAME | BREEDING SEASON |
|--|------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626 | Breeds Dec 1 to Aug 31 |

| NAME | BREEDING SEASON |
|---|-------------------------|
| Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454 | Breeds May 20 to Jul 31 |
| Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9643 | Breeds May 20 to Aug 10 |
| Cerulean Warbler <i>Setophaga cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974 | Breeds Apr 22 to Jul 20 |
| Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406 | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678 | Breeds May 1 to Aug 20 |
| Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329 | Breeds Jun 1 to Aug 20 |
| Henslow's Sparrow <i>Centronyx henslowii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941 | Breeds May 1 to Aug 31 |
| Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |

| NAME | BREEDING SEASON |
|--|-------------------------|
| Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561 | Breeds elsewhere |
| Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398 | Breeds May 10 to Sep 10 |
| Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10633 | Breeds elsewhere |
| Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478 | Breeds elsewhere |
| Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603 | Breeds elsewhere |
| Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431 | Breeds May 10 to Aug 31 |

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

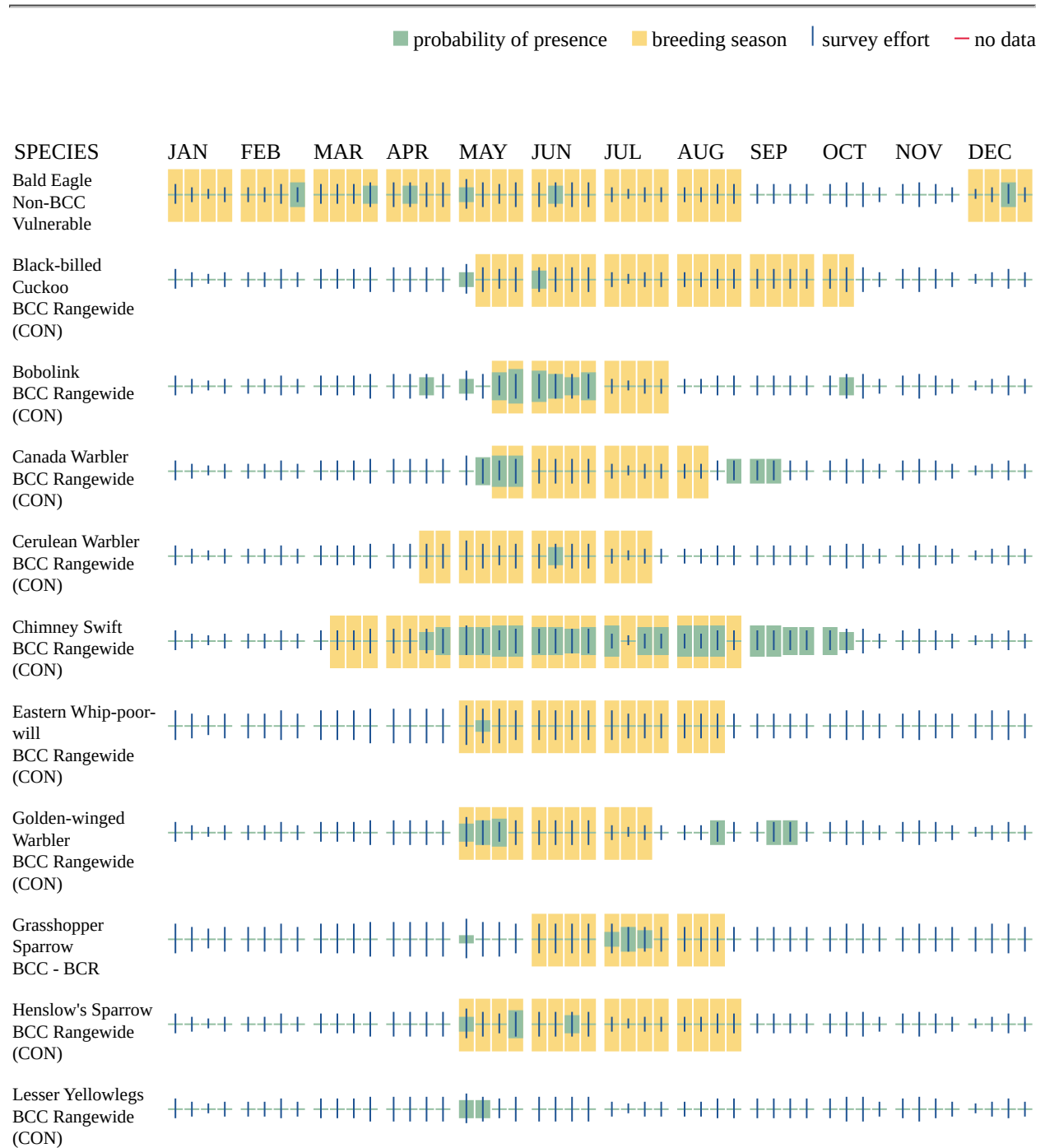
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

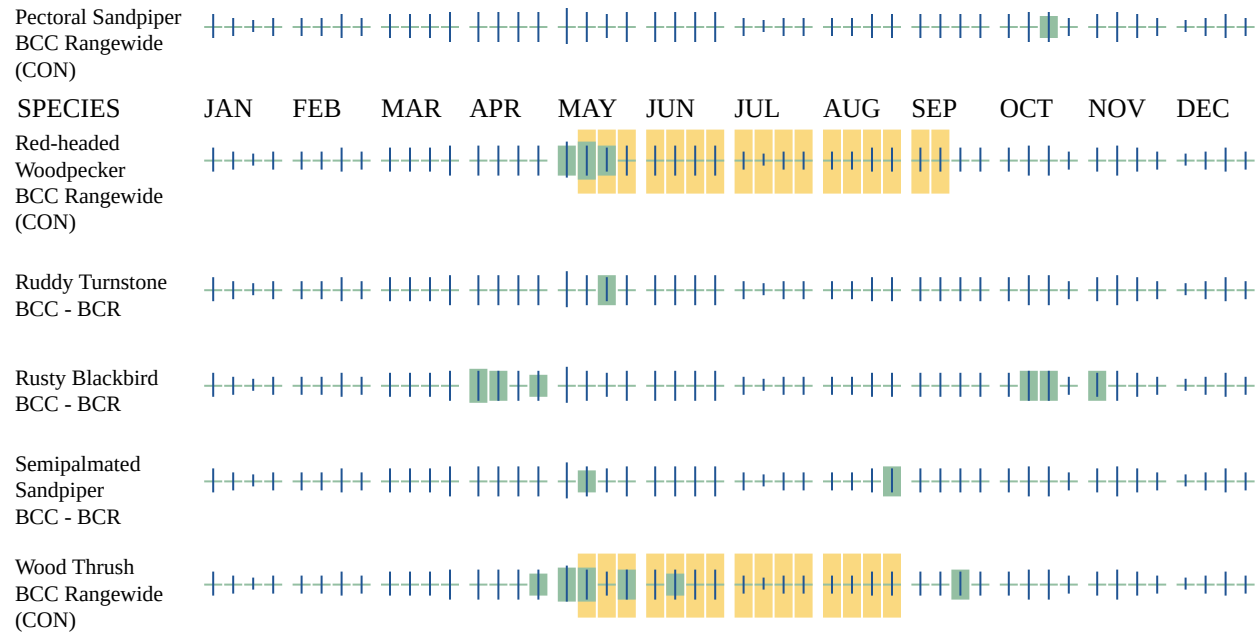
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

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





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

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

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

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

RIVERINE

- R4SBC
- R2UBH

FRESHWATER EMERGENT WETLAND

- PEM1Cx

IPAC USER CONTACT INFORMATION

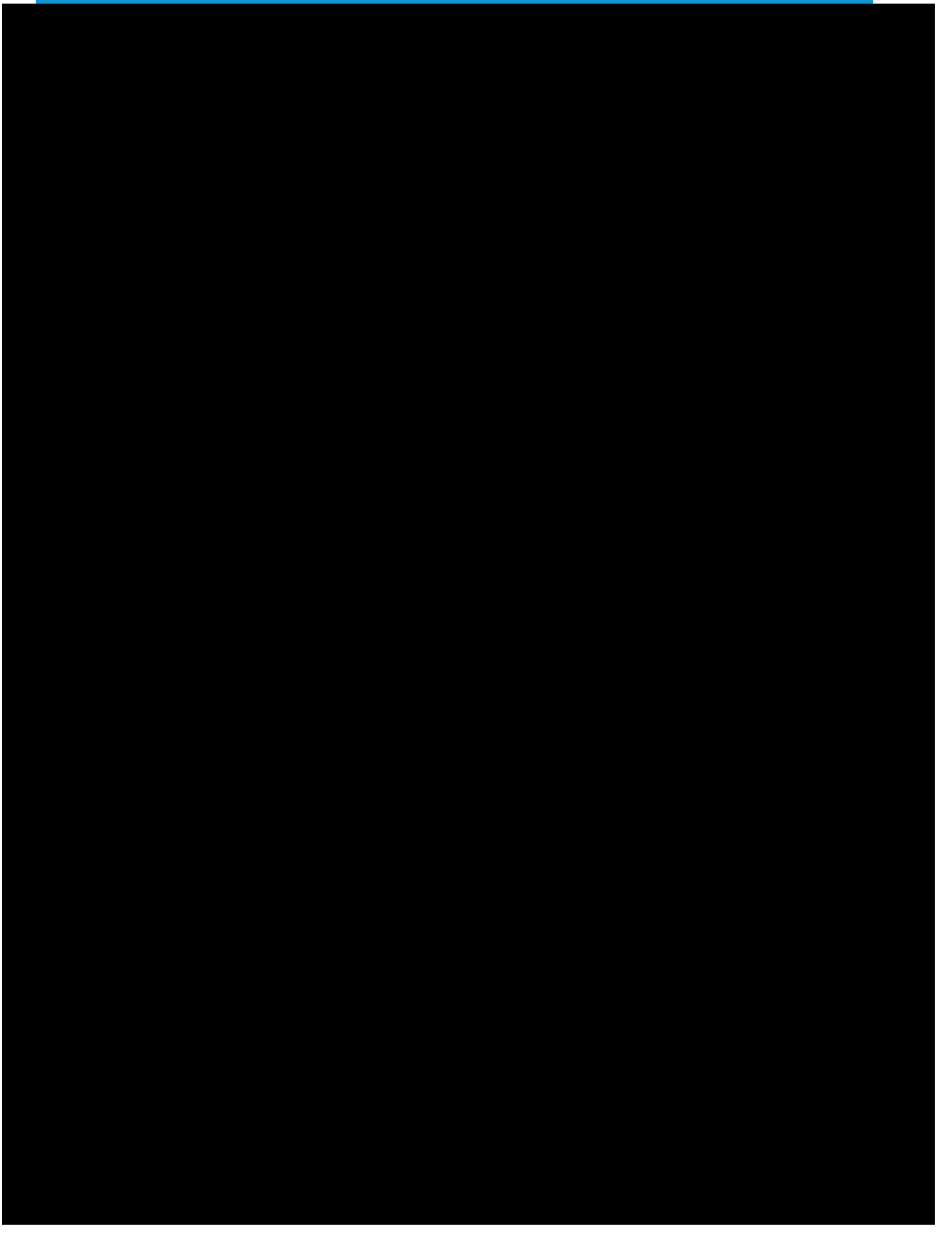
Agency: County of Milwaukee
Name: Kaitlyn Wehner
Address: 1N Systems Drive
City: Appleton
State: WI
Zip: 54914
Email: kaitlyn.wehner@westwoodps.com
Phone: 9208306183

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Aviation Administration
Name: Vladimir Jovic
Email: vjovic@mitchellairport.com
Phone: 4147475394

APPENDIX 3 – [REDACTED]

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APPENDIX 4 – NOISE ANALYSIS

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General Mitchell International Airport Runway 1R-19L and Runway 13-31 Decommissioning and Removal Environmental Assessment

Final Noise Technical Report

HMMH Report No. 23-0069B.002
September 2024

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Executive Summary

In support of an Environmental Assessment (EA) for Milwaukee County, this Noise Technical Report provides an assessment of the potential changes in noise associated with the proposed decommissioning of Runway 1R-19L and Runway 13-31 at Milwaukee Mitchell International Airport (MKE). Harris Miller Miller & Hanson Inc. (HMMH) evaluated potential changes 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) 2029, which corresponds to the year immediately following the completion of the proposed project, and CY 2034, 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 change as a result of the Proposed Action. Aircraft operations on Runway 1R-19L and Runway 13-31 would shift to the remaining runways in the future under the Proposed Action. Future operations on Runway 1R-19L and Runway 13-31 would utilize Runway 1L-19R and Runway 7L-25R.

The Proposed Action would not result in a significant noise impact as a result of the decommissioning of Runway 1R-19L and Runway 13-31. Impacted grid points as a result of the decommissioning of Runway 1R-19L and Runway 13-31 all occur on airport property along the runways. The Proposed Action would cause a slight decrease in acreage of the Day-Night Average Sound Level (DNL) 65 decibel (dB) contours in both 2029 and 2034 forecast years respectively due to changes in the DNL 65 dB contour on airport property and would not impact any additional noncompatible land use. There is no change to the DNL 65 dB contour off airport property in the 2029 or 2034 scenarios and the number of people remains the same (68 people in 2029, 94 people in 2034) between the No Action and Proposed Action scenarios.

There are projected to be no additional housing units or noise sensitive sites within the Proposed Action DNL 65 dB contours for 2029 or 2034. Therefore, no mitigation is proposed or required for Proposed Action.

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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 and Runway 13-31. 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 2029 No-Action
- Forecast year 2029 Proposed Action
- Forecast year 2034 No-Action
- Forecast year 2034 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.

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 (2029 and 2034) 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 decibel (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 sites 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.”¹ 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 does 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

¹ FAA Order 1050.1F, Section 4-3, Exhibit 4-1, 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 |
| Residential Uses | | | | | | |
| Residential other than mobile homes and transient lodgings | Y | N ^(a) | N ^(a) | N | N | N |
| Mobile home park | Y | N | N | N | N | N |
| Transient lodgings | Y | N ^(a) | N ^(a) | N ^(a) | N | N |
| Public Uses | | | | | | |
| Schools | Y | N ^(a) | N ^(a) | 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 ^(b) | Y ^(c) | Y ^(d) | Y ^(d) |
| Parking | Y | Y | Y ^(b) | Y ^(c) | Y ^(d) | N |
| Commercial Uses | | | | | | |
| Retail trade—general | Y | Y | 25 | 30 | N | N |
| Utilities | Y | Y | Y ^(b) | Y ^(c) | Y ^(d) | N |
| Communication | Y | Y | 25 | 30 | N | N |
| Manufacturing and Production | | | | | | |
| Manufacturing general | Y | Y | Y ^(b) | Y ^(c) | Y ^(d) | N |
| Photographic and optical | Y | Y | 25 | 30 | N | N |
| Agriculture (except livestock) and forestry | Y | Y ^(f) | Y ^(g) | Y ^(h) | Y ^(h) | Y ^(h) |
| Livestock farming and breeding | Y | Y ^(f) | Y ^(g) | 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 |
| Recreational | | | | | | |
| Outdoor sports arenas and spectator sports | Y | Y ^(e) | Y ^(e) | 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 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 nautical miles (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.

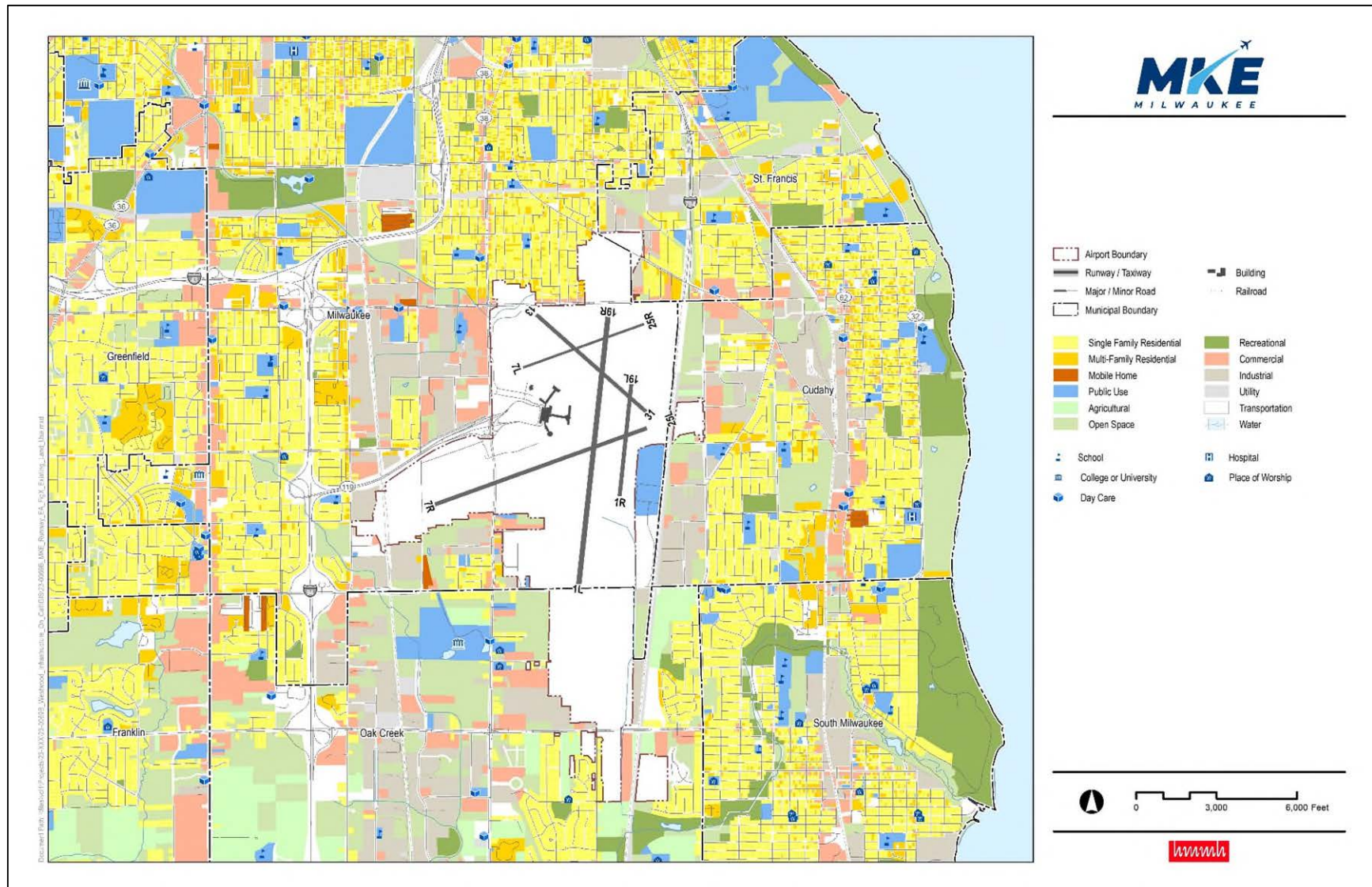


Figure 1. Existing Land Use

3.2 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).² 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.”³

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**.

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
OPSNET = Operations Network

² 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.

³ 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.

3.2.1 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**.

3.2.2 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 extent of the NSA area and beyond. The NSA grid consists of a rectangle with points spaced 0.02 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).

3.2.3 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. For purposes of modeling, the helipad (H1) is located on the West Ramp.

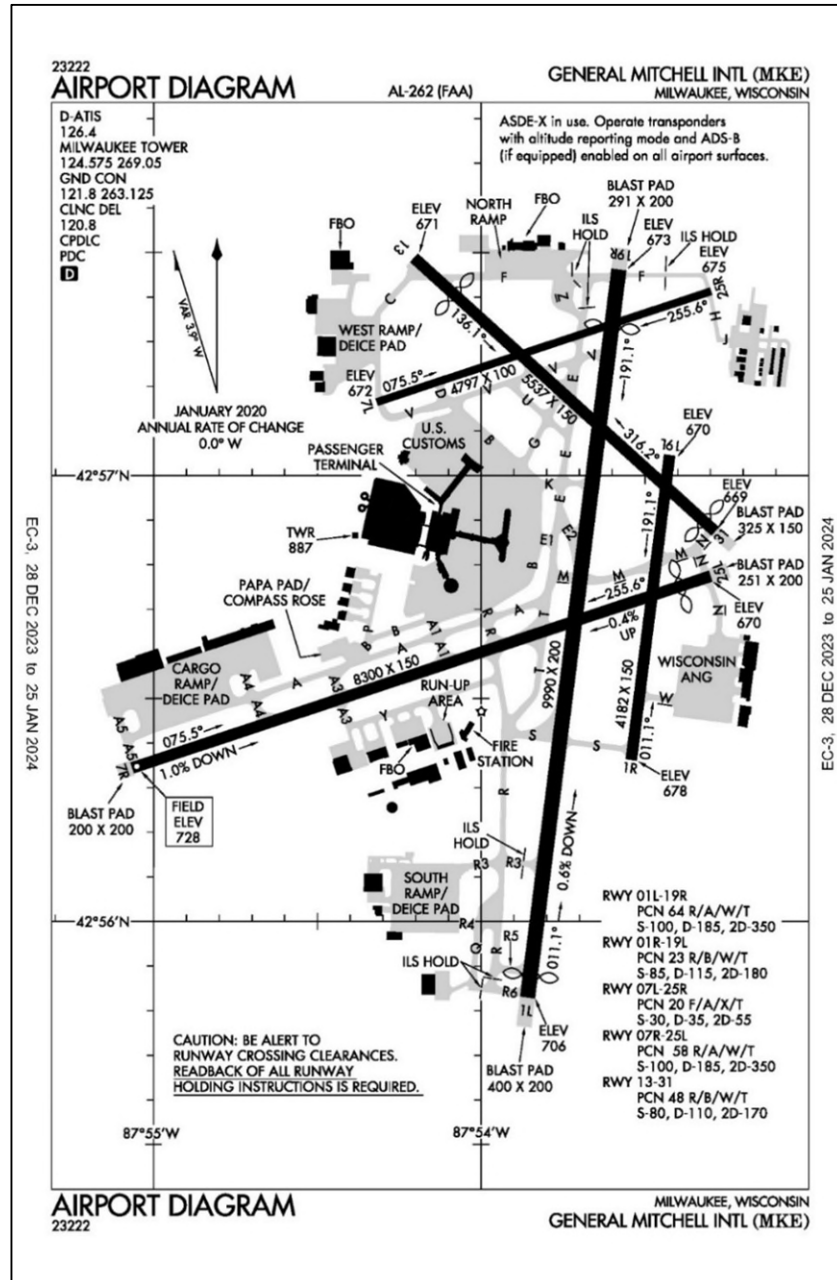


Figure 2. MKE Existing Airport Layout

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 would be redirected to use established "donor" tracks from Runway 1L-19R, while the operations previously conducted on Runway 13-31 would be redirected to use established "donor" tracks from Runway 1L-19R and Runway 7L-25R. These "donor" tracks would 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 and Runway 13-31 to Runway 1L-19R and Runway 7L-25R in the Proposed Action.

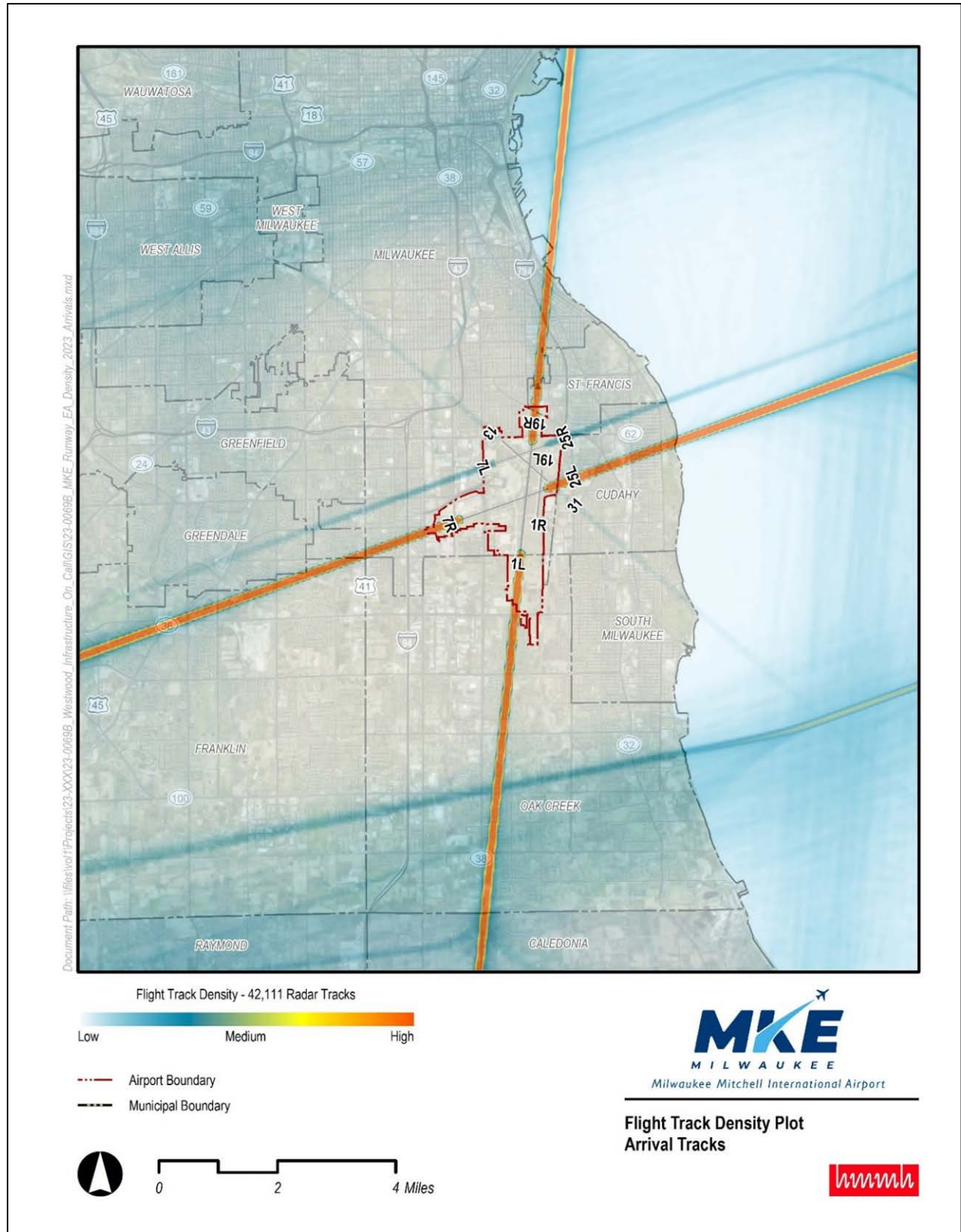


Figure 3. Existing Modeled Arrival Tracks

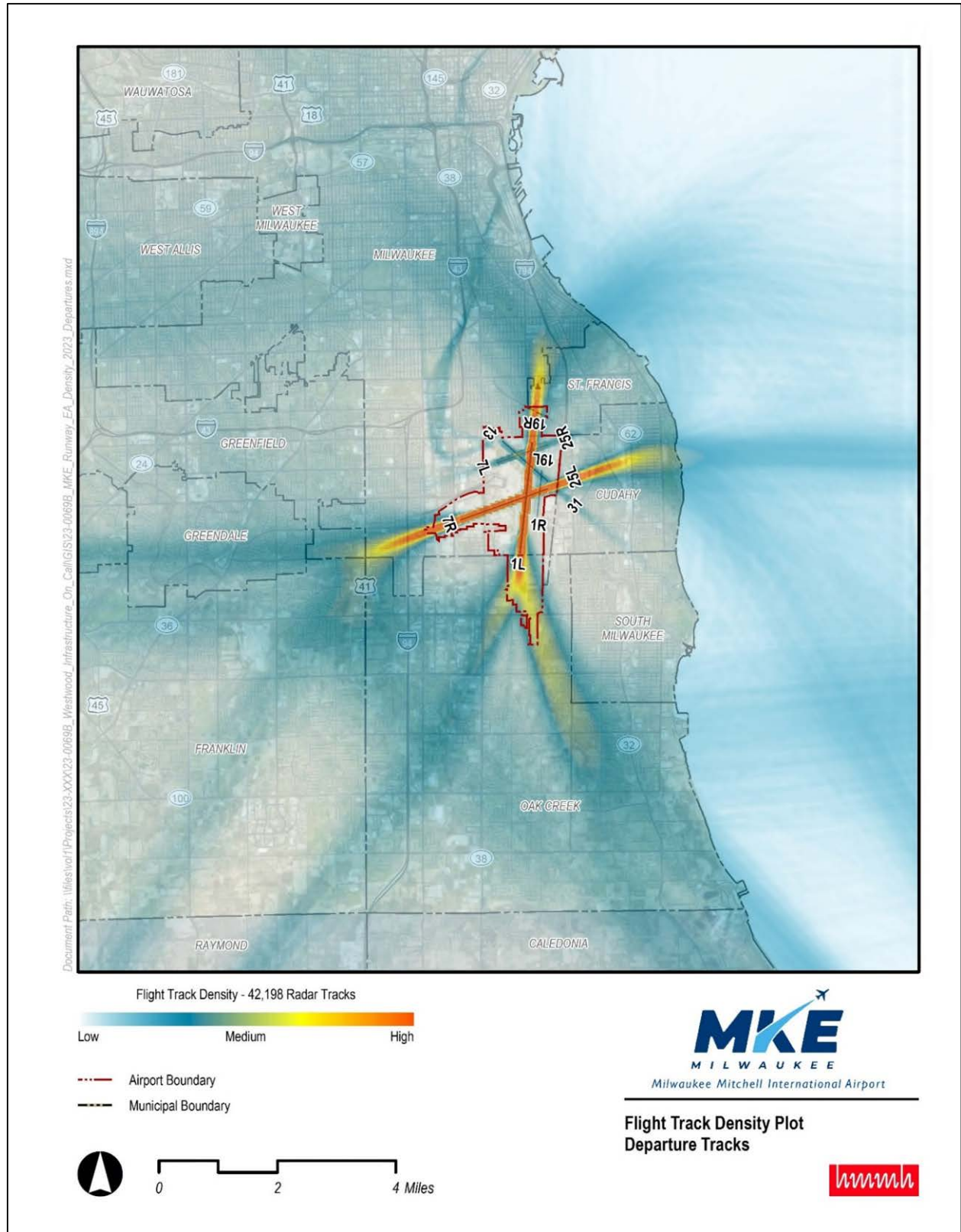


Figure 4. Existing Modeled Departure Tracks

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 | 500-1,000 |
| 3 | 1,000-1,500 |
| 4 | 1,500-2,500 |
| 5 | 2,500-3,500 |
| 6 | 3,500-4,500 |
| 7 | 4,500-5,500 |
| 8 | 5,500-6,500 |
| 9 | 6,500+ |

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 percent 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 |
| Subtotal | | 22,000.2 | 5,611.3 | 27,611.5 | 22,390.0 | 5,221.5 | 27,611.5 | 55,223.0 |
| 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 |
| Subtotal | | 10,779.7 | 1,105.8 | 11,885.5 | 9,020.6 | 2,864.9 | 11,885.5 | 23,771.0 |
| 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 |
| Subtotal | | 7,386.6 | 496.9 | 7,883.5 | 7,266.8 | 616.7 | 7,883.5 | 15,767.0 |

| 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 |
| | KC135R | 770.4 | - | 770.4 | 770.4 | - | 770.4 | 1,540.8 |
| Subtotal | | 997.0 | - | 997.0 | 997.0 | - | 997.0 | 1,994.0 |
| Grand Total | | 41,163.5 | 7,214.0 | 48,377.5 | 39,674.5 | 8,703.0 | 48,377.5 | 96,755.0 |

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. The Existing Condition runway usage was derived 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.

Table 8. Existing Conditions Runway Use

Source: MKE NOMS

| Runway | Arrival | | Departure | |
|--------------|---------------|---------------|---------------|---------------|
| | Day | Night | Day | Night |
| 1L | 19.4% | 29.3% | 19.3% | 24.4% |
| 1R | 0.1% | 0.0% | 0.3% | 0.0% |
| 7L | 1.3% | 0.1% | 1.1% | 0.2% |
| 7R | 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% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% |

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.

The DNL 65 dB contour extends off airport property in three areas:

- North of the Runway 19R end, the DNL 65 dB contour extends across E. Bolivar Avenue into a commercial area (compatible land use).
- East of the Runway 25L end, the DNL 65 dB contour extends across S. Pennsylvania Avenue into a commercial area (compatible land use).
- West of the Runway 7R end, the DNL 65 dB contour extends across South 13th Street into Maitland Park (compatible land use).

The DNL 70 dB and 75 dB contours remain on airport property.

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 |
| Total | 0 | 0 | 1,092.84 |

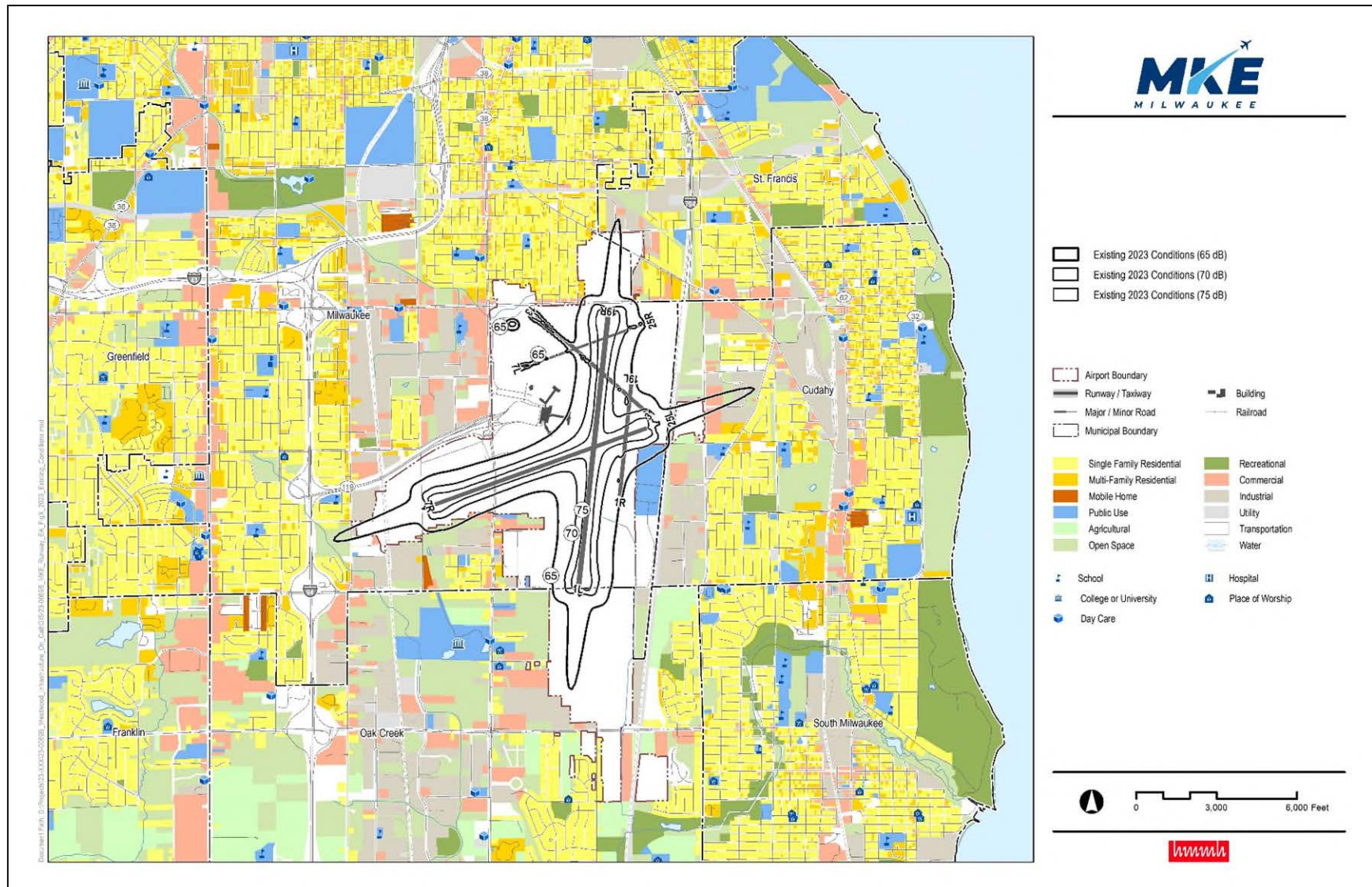


Figure 5. Existing 2023 Conditions

5 Future Alternatives

The following sections discuss the development of the future 2029 and 2034 aircraft operational forecast, runway use, flight tracks, and flight track usage for the future 2029 and 2034 No Action and Proposed Action alternatives. **Section 5.3.3** and **Section 5.3.6** discuss the comparison between the two alternatives for 2029 and 2034.

5.1 Forecast Activity Levels and Fleet Mix

Flight operation totals for both future condition model years (2029 and 2034) 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 2029 Proposed Action and No Action operations. **Table 12** displays the fleet mix breakdown for 2034 Proposed Action and No Action operations.

Table 10. 2029 and 2034 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 |
| 2029 No Action | 73,439 | 19,635 | 14,719 | 2,027 | 109,820 |
| 2029 Proposed Action | 73,439 | 19,635 | 14,719 | 2,027 | 109,820 |
| 2034 No Action | 79,552 | 20,761 | 14,719 | 2,027 | 117,059 |
| 2034 Proposed Action | 79,552 | 20,761 | 14,719 | 2,027 | 117,059 |

Table 11. Future (2029) 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 | 1,641.0 | 14.9 | 1,656.0 | 1,473.5 | 182.5 | 1,656.0 | 3,312.0 |
| | 737300 | 1.4 | - | 1.4 | 1.4 | - | 1.4 | 2.7 |
| | 737400 | 70.6 | 70.6 | 141.3 | 27.2 | 114.1 | 141.3 | 282.6 |
| | 737700 | 5,658.8 | 1,341.4 | 7,000.2 | 5,738.2 | 1,262.0 | 7,000.2 | 14,000.4 |
| | 737800 | 4,140.3 | 1,543.6 | 5,683.8 | 4,072.7 | 1,611.1 | 5,683.8 | 11,367.7 |
| | 757300 | 8.2 | 2.7 | 10.9 | 6.8 | 4.1 | 10.9 | 21.7 |
| | 767300 | 1.4 | 1.4 | 2.7 | 1.4 | 1.4 | 2.7 | 5.4 |
| | 727EM2 | 1.4 | - | 1.4 | - | 1.4 | 1.4 | 2.7 |

| Category | Aircraft Type | Arrivals | | | Departures | | | Grand Total |
|----------|---------------|----------|---------|----------|------------|---------|----------|-------------|
| | | Day | Night | Total | Day | Night | Total | |
| | 7378MAX | 1,622.6 | 724.9 | 2,347.4 | 1,634.2 | 713.2 | 2,347.4 | 4,694.9 |
| | 757PW | 264.9 | 135.8 | 400.7 | 261.7 | 139.0 | 400.7 | 801.5 |
| | 757RR | 9.5 | 138.6 | 148.1 | 6.9 | 141.2 | 148.1 | 296.1 |
| | 7673ER | 397.6 | 75.1 | 472.7 | 372.2 | 100.5 | 472.7 | 945.5 |
| | 767CF6 | 5.4 | 2.7 | 8.2 | 1.4 | 6.8 | 8.2 | 16.3 |
| | 767JT9 | 4.1 | 2.7 | 6.8 | 1.4 | 5.4 | 6.8 | 13.6 |
| | 7773ER | 1.4 | - | 1.4 | - | 1.4 | 1.4 | 2.7 |
| | A300-622R | 366.5 | 284.2 | 650.7 | 430.6 | 220.1 | 650.7 | 1,301.4 |
| | A319-131 | 1,931.5 | 212.2 | 2,143.7 | 2,032.3 | 111.4 | 2,143.7 | 4,287.3 |
| | A320-211 | 1,215.2 | 166.4 | 1,381.6 | 1,135.7 | 245.9 | 1,381.6 | 2,763.1 |
| | A320-232 | 713.1 | 190.3 | 903.4 | 830.0 | 73.4 | 903.4 | 1,806.8 |
| | A320-271N | 754.0 | 362.7 | 1,116.7 | 772.1 | 344.5 | 1,116.7 | 2,233.3 |
| | A321-232 | 1,809.1 | 1,088.5 | 2,897.6 | 2,268.6 | 629.0 | 2,897.6 | 5,795.2 |
| | A330-343 | 2.7 | - | 2.7 | 1.4 | 1.4 | 2.7 | 5.4 |
| | ATR72-212A | 1.4 | - | 1.4 | - | 1.4 | 1.4 | 2.7 |
| | CRJ9-ER | 3,488.1 | 114.5 | 3,602.7 | 3,102.8 | 499.9 | 3,602.7 | 7,205.3 |
| | DC93LW | 1.4 | - | 1.4 | 1.4 | - | 1.4 | 2.7 |
| | EMB170 | 317.8 | 13.6 | 331.5 | 322.0 | 9.5 | 331.5 | 662.9 |
| | EMB175 | 4,689.2 | 632.0 | 5,321.1 | 4,818.5 | 502.6 | 5,321.1 | 10,642.3 |
| | EMB190 | 119.5 | 1.4 | 120.9 | 118.2 | 2.7 | 120.9 | 241.8 |
| | HS748A | 4.1 | - | 4.1 | 4.1 | - | 4.1 | 8.2 |
| | MD11GE | 5.8 | 105.6 | 111.4 | 103.2 | 8.2 | 111.4 | 222.8 |
| | MD11PW | 9.5 | 236.4 | 245.9 | 236.0 | 9.8 | 245.9 | 491.8 |
| Subtotal | | 29,257.3 | 7,462.2 | 36,719.5 | 29,775.7 | 6,943.8 | 36,719.5 | 73,439.0 |
| Air Taxi | 1900D | 212.0 | - | 212.0 | 209.2 | 2.8 | 212.0 | 424.1 |
| | BD-700-1A10 | 14.6 | - | 14.6 | 13.6 | 1.0 | 14.6 | 29.1 |
| | BD-700-1A11 | 12.7 | - | 12.7 | 10.9 | 1.8 | 12.7 | 25.5 |
| | BEC58P | 62.7 | 37.4 | 100.1 | 37.3 | 62.8 | 100.1 | 200.2 |
| | CL600 | 2,195.9 | 222.0 | 2,418.0 | 2,114.4 | 303.6 | 2,418.0 | 4,835.9 |
| | CL601 | 48.2 | 0.9 | 49.1 | 47.3 | 1.8 | 49.1 | 98.3 |
| | CNA208 | 1,912.5 | 25.0 | 1,937.5 | 1,230.4 | 707.1 | 1,937.5 | 3,874.9 |
| | CNA510 | 0.9 | - | 0.9 | 0.9 | - | 0.9 | 1.8 |
| | CNA525C | 267.6 | 21.8 | 289.4 | 233.0 | 56.4 | 289.4 | 578.8 |
| | CNA55B | 212.0 | 6.5 | 218.4 | 202.9 | 15.5 | 218.4 | 436.8 |
| | CNA560E | 1.8 | - | 1.8 | 1.8 | - | 1.8 | 3.6 |
| | CNA560U | 29.1 | - | 29.1 | 29.1 | - | 29.1 | 58.2 |
| | CNA560XL | 173.8 | 10.0 | 183.8 | 179.3 | 4.6 | 183.8 | 367.7 |
| | CNA680 | 466.8 | 22.8 | 489.6 | 463.1 | 26.5 | 489.6 | 979.2 |
| | CNA750 | 152.9 | 2.7 | 155.6 | 150.2 | 5.5 | 155.6 | 311.2 |
| | 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 | 1,449.7 | 221.1 | 1,670.8 | 726.2 | 944.6 | 1,670.8 | 3,341.7 |
| | DHC830 | 1.8 | - | 1.8 | 1.8 | - | 1.8 | 3.6 |
| | ECLIPSE500 | 4.6 | - | 4.6 | 4.6 | - | 4.6 | 9.1 |
| | EMB120 | 230.5 | 170.8 | 401.3 | 276.7 | 124.7 | 401.3 | 802.7 |
| | EMB145 | 10.9 | - | 10.9 | 10.9 | - | 10.9 | 21.8 |
| | EMB14L | 302.1 | - | 302.1 | 302.1 | - | 302.1 | 604.3 |
| | FAL20 | 1.8 | - | 1.8 | 1.8 | - | 1.8 | 3.6 |
| | FAL900EX | 32.7 | 0.9 | 33.7 | 32.8 | 0.9 | 33.7 | 67.3 |
| | G650ER | 25.5 | - | 25.5 | 20.9 | 4.6 | 25.5 | 51.0 |
| | GASEPF | 2.7 | - | 2.7 | 2.7 | - | 2.7 | 5.5 |
| | GASEPV | 1.8 | - | 1.8 | 1.8 | - | 1.8 | 3.6 |
| | GIV | 95.6 | 6.4 | 101.9 | 80.8 | 21.1 | 101.9 | 203.8 |
| | GV | 32.5 | 3.0 | 35.5 | 33.7 | 1.8 | 35.5 | 71.0 |
| | HS748A | 125.6 | 104.7 | 230.2 | 195.5 | 34.7 | 230.2 | 460.5 |
| | IA1125 | 15.5 | 2.7 | 18.2 | 16.4 | 1.8 | 18.2 | 36.4 |
| | LEAR35 | 424.7 | 32.1 | 456.8 | 425.9 | 30.9 | 456.8 | 913.7 |
| | MU3001 | 38.2 | 0.9 | 39.1 | 38.2 | 0.9 | 39.1 | 78.3 |
| | PA30 | 9.1 | - | 9.1 | 9.1 | - | 9.1 | 18.2 |
| | SD330 | 333.3 | 20.7 | 354.0 | 343.1 | 10.9 | 354.0 | 708.0 |
| | SF340 | 0.9 | 0.9 | 1.8 | 1.8 | - | 1.8 | 3.6 |
| Subtotal | | 8,904.1 | 913.4 | 9,817.5 | 7,451.1 | 2,366.4 | 9,817.5 | 19,635.0 |
| 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 |
| | Subtotal | 6,895.6 | 463.9 | 7,359.5 | 6,783.8 | 575.7 | 7,359.5 | 14,719.0 |
| 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 |
| | KC135R | 783.2 | - | 783.2 | 783.2 | - | 783.2 | 1,566.3 |
| | Subtotal | 1,013.5 | - | 1,013.5 | 1,013.5 | - | 1,013.5 | 2,027.0 |
| | Grand Total | 46,070.4 | 8,839.6 | 54,910.0 | 45,024.1 | 9,885.9 | 54,910.0 | 109,820.0 |

Note: Totals may not add up due to rounding.

Table 12. Future (2034) 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 | 1,777.6 | 16.2 | 1,793.8 | 1,596.1 | 197.7 | 1,793.8 | 3,587.6 |
| | 737300 | 1.5 | - | 1.5 | 1.5 | - | 1.5 | 2.9 |
| | 737400 | 76.5 | 76.5 | 153.0 | 29.4 | 123.6 | 153.0 | 306.1 |
| | 737700 | 6,129.8 | 1,453.1 | 7,582.9 | 6,215.8 | 1,367.1 | 7,582.9 | 15,165.8 |
| | 737800 | 4,484.9 | 1,672.1 | 6,157.0 | 4,411.7 | 1,745.3 | 6,157.0 | 12,313.9 |
| | 757300 | 8.8 | 2.9 | 11.8 | 7.4 | 4.4 | 11.8 | 23.5 |
| | 767300 | 1.5 | 1.5 | 2.9 | 1.5 | 1.5 | 2.9 | 5.9 |
| | 727EM2 | 1.5 | - | 1.5 | - | 1.5 | 1.5 | 2.9 |
| | 7378MAX | 1,757.6 | 785.2 | 2,542.9 | 1,770.3 | 772.6 | 2,542.9 | 5,085.7 |
| | 757PW | 287.0 | 147.2 | 434.1 | 283.5 | 150.6 | 434.1 | 868.2 |
| | 757RR | 10.3 | 150.1 | 160.4 | 7.4 | 153.0 | 160.4 | 320.8 |
| | 7673ER | 430.7 | 81.4 | 512.1 | 403.2 | 108.9 | 512.1 | 1,024.2 |
| | 767CF6 | 5.9 | 2.9 | 8.8 | 1.5 | 7.4 | 8.8 | 17.7 |
| | 767JT9 | 4.4 | 2.9 | 7.4 | 1.5 | 5.9 | 7.4 | 14.7 |
| | 7773ER | 1.5 | - | 1.5 | - | 1.5 | 1.5 | 2.9 |
| | A300-622R | 397.0 | 307.8 | 704.9 | 466.5 | 238.4 | 704.9 | 1,409.7 |
| | A319-131 | 2,092.3 | 229.9 | 2,322.1 | 2,201.4 | 120.7 | 2,322.1 | 4,644.2 |
| | A320-211 | 1,316.3 | 180.2 | 1,496.6 | 1,230.2 | 266.4 | 1,496.6 | 2,993.1 |
| | A320-232 | 772.5 | 206.1 | 978.6 | 899.1 | 79.5 | 978.6 | 1,957.2 |
| | A320-271N | 816.7 | 392.9 | 1,209.6 | 836.4 | 373.2 | 1,209.6 | 2,419.2 |
| | A321-232 | 1,959.7 | 1,179.1 | 3,138.8 | 2,457.5 | 681.3 | 3,138.8 | 6,277.6 |
| | A330-343 | 2.9 | - | 2.9 | 1.5 | 1.5 | 2.9 | 5.9 |
| | ATR72-212A | 1.5 | - | 1.5 | - | 1.5 | 1.5 | 2.9 |
| | CRJ9-ER | 3,778.5 | 124.1 | 3,902.6 | 3,361.0 | 541.5 | 3,902.6 | 7,805.1 |
| | DC93LW | 1.5 | - | 1.5 | 1.5 | - | 1.5 | 2.9 |
| | EMB170 | 344.3 | 14.8 | 359.1 | 348.8 | 10.3 | 359.1 | 718.1 |
| | EMB175 | 5,079.5 | 684.6 | 5,764.1 | 5,219.6 | 544.5 | 5,764.1 | 11,528.1 |
| | EMB190 | 129.5 | 1.5 | 131.0 | 128.0 | 2.9 | 131.0 | 261.9 |
| | HS748A | 4.4 | - | 4.4 | 4.4 | - | 4.4 | 8.8 |
| | MD11GE | 6.3 | 114.4 | 120.7 | 111.8 | 8.8 | 120.7 | 241.3 |
| | MD11PW | 10.3 | 256.0 | 266.4 | 255.7 | 10.7 | 266.4 | 532.7 |
| | Subtotal | 31,692.6 | 8,083.4 | 39,776.0 | 32,254.2 | 7,521.8 | 39,776.0 | 79,552.0 |
| Air Taxi | 1900D | 224.2 | - | 224.2 | 221.2 | 3.0 | 224.2 | 448.4 |
| | BD-700-1A10 | 15.4 | - | 15.4 | 14.4 | 1.0 | 15.4 | 30.8 |
| | BD-700-1A11 | 13.5 | - | 13.5 | 11.5 | 1.9 | 13.5 | 26.9 |
| | BEC58P | 66.3 | 39.6 | 105.8 | 39.5 | 66.4 | 105.8 | 211.7 |
| | CL600 | 2,321.9 | 234.8 | 2,556.6 | 2,235.6 | 321.0 | 2,556.6 | 5,113.3 |
| | CL601 | 51.0 | 1.0 | 52.0 | 50.0 | 1.9 | 52.0 | 103.9 |

| Category | Aircraft Type | Arrivals | | | Departures | | | Grand Total |
|------------------|---------------|----------|-------|----------|------------|---------|----------|-------------|
| | | Day | Night | Total | Day | Night | Total | |
| | CNA208 | 2,022.1 | 26.4 | 2,048.6 | 1,300.9 | 747.7 | 2,048.6 | 4,097.2 |
| | CNA510 | 1.0 | - | 1.0 | 1.0 | - | 1.0 | 1.9 |
| | CNA525C | 282.9 | 23.1 | 306.0 | 246.3 | 59.7 | 306.0 | 612.0 |
| | CNA55B | 224.1 | 6.8 | 230.9 | 214.6 | 16.4 | 230.9 | 461.9 |
| | CNA560E | 1.9 | - | 1.9 | 1.9 | - | 1.9 | 3.8 |
| | CNA560U | 30.8 | - | 30.8 | 30.8 | - | 30.8 | 61.6 |
| | CNA560XL | 183.8 | 10.6 | 194.4 | 189.5 | 4.8 | 194.4 | 388.7 |
| | CNA680 | 493.6 | 24.1 | 517.7 | 489.6 | 28.1 | 517.7 | 1,035.4 |
| | CNA750 | 161.6 | 2.9 | 164.5 | 158.8 | 5.8 | 164.5 | 329.1 |
| | COMSEP | 1.0 | - | 1.0 | 1.0 | - | 1.0 | 1.9 |
| | DHC6 | 1,532.8 | 233.8 | 1,766.6 | 767.9 | 998.8 | 1,766.6 | 3,533.3 |
| | DHC830 | 1.9 | - | 1.9 | 1.9 | - | 1.9 | 3.8 |
| | ECLIPSE500 | 4.8 | - | 4.8 | 4.8 | - | 4.8 | 9.6 |
| | EMB120 | 243.7 | 180.6 | 424.3 | 292.5 | 131.8 | 424.3 | 848.7 |
| | EMB145 | 11.5 | - | 11.5 | 11.5 | - | 11.5 | 23.1 |
| | EMB14L | 319.5 | - | 319.5 | 319.5 | - | 319.5 | 638.9 |
| | FAL20 | 1.9 | - | 1.9 | 1.9 | - | 1.9 | 3.8 |
| | FAL900EX | 34.6 | 1.0 | 35.6 | 34.6 | 1.0 | 35.6 | 71.2 |
| | G650ER | 26.9 | - | 26.9 | 22.1 | 4.8 | 26.9 | 53.9 |
| | GASEPF | 2.9 | - | 2.9 | 2.9 | - | 2.9 | 5.8 |
| | GASEPV | 1.9 | - | 1.9 | 1.9 | - | 1.9 | 3.8 |
| | GIV | 101.0 | 6.7 | 107.8 | 85.4 | 22.3 | 107.8 | 215.5 |
| | GV | 34.4 | 3.1 | 37.5 | 35.6 | 1.9 | 37.5 | 75.1 |
| | HS748A | 132.8 | 110.7 | 243.4 | 206.7 | 36.7 | 243.4 | 486.9 |
| | IA1125 | 16.4 | 2.9 | 19.2 | 17.3 | 1.9 | 19.2 | 38.5 |
| | LEAR35 | 449.1 | 33.9 | 483.0 | 450.3 | 32.7 | 483.0 | 966.1 |
| | MU3001 | 40.4 | 1.0 | 41.4 | 40.4 | 1.0 | 41.4 | 82.8 |
| | PA30 | 9.6 | - | 9.6 | 9.6 | - | 9.6 | 19.2 |
| | SD330 | 352.4 | 21.9 | 374.3 | 362.8 | 11.5 | 374.3 | 748.6 |
| | SF340 | 1.0 | 1.0 | 1.9 | 1.9 | - | 1.9 | 3.8 |
| Subtotal | | 9,414.7 | 965.8 | 10,380.5 | 7,878.4 | 2,502.1 | 10,380.5 | 20,761.0 |
| 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 |

| Category | Aircraft Type | Arrivals | | | Departures | | | Grand Total |
|----------|---------------|----------|-------|---------|------------|-------|---------|-------------|
| | | Day | Night | Total | Day | Night | Total | |
| | 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 |
| | 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 |
| Subtotal | | 6,895.6 | 463.9 | 7,359.5 | 6,783.8 | 575.7 | 7,359.5 | 14,719.0 |
| Military | 737700 | 46.1 | - | 46.1 | 46.1 | - | 46.1 | 92.1 |
| | CNA208 | 92.1 | - | 92.1 | 92.1 | - | 92.1 | 184.3 |

| Category | Aircraft Type | Arrivals | | | Departures | | | Grand Total |
|-------------|---------------|----------|---------|----------|------------|----------|----------|-------------|
| | | Day | Night | Total | Day | Night | Total | |
| | DHC6 | 92.1 | - | 92.1 | 92.1 | - | 92.1 | 184.3 |
| | KC135R | 783.2 | - | 783.2 | 783.2 | - | 783.2 | 1,566.3 |
| Subtotal | | 1,013.5 | - | 1,013.5 | 1,013.5 | - | 1,013.5 | 2,027.0 |
| Grand Total | | 49,016.4 | 9,513.1 | 58,529.5 | 47,929.9 | 10,599.6 | 58,529.5 | 117,059.0 |

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. In the future No Action scenario, it is assumed that Runway 1R-19L and Runway 13-31 would remain operational. For the future Proposed Action, Runway 1R-19L and Runway 13-31 would be decommissioned. Both runways proposed to be decommissioned have less than one percent use in the No Action scenario. The operations on Runway 1R-19L and Runway 13-31 would utilize Runway 1L-19R and Runway 7L-25R in the Proposed Action.

Table 13. Future No Action Runway Use

Source: MKE NOMS

| Runway | Arrival | | Departure | |
|--------|---------|--------|-----------|--------|
| | Day | Night | Day | Night |
| 1L | 19.4% | 29.3% | 19.3% | 24.4% |
| 1R | 0.1% | 0.0% | 0.3% | 0.0% |
| 7L | 1.3% | 0.1% | 1.1% | 0.2% |
| 7R | 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% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% |

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 |
| 1L | 19.6% | 29.4% | 19.8% | 24.5% |
| 7L | 1.4% | 0.1% | 1.8% | 0.4% |
| 7R | 26.0% | 17.1% | 23.3% | 16.7% |
| 19R | 16.6% | 28.7% | 29.4% | 31.0% |
| 25L | 35.0% | 24.6% | 24.2% | 27.1% |
| 25R | 1.0% | 0.2% | 0.7% | 0.2% |
| H1 | 0.4% | 0.0% | 0.8% | 0.1% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% |

Note: Runway 1R-19L and Runway 13-31 are 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 the change in the DNL noise contours, 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 (2029)

Figure 6 displays the DNL 65 dB – 75 dB noise contours for the 2029 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.

The DNL 65 dB contour extends off airport property in three areas:

- North of the Runway 19R end, the DNL 65 dB contour extends across E. Bolivar Avenue into a commercial area (compatible land use) and the start of takeoff lobes extend across E. Layton Avenue and on the west side into a small residential area.
- East of the Runway 25L end, the DNL 65 dB contour extends across S. Nicholson Avenue into a residential area.
- West of the Runway 7R end, the DNL 65 dB contour extends across Interstate 94 and into a residential area.

The DNL 70 dB and 75 dB contours remain on airport property.

Table 15 provides the population exposure, housing unit count, and contour areas for the 2029 Future No Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,328.91 acres and contains 68 residents and 32 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 2029 No Action Alternative DNL 65 dB noise contour.

Table 15. Future 2029 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 | 68 | 32 | 788.59 |
| 70 - 75 | 0 | 0 | 296.60 |
| > 75 | 0 | 0 | 243.72 |
| Total | 68 | 32 | 1,328.91 |

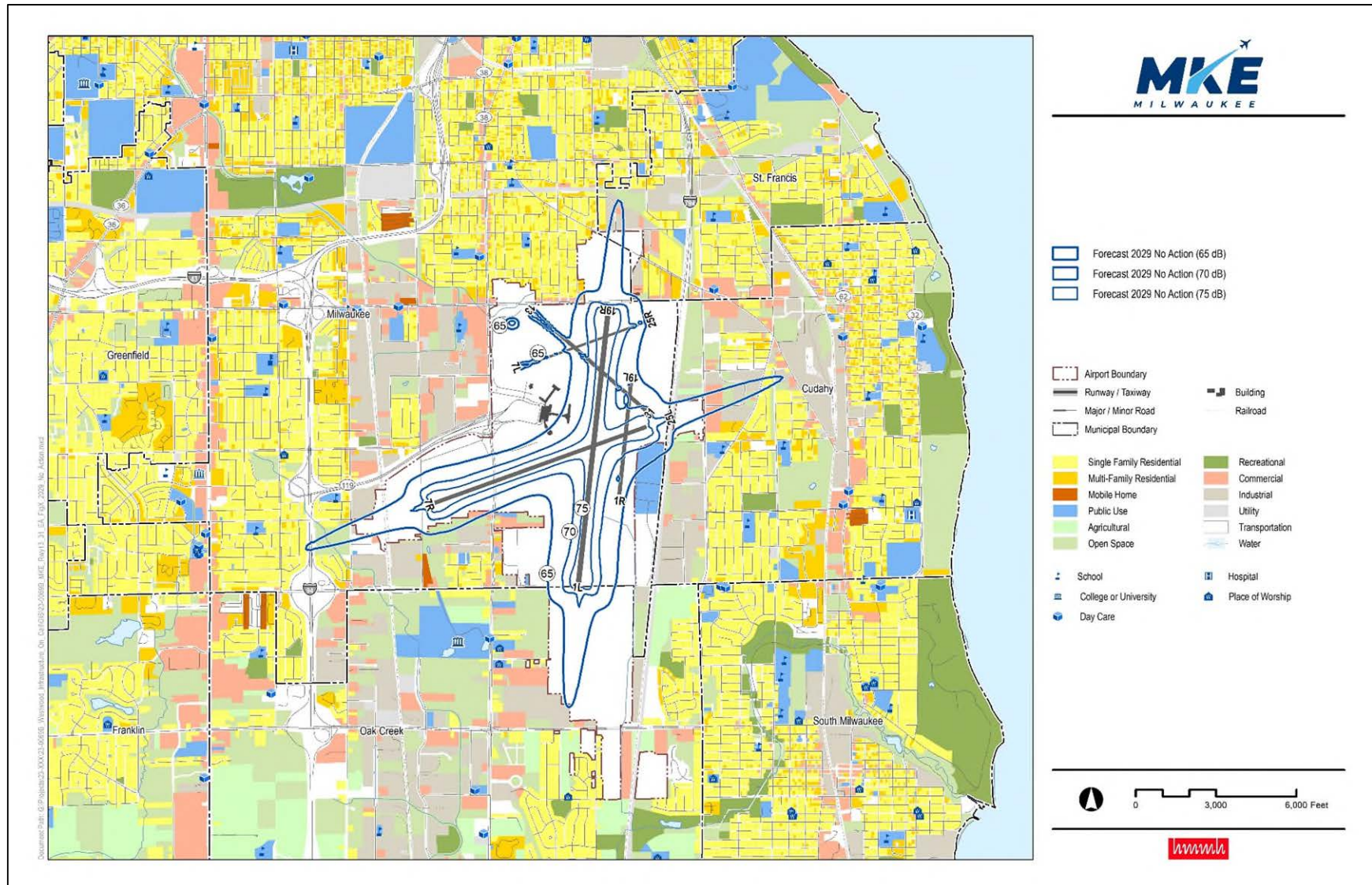


Figure 6. Future Forecast 2029 No Action DNL Contours

5.3.2 Proposed Action Alternative (2029)

Figure 7 displays the DNL 65 dB – 75 dB noise contours for the 2029 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.

The DNL 65 dB contour extends off airport property in three areas:

- North of the Runway 19R end, the DNL 65 dB contour extends across E. Bolivar Avenue into a commercial area (compatible land use) and the start of takeoff lobes extend across E. Layton Avenue and on the west side into a small residential area.
- East of the Runway 25L end, the DNL 65 dB contour extends across S. Nicholson Avenue into a residential area.
- West of the Runway 7R end, the DNL 65 dB contour extends across Interstate 94 and into a residential area.

The DNL 70 dB and 75 dB contours remain on airport property.

Table 16 provides the population exposure, housing unit count, and contour areas for the 2029 Future Proposed Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,323.55 acres and contains 68 residents and 32 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 2029 Proposed Action Alternative DNL 65 dB noise contour.

Table 16. 2029 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 | 68 | 32 | 789.03 |
| 70 - 75 | 0 | 0 | 290.80 |
| > 75 | 0 | 0 | 243.72 |
| Total | 68 | 32 | 1,323.55 |



5.3.3 No Action and Proposed Action Comparison (2029)

The 2029 Proposed Action DNL 65 dB contour is smaller in area than the No Action DNL 65 dB contour since there are no operations on the two closed runways. 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 5.36 acres on airport property. There is no change to the DNL 65 dB contour off airport property as shown in **Figure 8**.

Table 17 provides a summary of changes between the 2029 No Action and Proposed Action DNL 65 dB contours. **Figure 8** provides a comparison of the DNL 65 dB contours for each of the 2029 alternatives and shows the grid points that would see a significant or reportable change in DNL when comparing the modeling results for the 2029 No Action Alternative and 2029 Proposed Action. As shown in **Figure 8**, areas of significant change as a result of the Proposed Action occur within the airport boundary and would have no effect on residential land use.

There is a 1.5 dB reduction in noise (green grid points) along the north end of Runway 13 and along Runway 1R-19L. There is a corresponding 1.5 dB increase in noise (red grid points) along Runway 7L-25R. All areas of significant (+/- 1.5 dB) change and reportable (+/- 3 dB) change are on airport property. There is no change to the DNL 65 dB contour off airport property, therefore there is no change in the number of housing units or people exposed to areas greater than 65 dB due to the Proposed Action.

Table 17. Summary of Changes with the 2029 No Action and Proposed Action DNL 65 dB Contour

| DNL 65 dB | No Action | Proposed Action | Difference |
|-----------------------|-----------|-----------------|------------|
| 2020 Population | 68 | 68 | 0 |
| 2020 Housing Units | 32 | 32 | 0 |
| Acres | 1,328.91 | 1,323.55 | -5.36 |
| Noise Sensitive Sites | 0 | 0 | 0 |

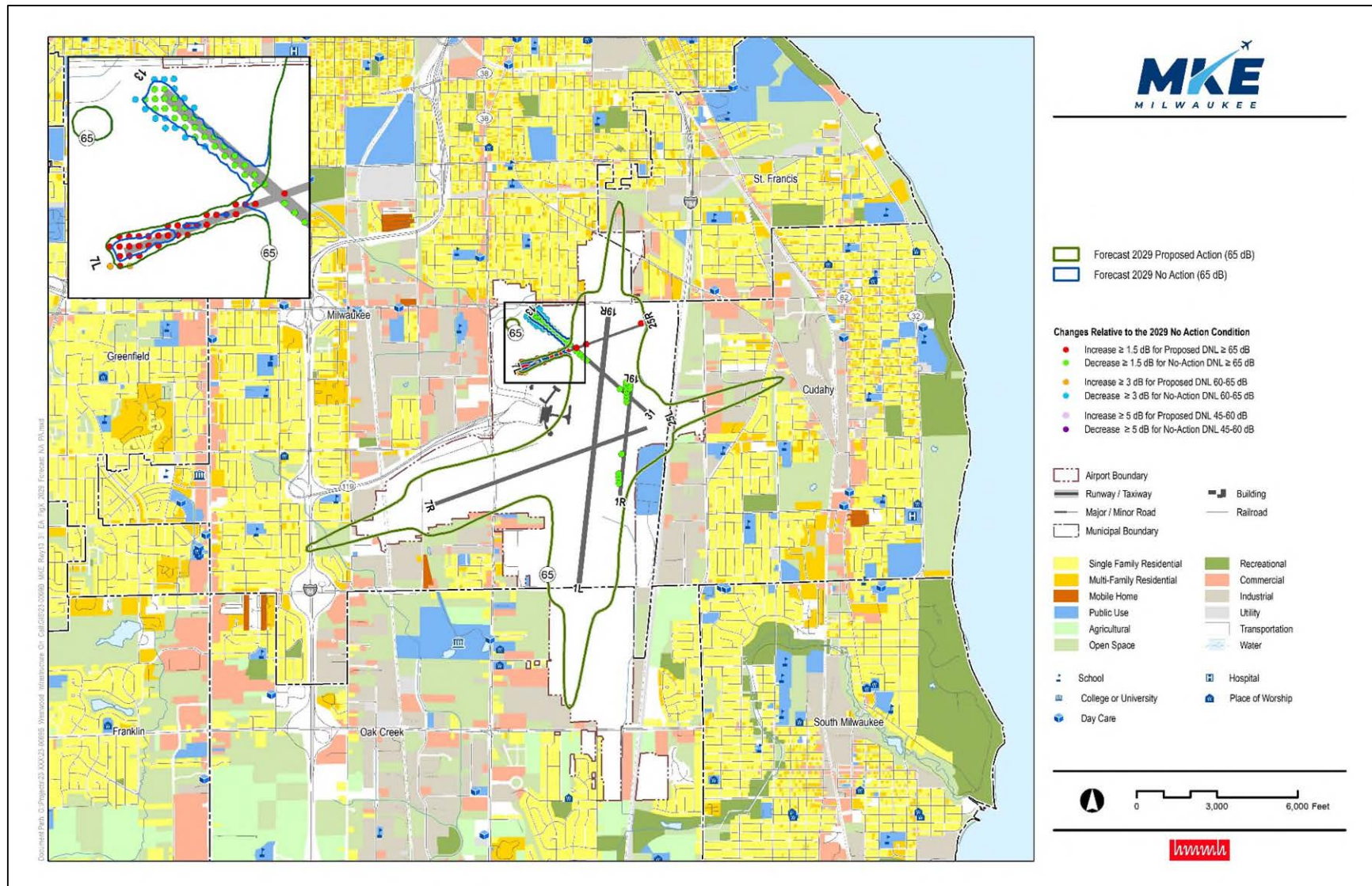


Figure 8. Future Forecast 2029 No Action and Proposed Action DNL 65 dB and Impact Sets

5.3.4 No Action Alternative (2034)

Figure 9 displays the DNL 65 dB – 75 dB noise contours for the 2034 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.

The DNL 65 dB contour extends off airport property in four areas:

- North of the Runway 19R end, the DNL 65 dB contour extends across E. Bolivar Avenue into a commercial area (compatible land use) and the start of takeoff lobes extend across E. Layton Avenue and on the west side into a small residential area.
- East of the Runway 25L end, the DNL 65 dB contour extends across S. Nicholson Avenue across a residential area almost to S. Whitnall Avenue.
- West of the Runway 7R end, the DNL 65 dB contour extends across Interstate 94 and into a residential area to S. 18th Street.
- South of the Runway 7R end, the DNL 65 dB contour extends into compatible land use and slightly south of the Runway 1L end into compatible land use.

The DNL 70 dB and 75 dB contours remain on airport property.

Table 18 provides the population exposure, housing unit count, and contour areas for the 2034 Future No Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,416.19 acres and contains 94 residents and 44 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 2034 No Action Alternative DNL 65 dB noise contour.

Table 18. 2034 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 | 94 | 44 | 846.06 |
| 70 - 75 | 0 | 0 | 313.53 |
| > 75 | 0 | 0 | 256.60 |
| Total | 94 | 44 | 1,416.19 |



5.3.5 Proposed Action Alternative (2034)

Figure 10 displays the DNL 65 dB – 75 dB noise contours for the 2034 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.

The DNL 65 dB contour extends off airport property in four areas:

- North of the Runway 19R end, the DNL 65 dB contour extends across E. Bolivar Avenue into a commercial area (compatible land use) and the start of takeoff lobes extend across E. Layton Avenue and on the west side into a small residential area.
- East of the Runway 25L end, the DNL 65 dB contour extends across S. Nicholson Avenue across a residential area almost to S. Whitnall Avenue.
- West of the Runway 7R end, the DNL 65 dB contour extends across Interstate 94 and into a residential area to S. 18th Street.
- South of the Runway 7R end, the DNL 65 dB contour extends into compatible land use and slightly south of the Runway 1L end into compatible land use.

The DNL 70 dB and 75 dB contours remain on airport property.

Table 19 provides the population exposure, housing unit count, and contour areas for the 2034 Future Proposed Action DNL noise contours. The DNL 65 dB noise contour covers approximately 1,410.81 acres and contains 94 residents and 44 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 2034 Proposed Action Alternative DNL 65 dB noise contour.

Table 19. 2034 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 | 94 | 44 | 847.42 |
| 70 - 75 | 0 | 0 | 306.82 |
| > 75 | 0 | 0 | 256.57 |
| Total | 94 | 44 | 1,410.81 |

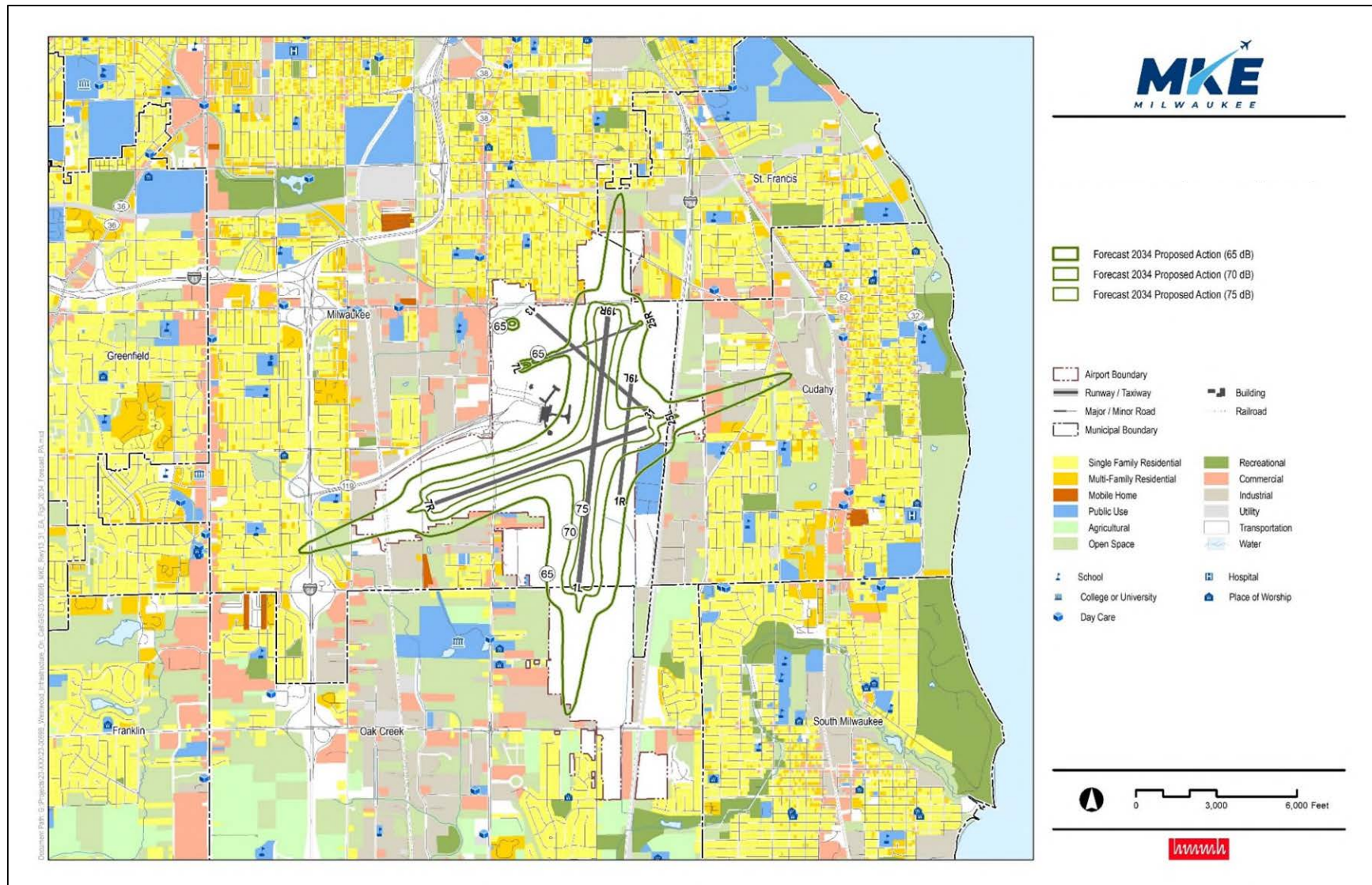


Figure 10. Future Forecast 2034 Proposed Action DNL Contours

5.3.6 No Action and Proposed Action Comparison (2034)

The 2034 Proposed Action DNL 65 dB contour is smaller in area than the No Action DNL 65 dB contour since there are no operations on the two closed runways. 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 5.38 acres on airport property. There is no change to the DNL 65 dB contour off airport property as shown in **Figure 11**.

Table 20 provides a summary of changes between the 2034 No Action and Proposed Action DNL 65 dB contours. **Figure 11** provides a comparison of the DNL 65 dB contours for each of the 2034 alternatives and shows the grid points that would see a significant or reportable change in DNL when comparing the modeling results for the 2034 No Action Alternative and 2034 Proposed Action Alternative. As shown in Figure 11, areas of significant change as a result of the Proposed Action occur within the airport boundary and would have no effect on residential land use.

There is a 1.5 dB reduction in noise (green grid points) along the north end of Runway 13 and along Runway 1R-19L. There is a corresponding 1.5 dB increase in noise (red grid points) along Runway 7L-25R. All areas of significant (+/- 1.5 dB) change and reportable (+/- 3 dB) change are on airport property. There is no change to the DNL 65 dB contour off airport property, therefore there is no change in the number of housing units or people exposed to areas greater than 65 dB due to the Proposed Action.

Table 20. Summary of Changes with the 2034 No Action and Proposed Action DNL 65 dB Contours

| DNL 65 dB | No Action | Proposed Action | Difference |
|-----------------------|-----------|-----------------|------------|
| Population | 94 | 94 | 0 |
| Housing Units | 44 | 44 | 0 |
| Acres | 1,416.19 | 1,410.81 | -5.38 |
| Noise Sensitive Sites | 0 | 0 | 0 |

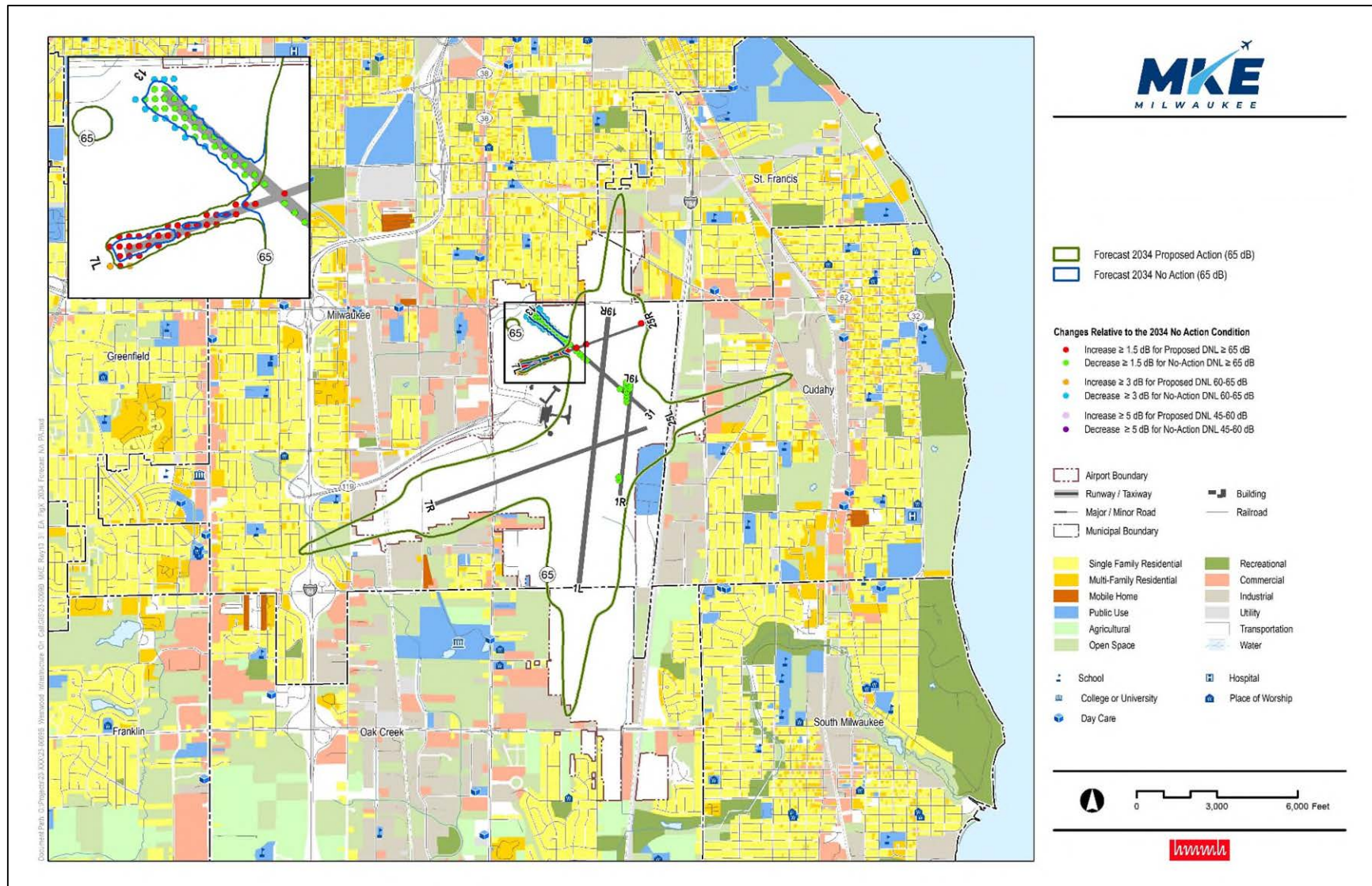


Figure 11. Future Forecast 2034 No Action and Proposed Action DNL Contours and Impact Sets

5.4 Mitigation Measures

There are projected to be no areas of significant noise impact, nor additional housing units or noise sensitive sites within the Proposed Action DNL 65 dB contours for 2029 or 2034. Therefore, no mitigation is proposed or required for the 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 ($P_{\text{reference}}$).⁴

$$\text{Sound Pressure Level (SPL)} = 20 * \text{Log} \left(\frac{P_{\text{source}}}{P_{\text{reference}}} \right) \text{dB}$$

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.⁵

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,⁶ 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.

⁴ The reference pressure is approximately the quietest sound that a healthy young adult can hear.

⁵ 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).

⁶ 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.

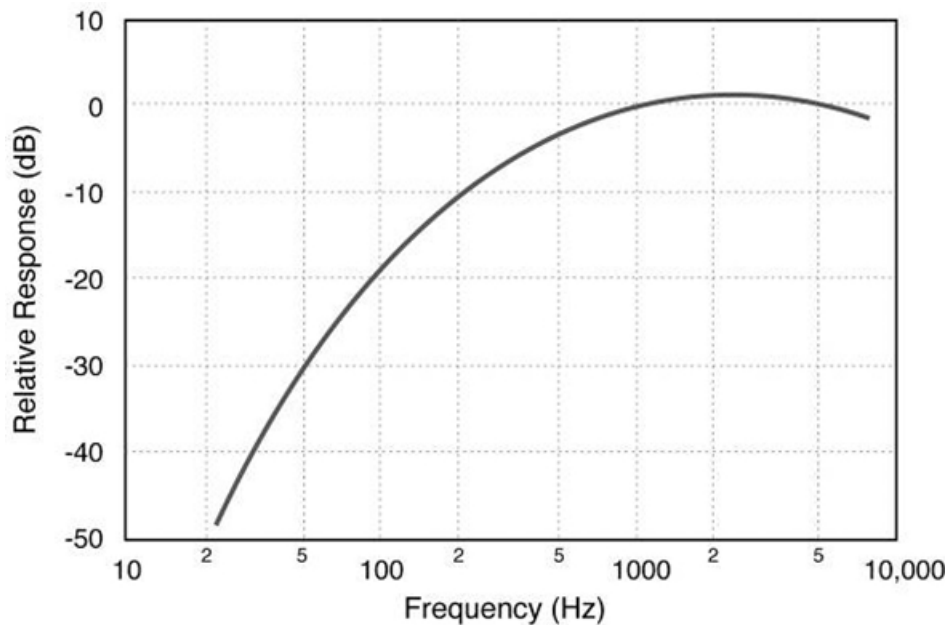


Figure A-1. A-Weighting Frequency Response

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.

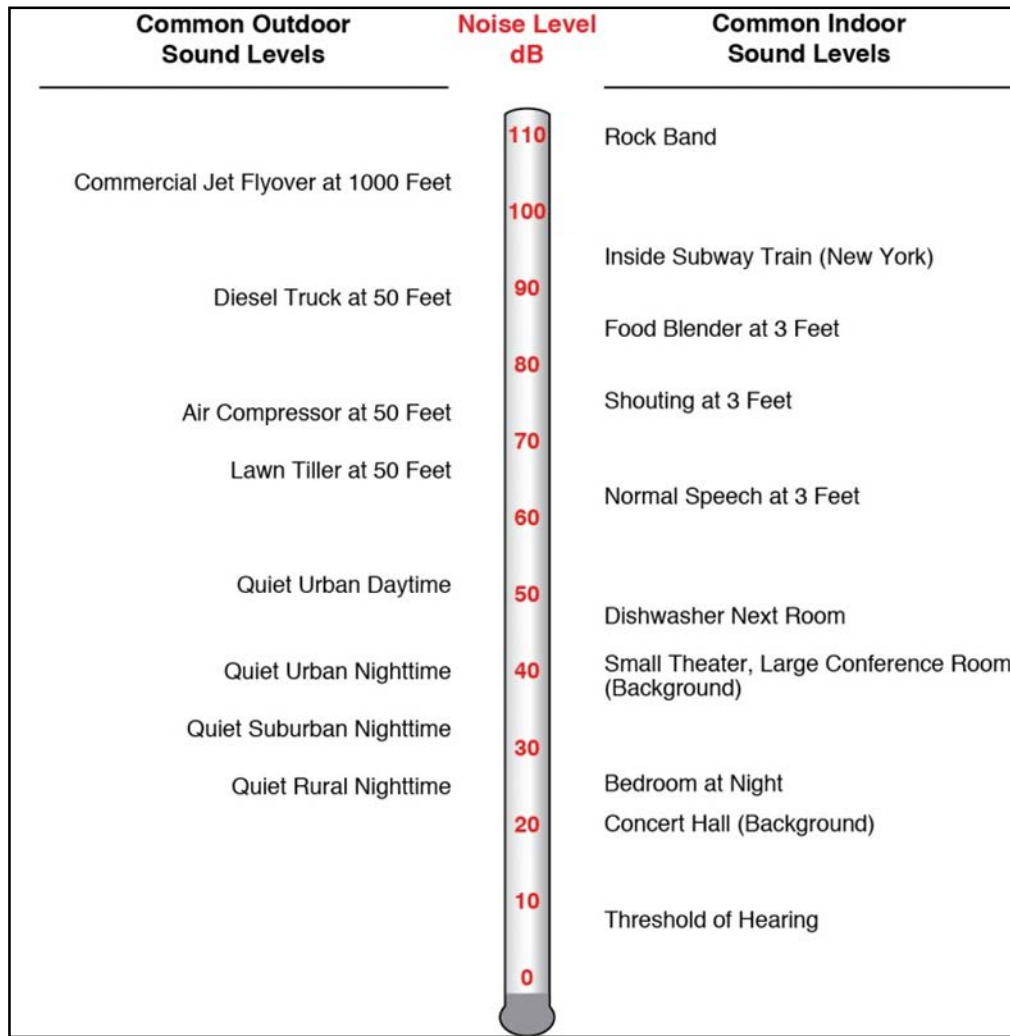


Figure A-2. A-Weighted Sound Levels for Common Sounds

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.

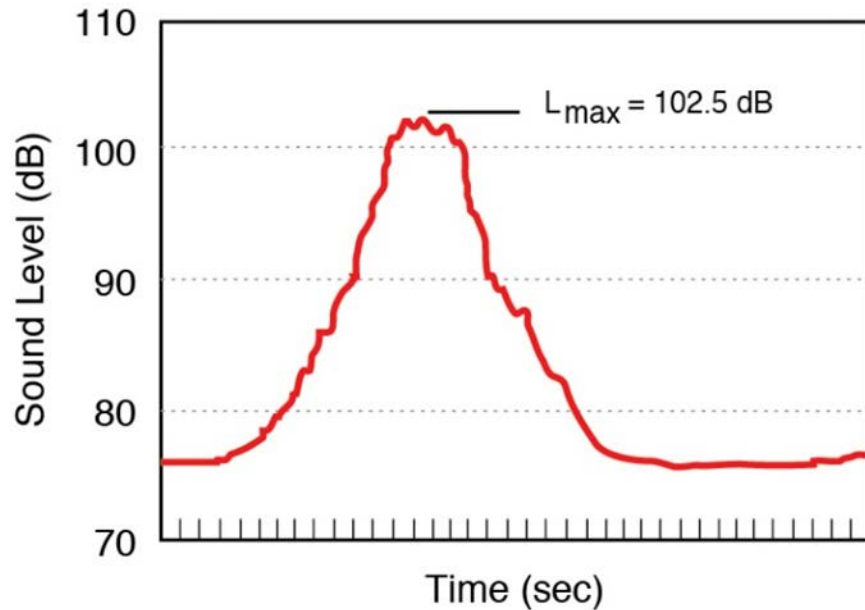


Figure A-3. Variation in A-Weighted Sound Level over Time and Maximum Noise Level

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} .

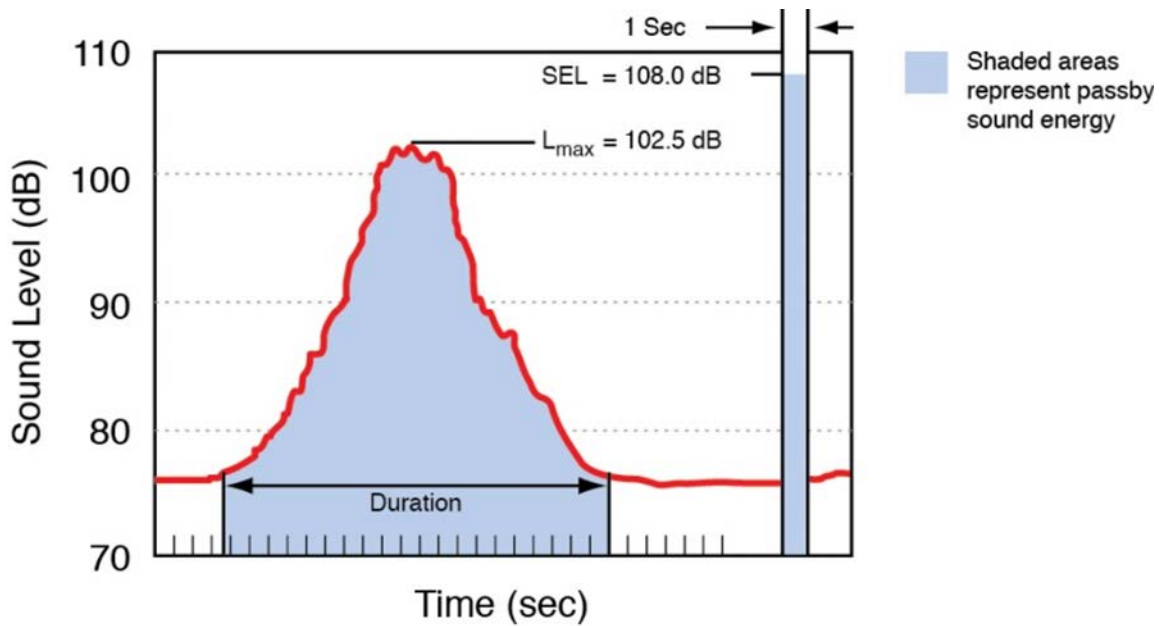


Figure A-4. Graphical Depiction of Sound Exposure Level

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.

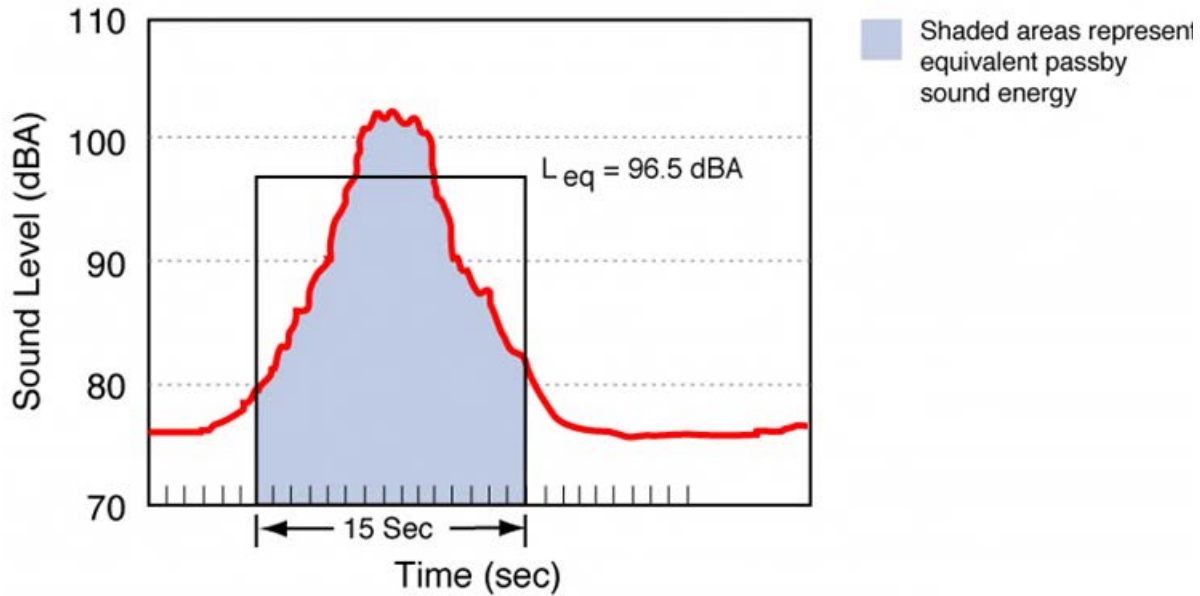


Figure A-5. Example of a 15-Second Equivalent Sound Level

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.⁷

- 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.

⁷ "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.⁸ 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, 2020⁹ 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.

⁸ 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

⁹ 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

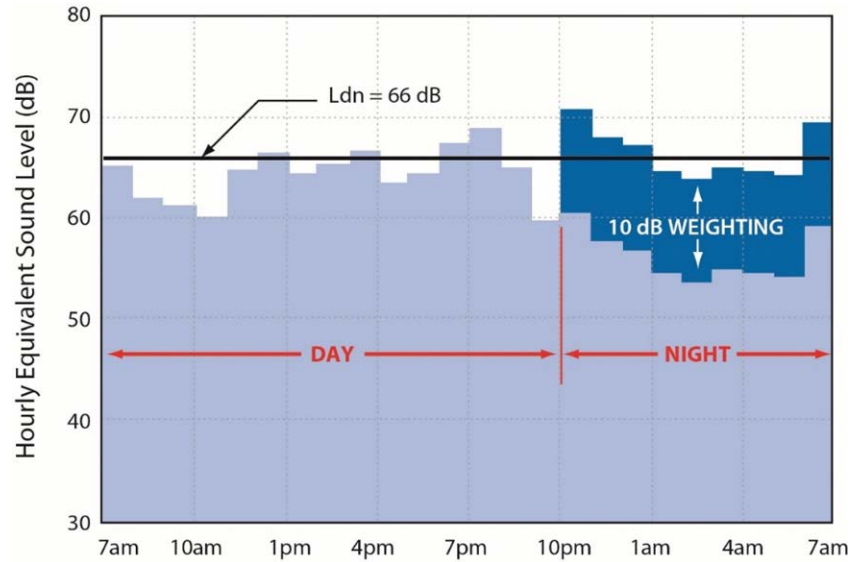


Figure A-6. Example of a Day-Night Average Sound Level Calculation

Source: HMMH

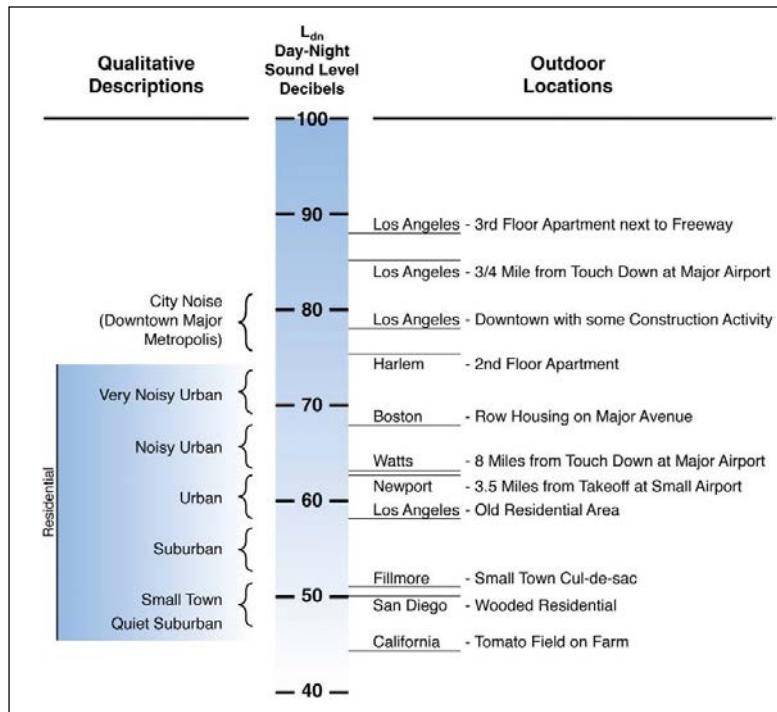


Figure A-7. Examples of Measured Day-Night Average Sound Levels, DNL

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.

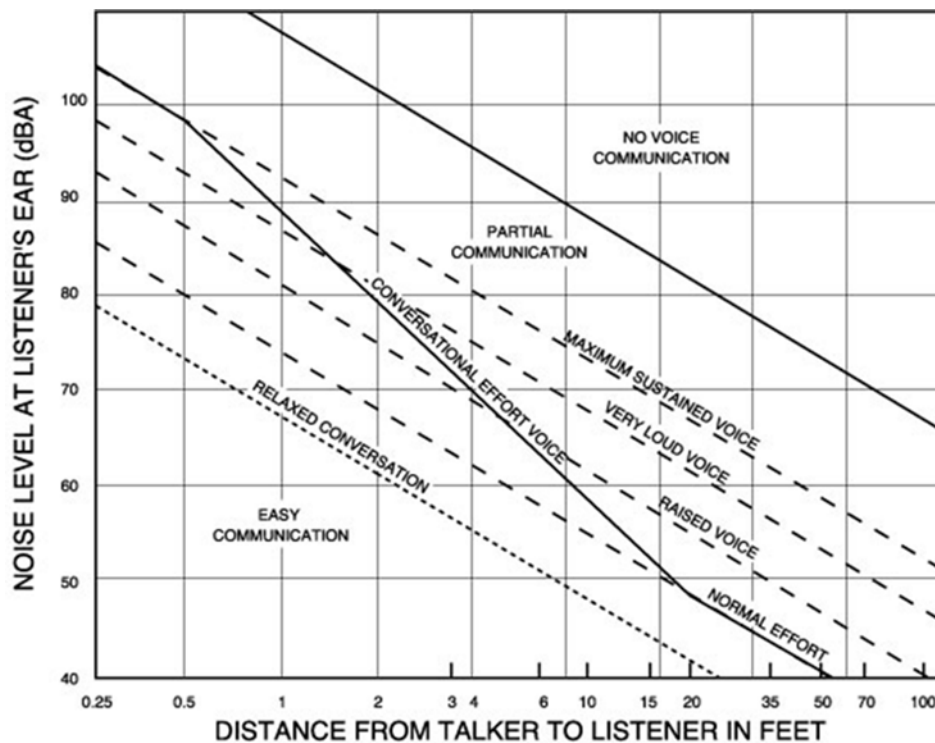


Figure A-8. Outdoor Speech Intelligibility

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 percent intelligibility is acceptable for many conversations. In relaxed conversation, however, we have higher expectations of hearing speech and generally require closer to 100 percent 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 percent 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.

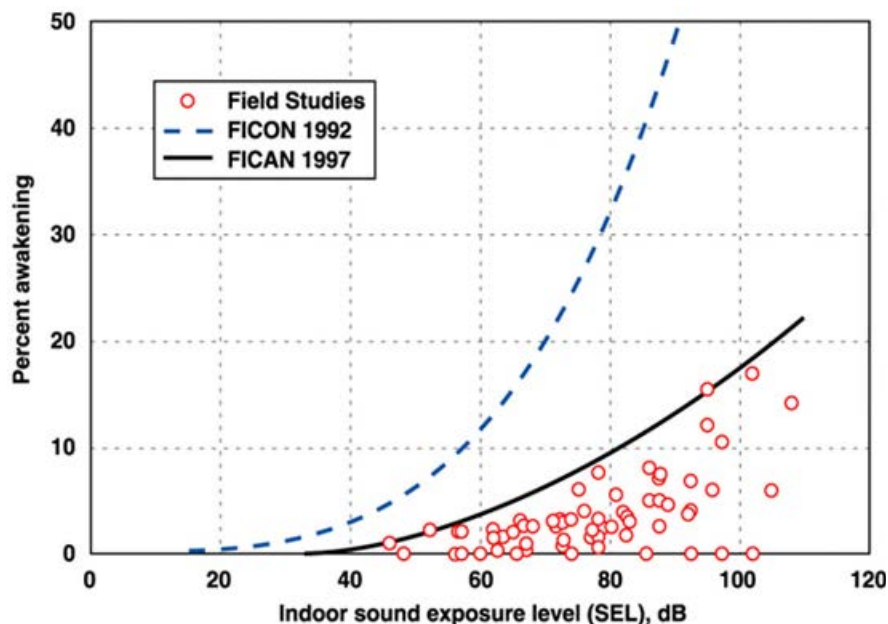


Figure A-9. Sleep Interference

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 percent awakening.¹⁰

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.

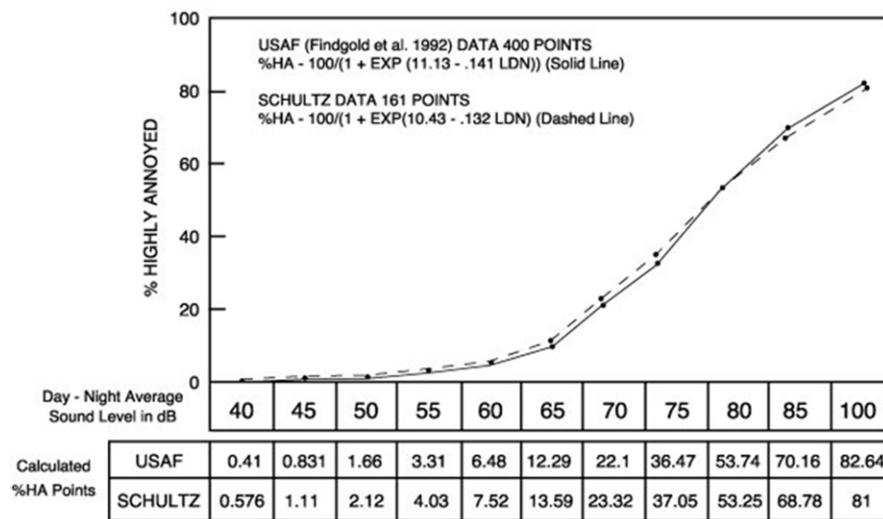


Figure A-10. Percentage of People Highly Annoyed

Source: FICON, “Federal Agency Review of Selected Airport Noise Analysis Issues,” September 1992

¹⁰ 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.

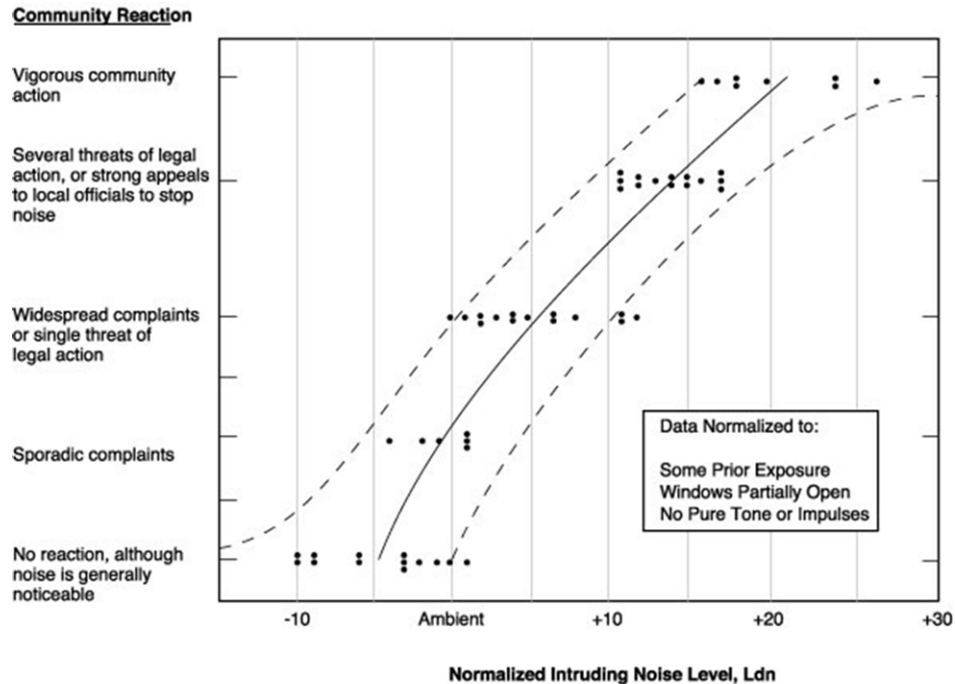


Figure A-11. Community Reaction as a Function of Outdoor DNL

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.¹¹

A.3.3 Influence of Temperature

The velocity of sound in the atmosphere is dependent on the air temperature.¹² 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.¹³ 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.¹⁴ 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.¹⁵

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.¹⁶ One study suggests that for frequencies greater than 500 Hz, the combined effects of these two factors tends towards two

¹¹ 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.

¹² 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.

¹³ 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.

¹⁴ Ingard, p. 407.

¹⁵ 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.

¹⁶ 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.¹⁷

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.¹⁸

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 9613-2¹⁹ 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

¹⁷ Piercy and Embleton, p. 1413.

¹⁸ Ingard, pp. 409-410.

¹⁹ 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.

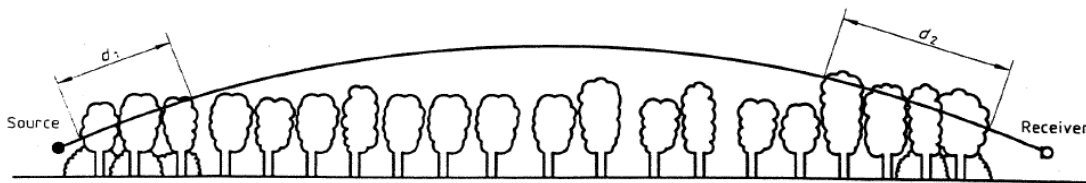


Figure A-12. Downward Refracting Sound Path

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 | <input type="checkbox"/> New Construction | <input type="checkbox"/> Reconstruction | <input type="checkbox"/> Recondition | <input checked="" type="checkbox"/> Other |
| | <input type="checkbox"/> Wetland Mitigation | <input type="checkbox"/> Runway Extension | <input type="checkbox"/> Land Acquisition | |
| <input type="checkbox"/> 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**☒ Archaeological survey is needed

[See Chapter 26-35-1 of FDM for procedure and # of exhibits]

☐ Archaeological survey is not needed - provide justification☐ SHPO records search conducted ___ (date).☐ Screening list ___ (date).☐ No potential to affect archaeological sites

Describe project area and attach project plans

HISTORY☒ Architecture/History survey is needed☐ Architecture/History survey is not needed**VI. SURVEY COMPLETED-Documentation required for submittal to TSS****ARCHAEOLOGY**☒ Project maps attached [most recent design]☒ ASFR attached [NO archaeological sites(s) identified]☐ Report attached [NO potentially eligible site(s) in project area]☐ Report attached [potentially eligible site(s) avoided]☐ Report attached - cemetery documentation☐ Native American response letters & reports

[Send four reports + # of copies for NA requests to district.]

HISTORY☒ A/HSF attached [NO buildings/structures identified]☐ A/HSF attached [potentially eligible buildings/structures identified.]**VII. EVALUATION COMPLETED-Documentation required for submittal to TSS**☐ Report attached [no arch site(s) eligible for NRHP]☐ Report and DOE attached [arch site(s) eligible for NRHP]☐ Report and draft DOE attached [arch site(s) eligible for NRHP—avoided through project redesign]☐ DOE attached [no buildings/structure(s) eligible for NRHP]☐ 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

Wendy Hottenstein
(BOA Project Manager)

1/16/24

(Date)

Heather Wolman
(Consultant Project Manager)

12/8/2023

(Date)

Barry Payne
(WisDOT Historic Preservation Officer)

25 February 2024

(Date)

DocuSigned by:

Kimberly Cof
(State Historic Preservation Officer)

28 February 2024

(Date)

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 13-31 | 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 | 24-0404 |

II. PROJECT DESCRIPTION

| | | | | |
|---|--|---|---|---|
| Type of Project | <input type="checkbox"/> New Construction | <input type="checkbox"/> Reconstruction | <input type="checkbox"/> Recondition | <input checked="" type="checkbox"/> Other |
| | <input type="checkbox"/> Wetland Mitigation | <input type="checkbox"/> Runway Extension | <input type="checkbox"/> Land Acquisition | |
| <input type="checkbox"/> Known Cemetery | Amount of land to be disturbed: Acres <u>60.9 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 13-31. 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 27 and 28 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 13-31 and the removal of Taxiway G, Taxiway U, and Taxiway N connectors. The project is anticipated to include the removal of approximately 126,900 SY of pavement and associated electrical utilities and NAVAIDs for Runway 13-31, Taxiway G, Taxiway U, and Taxiway N and restoration to turf. The proposed project also consists of the addition of a holding bay adjacent to Taxiway M including associated lighting. 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. Thirty-one historical resources stand within one mile of the Project. A historic building is located off airport property approximately 0.26 miles north of the area of potential effects. The proposed project is not anticipated to impact any historical resources and the historic building.

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**

☒ Archaeological survey is needed

[See Chapter 26-35-1 of FDM for procedure and # of exhibits]

☐ Archaeological survey is not needed - provide justification

☐ SHPO records search conducted ___ (date).

☐ Screening list ___ (date).

☐ No potential to affect archaeological sites

Describe project area and attach project plans

HISTORY

☒ Architecture/History survey is needed

☐ Architecture/History survey is not needed

VI. SURVEY COMPLETED-Documentation required for submittal to TSS**ARCHAEOLOGY**

☒ Project maps attached [most recent design]

☒ ASFR attached [NO archaeological sites(s) identified]

☐ Report attached [NO potentially eligible site(s) in project area]

☐ Report attached [potentially eligible site(s) avoided]

☐ Report attached - cemetery documentation

☐ Native American response letters & reports

[Send four reports + # of copies for NA requests to district.]

HISTORY

☒ A/HSF attached [NO buildings/structures identified]

☐ A/HSF attached [potentially eligible buildings/structures identified.]

VII. EVALUATION COMPLETED-Documentation required for submittal to TSS

☐ Report attached [no arch site(s) eligible for NRHP]

☐ Report and DOE attached [arch site(s) eligible for NRHP]

☐ Report and draft DOE attached [arch site(s) eligible for NRHP—avoided through project redesign]

☐ DOE attached [no buildings/structure(s) eligible for NRHP]

☐ 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)

Kathryn Weber
(Consultant Project Manager)

12/8/2023

(Date)

Barry Page

(WisDOT Historic Preservation Officer)

25 February 2024

(Date)

DocuSigned by:

Kimberly Cook

(State Historic Preservation Officer)

28 February 2024

(Date)

APPENDIX 6 – [REDACTED] EMISSION CALCULATIONS

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Estimated Construction Emissions Calculation Assumptions

| Gallons of Diesel Consumed to CO2 | |
|---|--|
| 10180 grams of CO2 = 1 gallon of diesel | |
| 10,180 x 10 ⁻³ metric tons CO2 = 1 gallon of diesel | |
| Source: https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references | |

| CH4 & N2O Emissions for Non-Road Vehicles | |
|---|--|
| Diesel Equipment | CH4 = 1.01 g/gallon N2O = 0.94 g/gallon |
| Light Duty Trucks | CH4 = 0.0290 g/mile |
| Source: https://www.epa.gov/system/files/documents/2023-03/ghg_emission_factors_hub.pdf | |

| NOx Emissions for Diesel Vehicles | |
|---|-------------------------|
| Diesel | NOx = 0.02623781 kg/NOx |
| Source: https://unhsimap.gor/2022table | |

| Estimated Production Rates | Expected Production Range | |
|---|---------------------------|---------------------|
| 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 | 1300 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: https://wisconsin.dot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrcs/tools/estimating/production-rate-table.pdf | | |

| Equipment | Fuel Burn Per Hour |
|-------------------------|--------------------|
| 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 RWY 1R-19L - Removal Estimated Construction Emissions | | | | | | | | | |
|---|-------------------------------|---|------------------------------|------------------------|--------------------------------------|--------------------|--------------------|---------------------|--------------------|
| Major Construction Operations Tasks | Estimated Working Days (Days) | Estimated Equipment | Estimated Fuel Burn (gal/hr) | Hours per day (hr/day) | Estimated Diesel Fuel Consumed (gal) | MT CO ₂ | MT CH ₄ | MT N ₂ O | MT NO _x |
| Excavation | 8 | 4 Quads 1 Dozer 1 Excavator | 36 | 10 | 2880 | 29.3 | 0.0029088 | 0.0027072 | 0.075565 |
| Milling Asphalt | 3 | 1 Mill 4 Quads | 28 | 10 | 840 | 8.6 | 0.0008484 | 0.0007896 | 0.02204 |
| Remove Concrete | 54 | 1 Dozer - Heavy 1 Excavator 4 Quads | 40 | 10 | 21600 | 219.9 | 0.021816 | 0.020304 | 0.566736 |
| Topsoil Placement | 40 | 4 Quads 2 Dozer | 32 | 10 | 12800 | 130.3 | 0.012928 | 0.012032 | 0.335844 |
| Totals | | | | | 38120 | 388.1 | 0.039 | 0.036 | 1.000 |

| MKE RWY 13-31 and Taxiway Removal - Estimated Construction Emissions | | | | | | | | | |
|--|-------------------------------|---|------------------------------|------------------------|--------------------------------------|--------------------|--------------------|---------------------|--------------------|
| Major Construction Operations Tasks | Estimated Working Days (Days) | Estimated Equipment | Estimated Fuel Burn (gal/hr) | Hours per day (hr/day) | Estimated Diesel Fuel Consumed (gal) | MT CO ₂ | MT CH ₄ | MT N ₂ O | MT NO _x |
| Excavation | 21 | 4 Quads 1 Dozer 1 Excavator | 36 | 10 | 7560 | 77.0 | 0.0076356 | 0.0071064 | 0.198358 |
| Milling Asphalt | 3 | 1 Mill 4 Quads | 28 | 10 | 840 | 8.6 | 0.0008484 | 0.0007896 | 0.02204 |
| Remove Concrete | 58 | 1 Dozer - Heavy 1 Excavator 4 Quads | 40 | 10 | 23200 | 236.2 | 0.023432 | 0.021808 | 0.608717 |
| Topsoil Placement | 115 | 4 Quads 2 Dozer | 32 | 10 | 36800 | 374.6 | 0.037168 | 0.034592 | 0.965551 |
| Totals | | | | | 68400 | 696.3 | 0.069 | 0.064 | 1.795 |

| Partial Parallel Taxiway Existing Pavement Conversion - Estimated Construction Emissions | | | | | | | | | |
|--|-------------------------------|-----------------------------------|------------------------------|------------------------|--------------------------------------|--------------------|--------------------|---------------------|--------------------|
| Major Construction Operations Tasks | Estimated Working Days (Days) | Estimated Equipment | Estimated Fuel Burn (gal/hr) | Hours per day (hr/day) | Estimated Diesel Fuel Consumed (gal) | MT CO ₂ | MT CH ₄ | MT N ₂ O | MT NO _x |
| Excavation | 34 | 4 Quads 1 Dozer 1 Excavator | 36 | 10 | 12240 | 124.6 | 0.0123624 | 0.0115056 | 0.321151 |
| Subbase Course | 17 | 3 Quads 2 Dozer | 28 | 10 | 4760 | 48.5 | 0.0048076 | 0.0044744 | 0.124892 |
| Base Course | 19 | 3 Quads 2 Dozer | 28 | 10 | 5320 | 54.2 | 0.0053732 | 0.0050008 | 0.139585 |
| Lean Concrete Pavement | 11 | 6 Quads 1 Paver | 36 | 10 | 3960 | 40.3 | 0.0039996 | 0.0037224 | 0.103902 |
| Concrete Pavement | 10 | 6 Quads 1 Paver | 36 | 10 | 3600 | 36.6 | 0.003636 | 0.003384 | 0.094456 |
| Asphalt Pavement | 4 | 6 Quads 1 Paver | 36 | 10 | 1440 | 14.7 | 0.0014544 | 0.0013536 | 0.037782 |
| Topsoil Placement | 4 | 4 Quads 2 Dozer | 32 | 10 | 1280 | 13.0 | 0.0012928 | 0.0012032 | 0.033584 |
| | | | | Totals | 32600 | 331.9 | 0.033 | 0.031 | 0.855 |


| Partial Parallel Taxiway Relocation - Estimated Construction Emissions | | | | | | | | | |
|--|-------------------------------|-----------------------------------|------------------------------|------------------------|--------------------------------------|--------------------|--------------------|---------------------|--------------------|
| Major Construction Operations Tasks | Estimated Working Days (Days) | Estimated Equipment (per 1 Crew) | Estimated Fuel Burn (gal/hr) | Hours per day (hr/day) | Estimated Diesel Fuel Consumed (gal) | MT CO ₂ | MT CH ₄ | MT N ₂ O | MT NO _x |
| Excavation | 34 | 4 Quads 1 Dozer 1 Excavator | 36 | 10 | 12240 | 124.6 | 0.0123624 | 0.0115056 | 0.321151 |
| Subbase Course | 17 | 3 Quads 2 Dozer | 28 | 10 | 4760 | 48.5 | 0.0048076 | 0.0044744 | 0.124892 |
| Base Course | 19 | 3 Quads 2 Dozer | 28 | 10 | 5320 | 54.2 | 0.0053732 | 0.0050008 | 0.139585 |
| Lean Concrete Pavement | 11 | 6 Quads 1 Paver | 36 | 10 | 3960 | 40.3 | 0.0039996 | 0.0037224 | 0.103902 |
| Concrete Pavement | 10 | 6 Quads 1 Paver | 36 | 10 | 3600 | 36.6 | 0.003636 | 0.003384 | 0.094456 |
| Asphalt Pavement | 4 | 6 Quads 1 Paver | 36 | 10 | 1440 | 14.7 | 0.0014544 | 0.0013536 | 0.037782 |
| Topsoil Placement | 15 | 4 Quads 2 Dozer | 32 | 10 | 4800 | 48.9 | 0.004848 | 0.004512 | 0.125941 |
| | | | | Totals | 36120 | 367.7 | 0.036 | 0.034 | 0.948 |

**MKE RUNWAY DECOMMISSIONING AND REMVOAL
ENVIRONMENTAL ASSESSMENT**

**ANTICIPATED CONSTRUCTION MATERIAL PRODUCTION EMISSIONS
LCA PAVE TOOL CALCULATIONS AND ASSUMPTIONS**

PARTIAL PARALLEL TAXIWAY (TAXIWAY CC) CONSTRUCTION

LCA PAVE (Version 1.01.03)×



Pavement Life-Cycle Assessment Tool

A tool for determining environmental impacts of pavement systems.

Control Panel

Conduct Analysis

Click the "Conduct Analysis" button and follow the step-by-step procedures provided to setup and analyze your specific analysis objective. Setup steps include defining the analysis session details, defining up to five different design alternatives to analyze, and choosing desired outputs.

Library

To aid in the building of useful project analyses, many of the needed project building blocks can be named and stored in the library for use in future project analyses. Click the "Library" button below to view, add, and edit library items.

Additional Information


The tabs below contain disclaimer and general tool information, and a summary of tool applications and limitations.


Disclaimer

General

Applications and Limitations

As used in this Tool, "definition" and "Design Alternative Definition" do not refer to Federal regulatory definitions or legally binding requirements. Instead, "definition" is commonly used or referenced in Life Cycle Assessment to instruct a user to describe the term with greater detail to shape the analysis (e.g., when modeling design alternatives).





Exit Tool

Figure 1. LCA Pavement Life-Cycle Assessment Tool Home Page¹

¹ 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 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: 'Alternative'

Name: Alternative A - Convert and Rehabilitate

Description: Convert the existing Runway 1R-19L pavement south of Taxiway W to Taxiway CC to connect Taxiway W and Taxiway S

Analysis Period: 50 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 rehabilitate 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

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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 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: 'Alternative'

Name:

Description:

Analysis Period: yrs (Analysis period for this alternative)

[Add New 'Pavement' to Current '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 |

Analysis Period: 1 yrs 1 yrs**Total Lane-Miles:** 3.64 ln-mi 3.62 ln-mi**Total Area:** 329,500 sf 327,441 sf**Figure 9. Summary Results Page**

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 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

Copy

Add New

Edit

Paste

Delete

Selection Details: 'Mix Design' Item

View:
1: Properties
2: Impact Indicators
3: Metadata

General
Description

General Properties

Pavement Type: Concrete
Name: PCC Mainline
Quantity: 1 short-ton
Source Method: Built From Library Items
Editable?: Yes (User-Defined Item)

Mix Design Definition

PCC Mainline (1 short-ton)

Materials

- Fine Aggregate (for concrete) (0.3373 short-tons)
- Crushed Stone (Coarse Aggregate for Concrete) (0.4676 short-ton)
- Water (0.0563 short-tons)
- Slag Cement (0.0346 short-tons)
- Cement (Preheater and Precalciner method) (0.1042 short-tons)

Equipment

- Production of Concrete Mixture at Plant only (= 20% Fly Ash and

Figure 10. Assumed PCC (Concrete) Pavement Mix Design²

² Assumed PCC mix design determined through analyzing previous Wisconsin airport projects utilizing the FAA P-501 specification.

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

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.

Figure 12. Assumed PCC (Concrete) Pavement Mix Design Impact Indicators for Life-Cycle Impact Assessment

Library

Library

Close

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

MaterialsEquipmentWasteTransportMix DesignsActivities

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

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Selection Details: 'Mix Design' Item

View: 1: Properties2: Impact Indicators3: Metadata

GeneralDescription

General Properties

Pavement Type: Concrete
Name: Lean Concrete
Quantity: 1 short-ton
Source Method: Built From Library Items
Editable?: Yes (User-Defined Item)

Mix Design Definition

- Lean Concrete (1 short-ton)
 - Materials
 - Fine Aggregate (for concrete) (0.4268 short-tons)
 - Crushed Stone (Coarse Aggregate for Concrete) (0.4384 short-ton)
 - Water (0.0753 short-tons)
 - Cement (Preheater and Precalciner method) (0.0595 short-tons)
 - Equipment
 - Production fo Concrete Mixture at Plant only (19% Fly Ash and/or

Figure 13. Assumed Lean Concrete Pavement Mix Design³

³ Assumed lean concrete mix design determined through analyzing previous Wisconsin airport projects utilizing the FAA P-306 specification.

Library
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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 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

Copy

Add New

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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.

Figure 14. Assumed Lean Concrete Pavement Mix Design Impact Indicators for Life Cycle Inventory

Library
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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

Copy

Add New

Edit

Paste

Delete

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.

Figure 15. Assumed Lean Concrete Pavement Mix Design Impact Indicators for Life-Cycle Impact Assessment

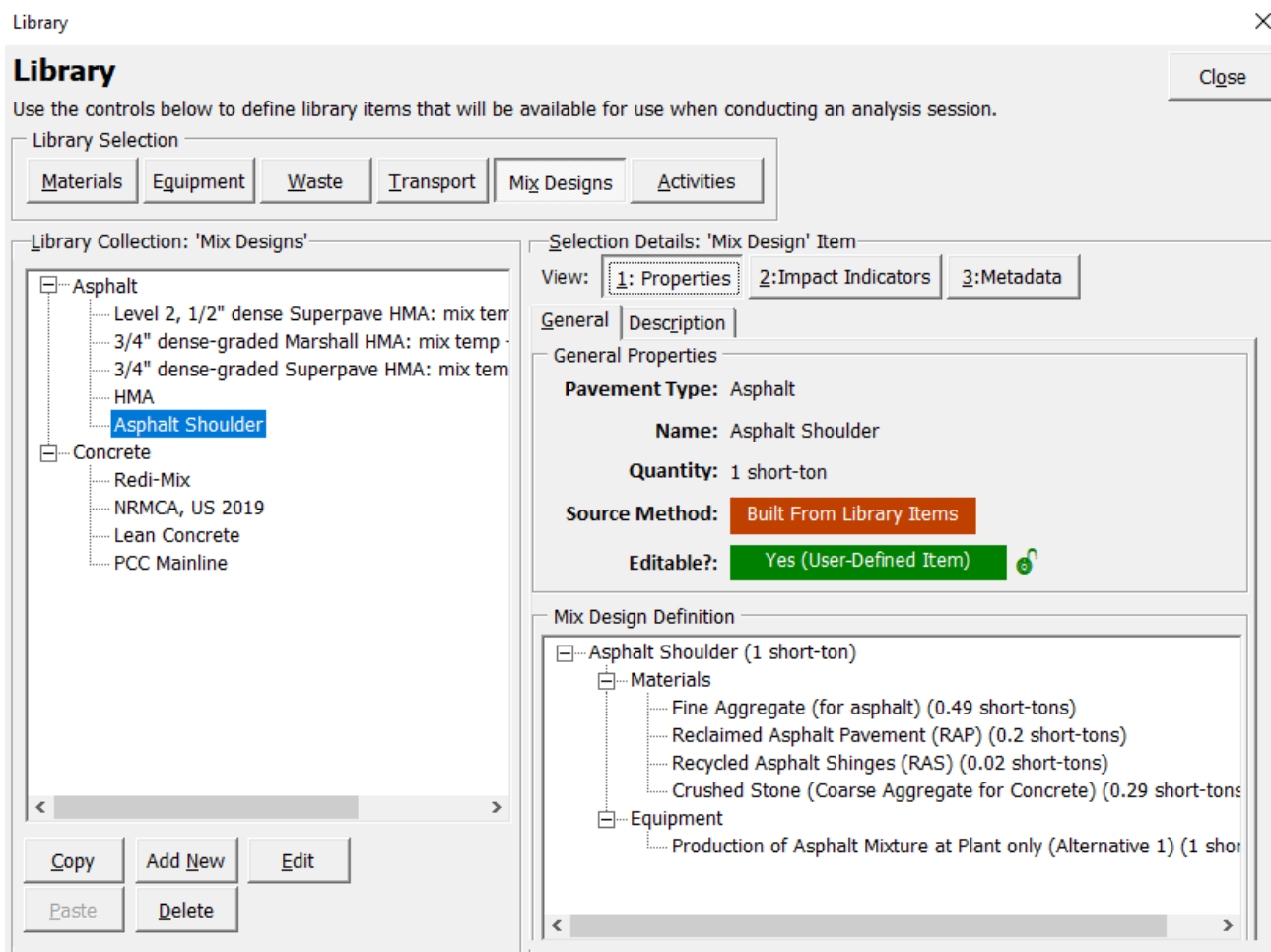


Figure 16. Assumed Asphalt Pavement Mix Design⁴

⁴ Assumed asphalt mix design determined through analyzing previous Wisconsin airport projects utilizing the WisDOT Highway specification for 4MT 58-28H Asphaltic Surface.

Library

Close

Library

Use the controls below to define library items that will be available for use when conducting an analysis session.

Library Selection

MaterialsEquipmentWasteTransportMix DesignsActivities

Library Collection: 'Mix Designs'

Selection Details: 'Mix Design' Item

View: 1: Properties2: Impact Indicators3: Metadata

Life-Cycle InventoryLife-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
×

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

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Selection Details: 'Mix Design' Item

View:
1: Properties
2: Impact Indicators
3: Metadata

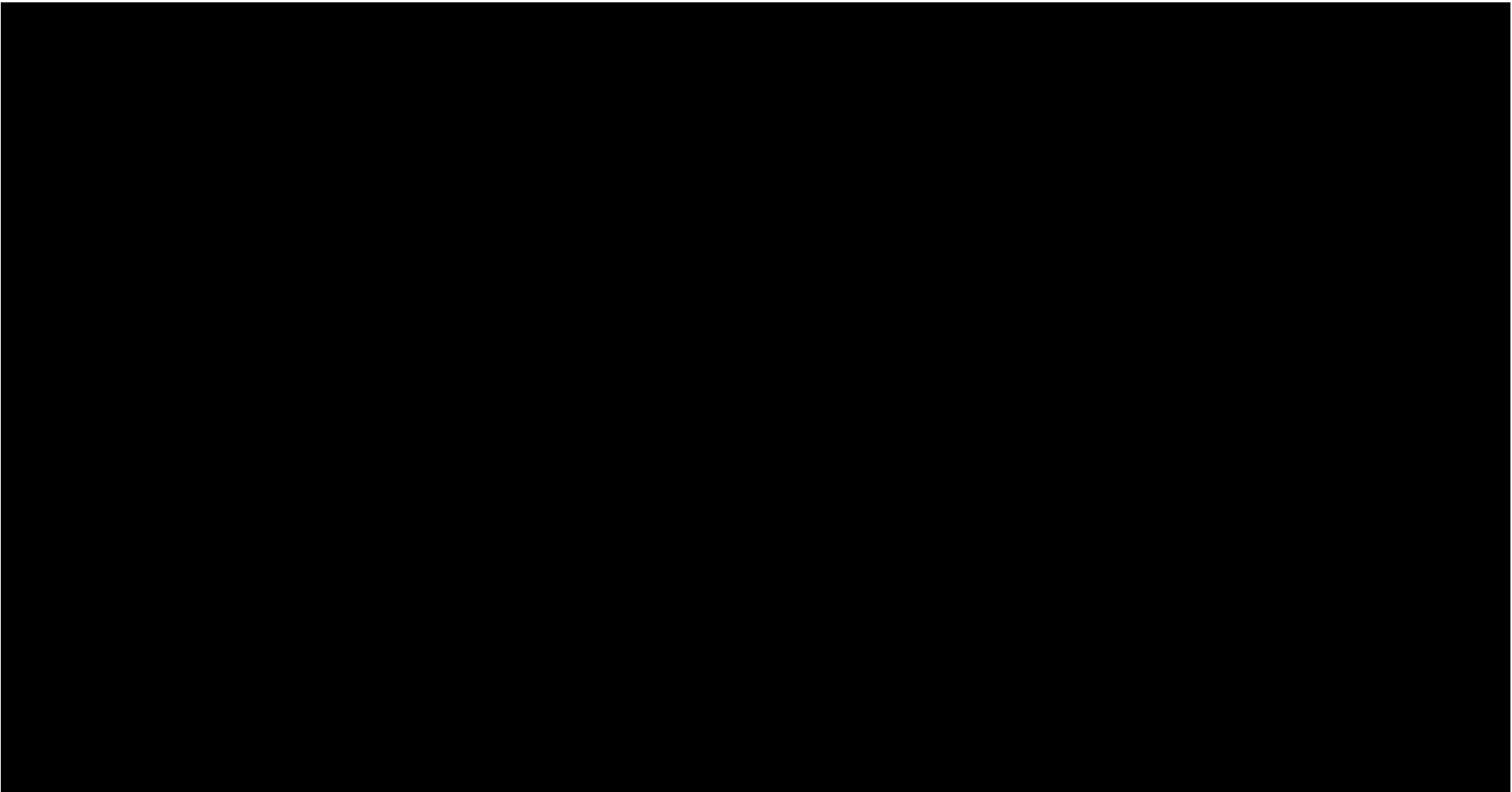
Life-Cycle Inventory
Life-Cycle Impact Assessment

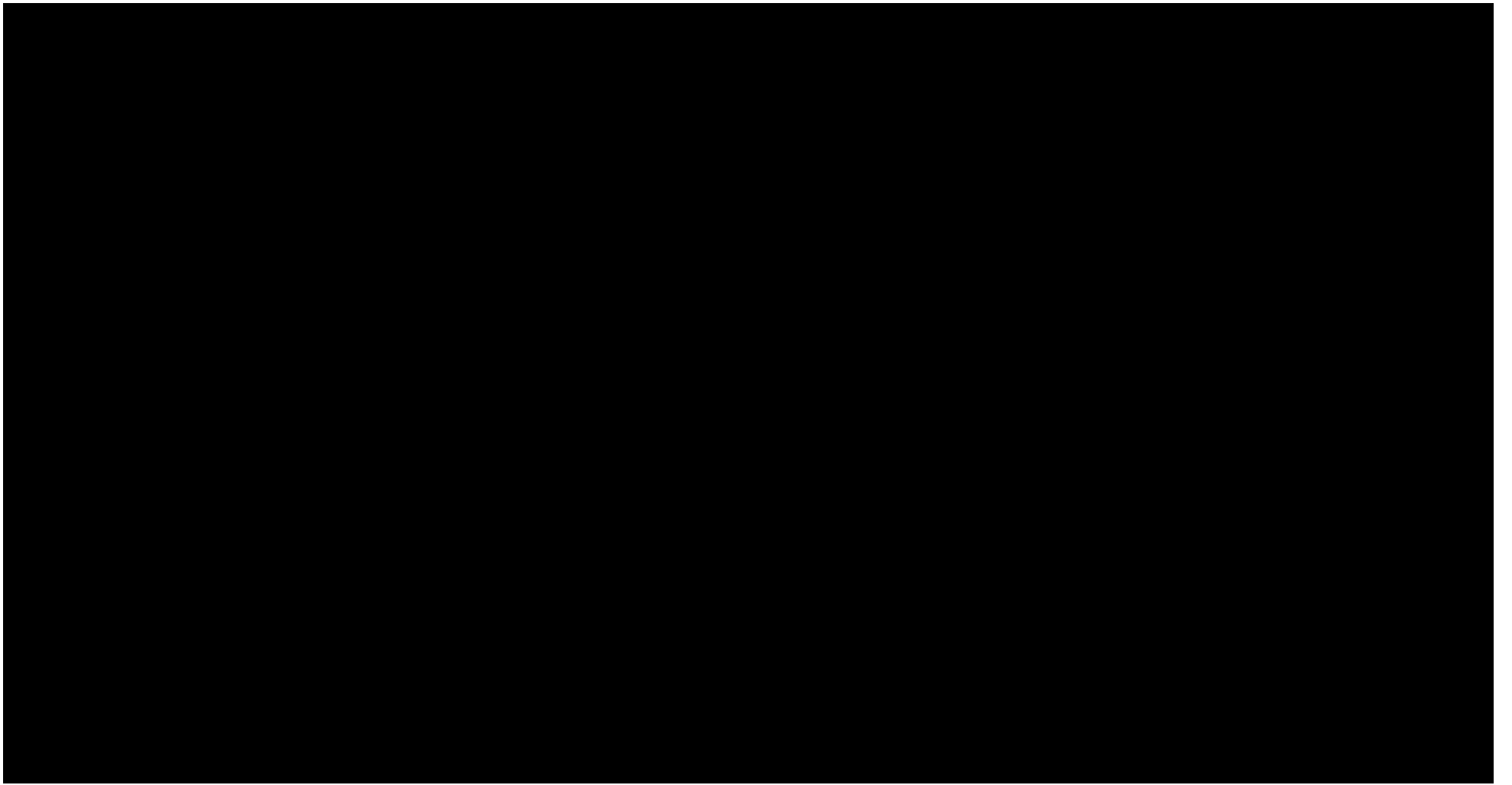
Library Item: Asphalt Shoulder
Quantity: 1 short-ton

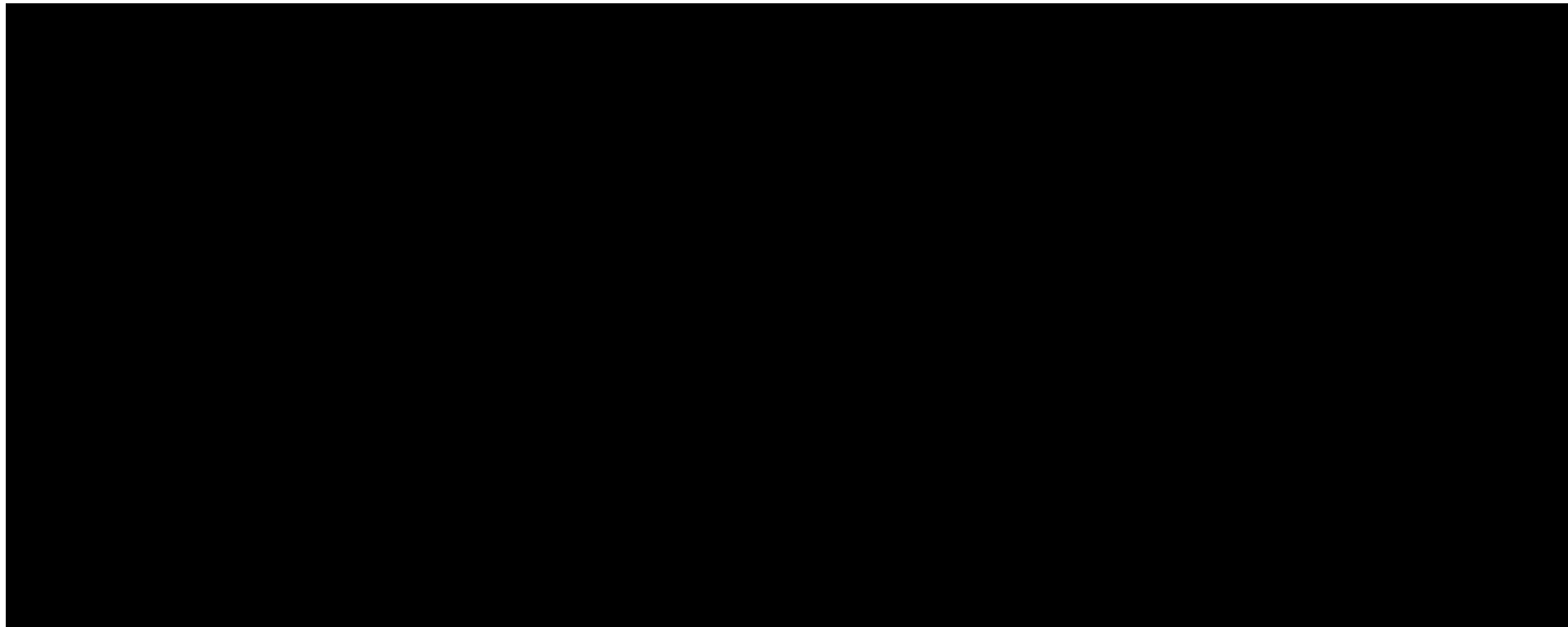
| Included? | Impact Indicator | Quantity | Units |
|-----------|-----------------------------|----------|--------------|
| Yes | Acidification | 0.0565 | kg SO2 eq |
| No | Ecotoxicity | No Data | CTUeco/kg |
| Yes | Eutrophication | 0.0172 | kg N eq |
| No | Fossil Fuel Depletion | No Data | MJ surplus |
| 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.

Figure 16. Assumed Asphalt Pavement Mix Design Impact Indicators for Life-Cycle Impact Assessment







APPENDIX 7 – PUBLIC OPEN HOUSE

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Public Hearing on the Preliminary Environmental Assessments

General Mitchell International Airport (MKE): Runway 1R/19L Decommissioning and Removal & Runway 13/31 Decommissioning and Removal
Sijan Conference Room, Milwaukee Mitchell International Airport Terminal Building

5300 S. Howell Ave. Milwaukee, WI 53207

May 7, 2024: 5:00 pm – 7:00 pm

SIGN-IN SHEET

Please Note: The information in this document is not confidential, and may be subject to disclosure upon request, pursuant to the requirements of the Wisconsin open records law, sections 19.31-19.39 of the Wisconsin Statutes. This document may also be included in Environmental Assessment final documentation.

| NAME | ADDRESS | ORGANIZATION/AFFILIATION | VOLUNTARY SELF IDENTIFICATION (race, national orientation, sexual orientation, gender identity, creed, age, disability, languages spoken, community membership) |
|----------------|--------------------|------------------------------------|--|
| Christine Turk | 5300 S Howell Ave | MKE Airport | w, F, english |
| Vladimir Jovic | 5300 S Howell Ave. | MKE Airport Engineering | |
| Harold Meister | 5300 S. Howell | MKE Marketing/PR | White, Male, English |
| Kaitlyn Wehner | IN SYSTEMS DRIVE | Westwood | white, Female, english |
| Brian Wayner | IN SYSTEMS DRIVE | Westwood | WHITE, MALE, ENGLISH |
| Evan Dujaram | IN SYSTEMS DRIVE | Westwood | white, male, English |
| | | | |
| | | | |
| | | | |
| | | | |

Written Testimony Form

General Mitchell International Airport

Runway 1R/19L Decommissioning and Removal Environmental Assessment

Please place this form in the box on the registration table or mail by June 1st, 2024.

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

Name (please print): Harold Mester Date: 5/7/24

Address: 191 N Broadway Unit 208, Milwaukee, WI 53202

Phone Number (optional): _____ Email Address (optional): _____

Testimony (use additional pages if necessary):

I see no downside or negative affect on the
environment of decommissioning/removing runways
13/31 and 1R/19L. Thank you.

The information in this document including names, addresses, phone numbers, email addresses, and signatures is not confidential, and may be subject to disclosure upon request, pursuant to the requirements of the Wisconsin open records law, sections 19.31 – 19.39 of the Wisconsin Statutes.

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Westwood Professional Services
1 N Systems Drive 1 Systems Drive
Appleton WI 54914


STATE OF WISCONSIN, COUNTY OF BROWN

I being duly sworn, doth depose and say that I am an authorized representative of the Milwaukee Journal Sentinel, public newspaper of general circulation, printed and published in the city and county of Milwaukee; and that an advertisement of which the annexed is a true copy, taken from said paper, has been published in said newspaper in the issues dated:

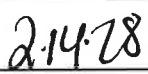
04/27/2024

That said newspaper was regularly issued and circulated on those dates and that the fees charged are legal.

Sworn to and subscribed before on 04/27/2024



Legal Clerk

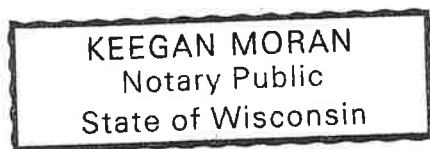

Notary, State of WI, County of Brown


My commission expires

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| Customer No: | 1438141 | 0 |
| PO #: | LWIX0093578 | |

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OFFICIAL NOTICE 7404

NOTICE OF PUBLIC HEARING
AND NOTICE OF AVAILABILITY OF
PRELIMINARY CONDENSED ENVI-
RONMENTAL ASSESSMENT IN THE
MATTER OF STATE AND FEDERAL AID
FOR IMPROVEMENTS AT GENERAL
MITCHELL INTERNATIONAL AIRPORT,
MILWAUKEE, WI

A petition resolution requesting state and federal financial assistance has been filed by Milwaukee County with the Wisconsin Department of Transportation, Bureau of Aeronautics to help carry out the following development at General Mitchell International Airport, Milwaukee, Wisconsin: Decommissioning of Runway 13/31. Removal of Taxiway G, Taxiway U, and Taxiway N connectors. Removal of runway and taxiway pavement and electrical utilities.

All interested persons are notified of the availability of a Preliminary Environmental Assessment (PEA) of the effects of the proposed improvements. The PEA is available for examination at the Milwaukee Public Library – Tippecanoe Branch at 3912 South Howell Ave, Milwaukee, WI 53207; Cudahy Family Library at 3500 Library Drive, Cudahy, WI 53110; Oak Creek Public Library at 8040 S. 6th Street, Oak Creek, WI 53154; St. Francis Public Library at 4230 S. Nicholson Avenue, St. Francis, WI 53235; and on the following website: <https://www.mitchellairport.com/airport-information/notices>. Further information regarding the proposed improvement is available for inspection at: WisDOT, Bureau of Aeronautics, 4822 Madison Yards Way, 5th Floor South, Madison, Wisconsin.

Notice is hereby given that Milwaukee Mitchell International Airport will hold a concurrent public hearing open house on the report at 5:00 p.m. – 7:00p.m. on May 7th, 2024 at the Sijan Conference Room in the Terminal Building of Milwaukee Mitchell International Airport, 5300 South Howell Ave, Milwaukee, WI 53207.

Americans with Disabilities Act (ADA) or language translation accommodation requests should be filed with the General Mitchell International Airport ADA/Title VI Coordinator, 414-747-6234 (voice) or 711 (TRS), upon receipt of this notice.

The purpose of the workshop is to provide the public with information on the environmental assessment and the opportunity to speak with county personnel and their consultant. All interested persons are invited to attend and present concise, relevant oral and written statements concerning the economic, social, and environmental effects of the proposed development and its consistency with the goals and objectives of each affected areas land use and planning strategy. Persons with an interest in or knowledge about historical and archaeological resources in the project area developed under this PEA are invited to present such information at the public hearing.

Additional written testimony may be filed with the project consultant, if received by June 1st, 2024. Such testimony should be directed to the following address:

WESTWOOD PROFESSIONAL
SERVICES
ATTN: AIRPORT ENVIRONMENTAL
1N SYSTEMS DRIVE
APPLETON, WI 54914

Para ver este aviso oficial en español,
por favor visita el siguiente sitio web:
[https://www.mitchellairport.com/airport-](https://www.mitchellairport.com/airport-information/notices)
[information/notices](https://www.mitchellairport.com/airport-information/notices)

WNAXLP
April 27 2024
LWIX0093578

AFFIDAVIT OF PUBLICATION

1 Systems Drive
Westwood Professional Services
1 N Systems Drive 1 Systems Drive
Appleton WI 54914


STATE OF WISCONSIN, COUNTY OF BROWN

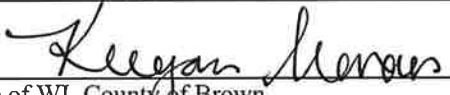
I being duly sworn, doth depose and say that I am an authorized representative of the Milwaukee Journal Sentinel, public newspaper of general circulation, printed and published in the city and county of Milwaukee; and that an advertisement of which the annexed is a true copy, taken from said paper, has been published in said newspaper in the issues dated:

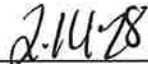
04/27/2024

That said newspaper was regularly issued and circulated on those dates and that the fees charged are legal.

Sworn to and subscribed before on 04/27/2024



Legal Clerk


Notary, State of WI, County of Brown


My commission expires

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KEEGAN MORAN
Notary Public
State of Wisconsin

OFFICIAL NOTICE 7403
NOTICE OF PUBLIC HEARING
AND NOTICE OF AVAILABILITY OF
PRELIMINARY CONDENSED ENVI-
RONMENTAL ASSESSMENT IN THE
MATTER OF STATE AND FEDERAL AID
FOR IMPROVEMENTS AT GENERAL
MITCHELL INTERNATIONAL AIRPORT,
MILWAUKEE, WI

A petition resolution requesting state and federal financial assistance has been filed by Milwaukee County with the Wisconsin Department of Transportation, Bureau of Aeronautics to help carry out the following development at General Mitchell International Airport, Milwaukee, Wisconsin:

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.

All interested persons are notified of the availability of a Preliminary Environmental Assessment (PEA) of the effects of the proposed improvements. The preliminary PEA is available for examination at the Milwaukee Public Library – Tippecanoe Branch at 3912 South Howell Ave, Milwaukee, WI 53207; Cudahy Family Library at 3500 Library Drive, Cudahy, WI 53110; Oak Creek Public Library at 8040 S. 6th Street, Oak Creek, WI 53154; St. Francis Public Library at 4230 S. Nicholson Avenue, St. Francis, WI 53235; and on the following website: <https://www.mitchellairport.com/airport-information/notices>. Further information regarding the proposed improvement is available for inspection at: WisDOT, Bureau of Aeronautics, 4822 Madison Yards Way, 5th Floor South, Madison, Wisconsin.

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The purpose of the workshop is to provide the public with information on the environmental assessment and the opportunity to speak with county personnel and their consultant. All interested persons are invited to attend and present concise, relevant oral and written statements concerning the economic, social, and environmental effects of the proposed development and its consistency with the goals and objectives of each affected areas land use and planning strategy. Persons with an interest in or knowledge about historical and archaeological resources in the project area developed under this PEA are invited to present such information at the public hearing.

Additional written testimony may be filed with the project consultant, if received by June 1st, 2024. Such testimony should be directed to the following address:

WESTWOOD PROFESSIONAL
SERVICES
ATTN: AIRPORT ENVIRONMENTAL
1N SYSTEMS DRIVE
APPLETON, WI 54914

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April 27 2024
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APPENDIX 8 – DRAFT ENVIRONMENTAL ASSESSMENT DISTRIBUTION

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Draft Environmental Assessment Distribution Summary

The purpose of the Draft Environmental Assessment was to consider the economic, social, and environmental effects of the proposed action and its consistency with local planning goals and objectives. This appendix includes responses to comments received on the Draft Environmental Assessment through November 6, 2024.

A copy of the Draft Environmental Assessment was provided to the agencies/organizations listed in Table A8-1, Agency/Organization Draft Environmental Assessment Distribution, on September 23, 2024, an example distribution letter is provided in at the end of this appendix. A notice of availability and a notice of public workshop regarding the proposed improvements was published in the Milwaukee Journal Sentinel on September 23, 2024 and El Conquistador Latino Newspaper on September 26, 2024. A public information web site was also established that provided the Draft Environmental Assessment in a downloadable format. The web site allowed comments to be submitted electronically.

Table A8-1
Agency/Organization Draft Environmental Assessment Distribution

| Agency | Date Comments Received |
|--|-----------------------------------|
| Federal Agencies | |
| United States Department of Agriculture – Natural Resources Conservation Service | None Received |
| United States Army Corps of Engineers | None Received |
| United States Department of Housing & Urban Development | None Received |
| United States Department of Interior – Fish and Wildlife Service | None Received |
| United States Environmental Protection Agency | 9/23/2024 (Automatic Response) |
| State Agencies | |
| Wisconsin Air National Guard – 128 th Mission Support Group | 10/6/2024 |
| Wisconsin Department of Administration – Wisconsin Coastal Management Program | None Received |
| Wisconsin Department of Natural Resources | None Received |
| Wisconsin Department of Transportation – Bureau of Aeronautics | None Received |
| Wisconsin Department of Transportation – Environmental Process & Documentation Section | None Received |
| Wisconsin Historical Society | None Received |
| Local Governments/Agencies | |
| City of Milwaukee – Department of City Development | 10/3/2024 |
| Milwaukee Metropolitan Sewerage District | 10/2/2024 |
| Southeastern Wisconsin Regional Planning Commission | None Received |

Comments have been broken down into the following categories:

- Comments Received From Agencies
- Comments Received From Public
- Comments Received Electronically

Copies of correspondence and the notice of availability and a notice of a public workshop have been included at the end of this appendix.

Table A8-2
Responses To Comments Received From Agencies

| Agency Comment | Project Team Response |
|--|---|
| <i>United States Environmental Protection Agency</i> | |
| <p>Thank you for emailing the EPA Region 5 NEPA team. Your email has been received. If your correspondence is requesting review of a NEPA scoping document or an Environmental Assessment, your project request will be assigned to one of our NEPA staff for review and comment, and our program staff will be in touch. Please note that due to current staffing constraints, not all scoping documents and Environmental Assessments will be reviewed by the Region 5 NEPA program.</p> | <p>Comment noted.</p> |
| <i>Wisconsin Air National Guard – 128th Mission Support Group</i> | |
| <p>Thank you so much for the opportunity to review the EA. I will make sure the people that need to review have had a chance to ASAP and respond as detailed in the attachment.</p> | <p>Comment noted.</p> |
| <p>Thank you for the opportunity to review the Draft EA. Below are the comments we have, feel free to reach out for additional info if you require.</p> <ol style="list-style-type: none"> 1. The report never appears to address PFAS contamination in soils, an issue that has been documented all over the airport property (on and off our base). I would recommend that this subject be discussed (or at least mentioned) in Section 3.10 (pages 3-9 & 3-10) and discussed in detail in Section 4.7 (pages 4-11 & 4-12). Although the release of petroleum products from the Shell pipeline and resulting BRRTS case is discussed in detail here and elsewhere in the draft EA, the PFAS issue is never mentioned. And we know that GMIA has conducted multiple PFAS studies of their site. As we know, this issue will impact timing, disposal, and cost – among other factors. Given the scope of this project and WDNR’s low threshold for regulating PFAS (and the equally low threshold that disposal facilities use), this issue would almost certainly impact the proposed project. 2. Table 5-1 (pages 5-2, 5-3, 5-4) should include a row that lists the Materials Management Plan which will most likely be required by the WDNR for any activities involving the disturbance, removal, reuse, or disposal of PFAS-impacted soils. This does not appear to have been considered during the preparation of the EA. | <p>The project team responded on October 17, 2024 and incorporated the recommendations into the Final Environmental Assessment.</p> <p>Below is the project team response:</p> <p>Thank you very much for your comments on the Draft EA. Per your comments, we plan on incorporating discussion on the current PFAS investigations, potential project impacts, and that WDNR coordination for the potential of submitting a Materials Management Plan as project plans are developed is necessary.</p> <p>If you would like to be informed of the updates to the document as we work on incorporating all DEA comments, please let me know.</p> |

| | |
|--|--|
| Thank you for the follow-up and incorporating our comments. It would be great to be kept in the loop as you update the document with all comments. So, if you are willing to share, I think it would be good situational awareness as each of our organizations tackle PFAS in our region. | Comment noted. |
| <i>City of Milwaukee – Department of City Development</i> | |
| Hello: I've just started reviewing the EA, and I have a question. Would the proposed action impact the height restrictions of nearby structures? Currently, some areas have building height limits of 35'. | The project team responded on October 8, 2024 with the below response: Thank you for reaching out, please see the below response to your question. Question: Would the proposed action impact the height restrictions of nearby structures? Airport Response: The proposed action of decommissioning and removing Runway 1R/19L and Runway 13/31 would eliminate the need for the FAA required runway protections such as approach, departure, and runway protection zones for the removed runways. The proposed project would not lower any of the existing height restrictions of nearby structures. After the runways are decommissioned, there is a possibility of adjusting zoning requirements (raising height restrictions) due to the removal of FAA runway protections. If desired, the airport will coordinate to ensure alignment with Airport future development plans and the approved Airport Layout Plan. As you continue to review the Draft EA, feel free to reach out with any other questions or comments. |
| Page 113 Grammatical Correction: "Master" | Comment Noted. |
| <i>Milwaukee Metropolitan Sewerage District</i> | |
| Page 62 Grammatical Correction: "From MMSD: basins" | Comment Noted. |

Responses To Comments Received From Public.

No comments received.

Responses To Comments Received Electronically.

No comments received.

OFFICIAL NOTICE 7400

NOTICE OF PUBLIC WORKSHOP AND
NOTICE OF AVAILABILITY OF DRAFT
ENVIRONMENTAL ASSESSMENT
IN THE MATTER OF STATE AND
FEDERAL AID FOR IMPROVEMENTS
AT GENERAL MITCHELL INTERNA-
TIONAL AIRPORT, MILWAUKEE, WI

A petition resolution requesting state and federal financial assistance has been filed by Milwaukee County with the Wisconsin Department of Transportation, Bureau of Aeronautics to help carry out the following development at General Mitchell International Airport, Milwaukee, Wisconsin: Decommissioning of Runway 1R/19L. Conversion of Runway 1R/19L south of Taxiway W into a parallel taxiway including associated lighting and pavement rehabilitation. Decommissioning of Runway 13/31. Removal of Taxiway G, Taxiway U, and Taxiway N connectors. Removal of runway and taxiway pavement and electrical utilities.

The proposed project does include potential floodplain encroachment.

All interested persons are notified of the availability of a Draft Environmental Assessment (DEA) of the effects of the proposed improvements (EAXX-021-12-ARP-1726672411). The DEA is available for examination at the Milwaukee Public Library – Tippecanoe Branch at 3912 South Howell Ave, Milwaukee, WI 53207; Cudahy Family Library at 3500 Library Drive, Cudahy, WI 53110; South Milwaukee Public Library at 1907 10th Ave., South Milwaukee, WI 53172; St. Francis Public Library at 4230 S. Nicholson Avenue, St. Francis, WI 53235; and on the following website: <https://westwoodps.com/milwaukee-mitchell-international-airport>. Further information regarding the proposed improvement is available for inspection at: WisDOT, Bureau of Aeronautics, 4822 Madison Yards Way, 5th Floor South, Madison, Wisconsin.

Notice is hereby given that Milwaukee Mitchell International Airport will hold a public workshop on the report at 5:00 p.m. – 6:00p.m. on October 23rd, 2024 at the Sijan Conference Room in the Terminal Building of Milwaukee Mitchell International Airport, 5300 South Howell Ave. Milwaukee, WI 53207.

Americans with Disabilities Act (ADA) or language translation accommodation requests should be filed with the General Mitchell International Airport ADA/Title VI Coordinator, 414-747-3889 (voice) or 711 (TRS), upon receipt of this notice or a minimum of 7 calendar days prior to the public workshop.

The purpose of the workshop is to provide the public with information on the environmental assessment and the opportunity to speak with county personnel and their consultant. All interested persons are invited to attend and present concise, relevant oral and written comments concerning the economic, social, and environmental effects of the proposed development and its consistency with the goals and objectives of each affected areas land use and planning strategy. Persons with an interest in or knowledge about historical and archaeological resources in the project area developed under this DEA are invited to present such information at the public workshop.

Additional written comments may be filed with the project consultant, if received by November 6th, 2024. Such testimony should be directed to the following address:

WESTWOOD PROFESSIONAL
SERVICES
ATTN: AIRPORT ENVIRONMENTAL
1N SYSTEMS DRIVE
APPLETON, WI 54914

Para ver este aviso oficial en español,
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Aviso De Taller Público Y Aviso De Disponibilidad De Evaluación Ambiental Borrador En Relación Con La Ayuda Estatal Y Federal Para Mejoras En El Aeropuerto Internacional General Mitchell MILWAUKEE, WI

Una resolución de petición solicitando asistencia financiera estatal y federal ha sido presentada por el Condado de Milwaukee ante el Departamento de Transporte de Wisconsin, Oficina de Aeronáutica, para ayudar a llevar a cabo el siguiente desarrollo en el Aeropuerto Internacional General Mitchell, Milwaukee, Wisconsin: Desmantelamiento de la Pista 1R/19L. Conversión de la Pista 1R/19L al sur de la Calle de Rodaje W en una calle de rodaje paralela, incluyendo iluminación asociada y rehabilitación del pavimento. Desmantelamiento de la Pista 13/31. Demolición de los conectores de la Calle de Rodaje G, Calle de Rodaje U y Calle de Rodaje N. Demolición del pavimento de la pista y la calle de rodaje, así como de los servicios eléctricos.

El proyecto propuesto incluye la posible invasión de la zona de inundación.

Se notifica a todas las personas interesadas sobre la disponibilidad de una Evaluación Ambiental Borrador (DEA por sus siglas en ingles) de los efectos de las mejoras propuestas (EAXX-021-12-ARP-1726672411).

La DEA preliminar está disponible para su examen en la Biblioteca Pública de Milwaukee
Tippecanoe Sucursal
3912 South Howell Ave, Milwaukee, WI 53207;

Biblioteca Familiar de Cudahy
3500 Library Drive, Cudahy, WI 53110;
Biblioteca Pública de South Milwaukee
1907 10th Ave., South Milwaukee, WI 53172.;
Biblioteca Pública de St. Francis
4230 S. Nicholson Avenue, St. Francis, WI 53235;
y en el siguiente sitio web:
<https://westwoodps.com/milwaukee-mitchell-international-airport>.

Información adicional sobre las mejoras propuestas al aeropuerto está disponible en:
WisDOT, Oficina de Aeronáutica,
4822 Madison Yards Way, 5th Floor South,
Madison, Wisconsin.

Por la presente se notifica que el Aeropuerto Internacional Milwaukee Mitchell llevará a cabo un taller público sobre el informe de 5:00 p.m. a 6:00 p.m. el 23 de octubre de 2024 en la Sala de Conferencias Sijan en el Edificio de Terminales del Aeropuerto Internacional General Mitchell de Milwaukee, 5300 South Howell Ave. Milwaukee, WI 53207.

Las solicitudes de alojamiento de la Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés) o de traducción de idiomas deben presentarse al Coordinador de ADA/Title VI del

Aeropuerto Internacional General Mitchell, al 414-747-3889 (voz) o al 711 (TRS), al recibir este aviso o un mínimo de 7 días calendario antes del taller público.

El propósito del taller es proporcionar al público información sobre la evaluación ambiental y la oportunidad de hablar con el personal del condado y su consultor. Se invita a todas las personas interesadas a asistir y presentar comentarios orales y escritos concisos y relevantes sobre los efectos económicos, sociales y ambientales del desarrollo propuesto y su coherencia con los objetivos y estrategias de uso de la tierra y planificación de cada área afectada. Se invita a las personas con interés o conocimiento sobre recursos históricos y arqueológicos en el área del proyecto desarrollado bajo esta DEA a presentar dicha información en el taller público.

Se pueden presentar comentarios adicionales por escrito al consultor del proyecto, si se reciben antes del 6 de noviembre de 2024. Dichos testimonios deben dirigirse a la siguiente dirección:

WESTWOOD PROFESSIONAL SERVICES
ATTN: AIRPORT ENVIRONMENTAL
1N SYSTEMS DRIVE
APPLETON, WI 54914



September 23, 2024

Krystle Z. McClain
NEPA & EJ Programs Supervisor
US Environmental Protection Agency - Region 5
77 W Jackson Blvd
Chicago, IL 60604
Via Electronic Mail Only to r5nepa@epa.gov

**Re: Milwaukee General Mitchell International Airport, Milwaukee, Wisconsin
Proposed Runway Decommissioning and Removal
Draft Environmental Assessment**

Dear Ms. McClain:

The Milwaukee General Mitchell International Airport is soliciting comments on a Draft Environmental Assessment for the proposed Runway 1R/19 and Runway 13/31 decommissioning and removal projects.

Enclosed for your review and comment is a copy of the Draft Environmental Assessment. We are requesting that you submit your comments on the Draft Environmental Assessment to Kaitlyn Wehner, Westwood Professional Services, 1 N Systems Drive, Appleton, WI 54914 or kaitlyn.wehner@westwoodps.com by November 6th, 2024, so that they may be incorporated into the Final Environmental Assessment. If comments are not received by this date, it will be assumed that you have no comments.

A Notice of Public Workshop and Notice of Availability of the Draft Environmental Assessment for the proposed project was published in the Milwaukee Journal Sentinel and is scheduled for October 23rd, 2024 at 5:00pm – 6:00pm in the Sijan Conference Room in the Terminal Building of Milwaukee Mitchell International Airport, 5300 South Howell Ave. Milwaukee, WI 53207.

If you have any questions or would like a paper copy of the Draft Environmental Assessment mailed, please contact me at 920-830-6183 or at kaitlyn.wehner@westwoodps.com.

Sincerely,

WESTWOOD INFRASTRUCTURE, INC.

A handwritten signature in black ink that reads "Kaitlyn Wehner".

Kaitlyn Wehner
Airport Engineer

cc: Vladimir Jovic, General Mitchell International Airport (via email)

Kaitlyn Wehner

From: EPA Region 5 NEPA Program <R5NEPA@epa.gov>
Sent: Monday, September 23, 2024 8:38 AM
To: Kaitlyn Wehner
Subject: Automatic reply: Milwaukee General Mitchell Airport - Draft Environmental Assessment

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Thank you for emailing the EPA Region 5 NEPA team. Your email has been received.

If your correspondence is requesting review of a NEPA scoping document or an Environmental Assessment, your project request will be assigned to one of our NEPA staff for review and comment, and our program staff will be in touch.

Please note that due to current staffing constraints, not all scoping documents and Environmental Assessments will be reviewed by the Region 5 NEPA program.

Thanks for contacting us.

-The EPA Region 5 NEPA team

<https://www.epa.gov/nepa/forms/contact-us-about-national-environmental-policy-act>

Kaitlyn Wehner

From: LEE, MATTHEW J Lt Col NG ANG 128 CES/MSG <matthew.lee.34@us.af.mil>
Sent: Friday, October 18, 2024 7:46 AM
To: Kaitlyn Wehner
Cc: Jovic, Vladimir; SCHRADER, BRIAN J Capt NG ANG 128 CES/CEIE; STRIBLING, JOHN W Maj NG ANG 128 CES/CC; CHMIELESKI, ROBERT M JR CIV USAF ANG 128 CES/CEIE
Subject: RE: [Non-DoD Source] Milwaukee General Mitchell Airport - Draft Environmental Assessment

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Kaitlyn,
Thank you for the follow-up and incorporating our comments. It would be great to be kept in the loop as you update the document with all comments. So, if you are willing to share, I think it would be good situational awareness as each of our organizations tackle PFAS in our region.

Lt Col Lee

From: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>
Sent: Thursday, October 17, 2024 6:37 PM
To: LEE, MATTHEW J Lt Col NG ANG 128 CES/MSG <matthew.lee.34@us.af.mil>
Cc: Jovic, Vladimir <vjovic@mitchellairport.com>; SCHRADER, BRIAN J Capt NG ANG 128 CES/CEIE <brian.schrader.1@us.af.mil>; STRIBLING, JOHN W Maj NG ANG 128 CES/CC <john.stribling.4@us.af.mil>; CHMIELESKI, ROBERT M JR CIV USAF ANG 128 CES/CEIE <robert.chmielecki@us.af.mil>
Subject: RE: [Non-DoD Source] Milwaukee General Mitchell Airport - Draft Environmental Assessment

Hello Lt Col Lee,

Thank you very much for your comments on the Draft EA. Per your comments, we plan on incorporating discussion on the current PFAS investigations, potential project impacts, and that WDNR coordination for the potential of submitting a Materials Management Plan as project plans are developed is necessary.

If you would like to be informed of the updates to the document as we work on incorporating all DEA comments, please let me know.

Thank you,
Kaitlyn

Kaitlyn Wehner
Airport Engineer
kaitlyn.wehner@westwoodps.com

main (920)-735-6900

Westwood
1 Systems Drive
Appleton, WI 54914

From: LEE, MATTHEW J Lt Col NG ANG 128 CES/MSG <matthew.lee.34@us.af.mil>
Sent: Sunday, October 6, 2024 9:18 AM

WI ANG 128th Mission Support Group Comments

To: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>

Cc: Jovic, Vladimir <vjovic@mitchellairport.com>; SCHRADER, BRIAN J Capt NG ANG 128 CES/CEIE

<brian.schrader.1@us.af.mil>; STRIBLING, JOHN W Maj NG ANG 128 CES/CC <john.stribling.4@us.af.mil>; CHMIELESKI, ROBERT M JR CIV USAF ANG 128 CES/CEIE <robert.chmielecki@us.af.mil>

Subject: RE: [Non-DoD Source] Milwaukee General Mitchell Airport - Draft Environmental Assessment

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Kaitlyn,

Thank you for the opportunity to review the Draft EA. Below are the comments we have, feel free to reach out for additional info if you require.

1. The report never appears to address PFAS contamination in soils, an issue that has been documented all over the airport property (on and off our base). I would recommend that this subject be discussed (or at least mentioned) in Section 3.10 (pages 3-9 & 3-10) and discussed in detail in Section 4.7 (pages 4-11 & 4-12). Although the release of petroleum products from the Shell pipeline and resulting BRRS case is discussed in detail here and elsewhere in the draft EA, the PFAS issue is never mentioned. And we know that GMIA has conducted multiple PFAS studies of their site. As we know, this issue will impact timing, disposal, and cost – among other factors. Given the scope of this project and WDNR's low threshold for regulating PFAS (and the equally low threshold that disposal facilities use), this issue would almost certainly impact the proposed project.
2. Table 5-1 (pages 5-2, 5-3, 5-4) should include a row that lists the Materials Management Plan which will most likely be required by the WDNR for any activities involving the disturbance, removal, reuse, or disposal of PFAS-impacted soils. This does not appear to have been considered during the preparation of the EA.

Lt Col Lee

From: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>

Sent: Monday, September 23, 2024 9:02 AM

To: LEE, MATTHEW J Lt Col NG ANG 128 CES/MSG <matthew.lee.34@us.af.mil>

Cc: Jovic, Vladimir <vjovic@mitchellairport.com>

Subject: [Non-DoD Source] Milwaukee General Mitchell Airport - Draft Environmental Assessment

You don't often get email from kaitlyn.wehner@westwoodps.com. [Learn why this is important](#)

Hello,

The Milwaukee General Mitchell International Airport is soliciting comments on a Draft Environmental Assessment for the proposed Runway 1R/19 and Runway 13/31 decommissioning and removal projects. Additional information can be found in the attached correspondence.

A PDF copy of the Draft Condensed Environmental Assessment can be downloaded from the project website link: [Draft Environmental Assessment](#). If you have any questions or trouble accessing the file, please let me know.

Thank you,

Kaitlyn Wehner

From: Kaitlyn Wehner
Sent: Tuesday, October 8, 2024 8:18 AM
To: Wauck Smith, Monica
Cc: Jovic, Vladimir; cturk@mitchellairport.com
Subject: RE: Milwaukee General Mitchell Airport - Draft Environmental Assessment

Good morning,

Thank you for reaching out, please see the below response to your question.

Question: Would the proposed action impact the height restrictions of nearby structures?

Airport Response: The proposed action of decommissioning and removing Runway 1R/19L and Runway 13/31 would eliminate the need for the FAA required runway protections such as approach, departure, and runway protection zones for the removed runways.

The proposed project would not lower any of the existing height restrictions of nearby structures. After the runways are decommissioned, there is a possibility of adjusting zoning requirements (raising height restrictions) due to the removal of FAA runway protections. If desired, the airport will coordinate to ensure alignment with Airport future development plans and the approved Airport Layout Plan.

As you continue to review the Draft EA, feel free to reach out with any other questions or comments.

Thank you,
Kaitlyn

Kaitlyn Wehner
Airport Engineer
kaitlyn.wehner@westwoodps.com

main (920)-735-6900

Westwood
1 Systems Drive
Appleton, WI 54914

From: Wauck Smith, Monica <MonicaWauck.Smith@milwaukee.gov>
Sent: Wednesday, October 2, 2024 1:42 PM
To: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>
Subject: FW: Milwaukee General Mitchell Airport - Draft Environmental Assessment

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Hello:

I've just started reviewing the EA, and I have a question. Would the proposed action impact the height restrictions of nearby structures? Currently, some areas have building height limits of 35'.

Thanks,

Monica Wauck Smith, AICP

Senior Planner

City of Milwaukee | Department of City Development

809 N. Broadway Avenue

Milwaukee, WI 53202

MonicaWauck.Smith@milwaukee.gov

414.758.0048

From: Richardson, Ed <Ed.Richardson@milwaukee.gov>

Sent: Monday, September 23, 2024 1:41 PM

To: Wauck Smith, Monica <MonicaWauck.Smith@milwaukee.gov>

Subject: FW: Milwaukee General Mitchell Airport - Draft Environmental Assessment

From: Kaitlyn Wehner <Kaitlyn.Wehner@westwoodps.com>

Sent: Monday, September 23, 2024 8:40 AM

To: planadmin <planadmin@milwaukee.gov>

Cc: Jovic, Vladimir <vjovic@mitchellairport.com>

Subject: Milwaukee General Mitchell Airport - Draft Environmental Assessment

Hello,

The Milwaukee General Mitchell International Airport is soliciting comments on a Draft Environmental Assessment for the proposed Runway 1R/19 and Runway 13/31 decommissioning and removal projects. Additional information can be found in the attached correspondence.

A PDF copy of the Draft Condensed Environmental Assessment can be downloaded from the project website link: [Draft Environmental Assessment](#). If you have any questions or trouble accessing the file, please let me know.

Thank you,

Kaitlyn Wehner

Airport Engineer

kaitlyn.wehner@westwoodps.com

main (920)-735-6900

office (920)-830-6183

Westwood

1 Systems Drive

Appleton, WI 54914

westwoodps.com

(888) 937-5150

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sent on November 11, 2023 and no response was received. Copies of historical society correspondence is included in **Appendix 2**.

The architecture history and archeological investigations were submitted to the SHPO. The SHPO concurred on February 28, 2024 that there are no properties listed in or eligible for the NRHP are 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 proposed action 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 proposed 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 proposed action also includes the conversion of pavement to a parallel taxiway to Runway 1R/19L or the construction of a taxiway west of the existing runway pavement. A parallel taxiway to Runway 1L/19R is shown on the ALP. Either taxiway conversion or construction would be located solely on Airport property.


The proposed action 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.

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

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.”¹²⁷

¹²⁷ Energy Independence and Security Act of 2007: <https://www.govinfo.gov/content/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf>

 Number: 1 Author: Monica Smith-City of MKE, DCD Date: 11/4/2024 10:55:11 AM

Would the proposed action impact the height restrictions of nearby structures? Currently, some areas have building height limits of 35'.

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 proposed action 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 2030¹⁵⁷ and the Airport Master Plan Update¹⁵⁸.

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 Environmental Assessment from Federal, State, and local agencies and officials to identify controversial actions. The proposed 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**.

¹⁵⁷ Wisconsin State Airport System Plan 2030: <http://wisconsindot.gov/Pages/projects/multimodal/sasp/air2030-chap.aspx>

¹⁵⁸ Master Plan Update: <https://www.mkeupdate.com/>

during reduced visibility. Depending on the type of equipment, a REIL has an approximate range of three miles in daylight and twenty miles at night⁷⁷.

The existing Runway 13/31, Taxiway G, Taxiway U, and Taxiway N includes runway and taxiway lighting. Runway 13/31 also includes the NAVAIDs of REILs and FAA owned PAPIs. A PAPI system consists of four light boxes arranged perpendicular to the runway and provide visual approach slope information to landing aircraft.⁷⁸

3.17 Water Resources

3.17.1 Wetlands

A wetland delineation was performed on September 11, 2023 at the proposed project location⁷⁹. The delineation did not identify any wetlands in the proposed project area. **Figure 3-15** shows the delineated wetlands within the proposed project area. **Figure 3-16** shows wetlands included on the Wisconsin Wetland Inventory maps provided by the WDNR⁸⁰.

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 elevation occurs near the approach end of Runway 7R. **Figure 3-17** 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

⁷⁷ FAA, Runway End Identifier Lights:

https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/reil

⁷⁸ FAA, Precision Approach Path Indicator,

https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/papi

⁷⁹ A Wetland Delineation Report was prepared by Quest Civil Engineers, LLC, dated September 11, 2023. A copy of the Wetland Delineation Report can be found on the project webpage: <https://westwoodps.com/milwaukee-mitchell-international-airport>

⁸⁰ Wisconsin Wetland Inventory: <https://dnr.wisconsin.gov/topic/Wetlands/inventory.html>

Summary of Comments on MKE RWY Decommissioning DEA.pdf

Page: 62

APPENDIX 9 – PUBLIC WORKSHOP SUMMARY

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Public Workshop Summary

The objective of the public workshop and environmental document availability period is to get the most complete expression of public opinion regarding the proposed project aspects. A Public Workshop was held on October 23, 2024 from 5:00pm – 6:00 pm in the Milwaukee Mitchell Airport Terminal Building. Attendees included project team members and one individual from the public. The public workshop record was recorded by a U.S. Legal Services court reporter that was in attendance. Public in attendance were given the opportunities to provide written and private verbal testimony directly to the court reporter.

The Public Workshop was opened by Christine Turk from the Milwaukee Mitchell International Airport. Ms. Turk gave an opening statement describing the purpose of the public workshop. The public was invited to make written and verbal testimony and provided instructions on how to do so.

Following the opening statement, public in attendance were able to discuss and ask questions of project team members in attendance. Three exhibits were placed around the room. Exhibits featured an overall project display, summary of project objectives and environmental consequences, and noise impacts.

A public workshop packet was made available to the public. The workshop packet included information for providing testimony, proposed project summary, alternatives summary, and an overall project display.

The full public workshop transcript, attendee list, handout packet, and exhibits can be provided virtually upon request.

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