Wetland Delineation

Runway Abandonment Project
Runways 1R-19L & 13-31
Milwaukee General Mitchell International Airport (MKE)
Milwaukee County, WI

Prepared for: **Westwood Professional Services**
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Table of Contents

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 Mitchel 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**).

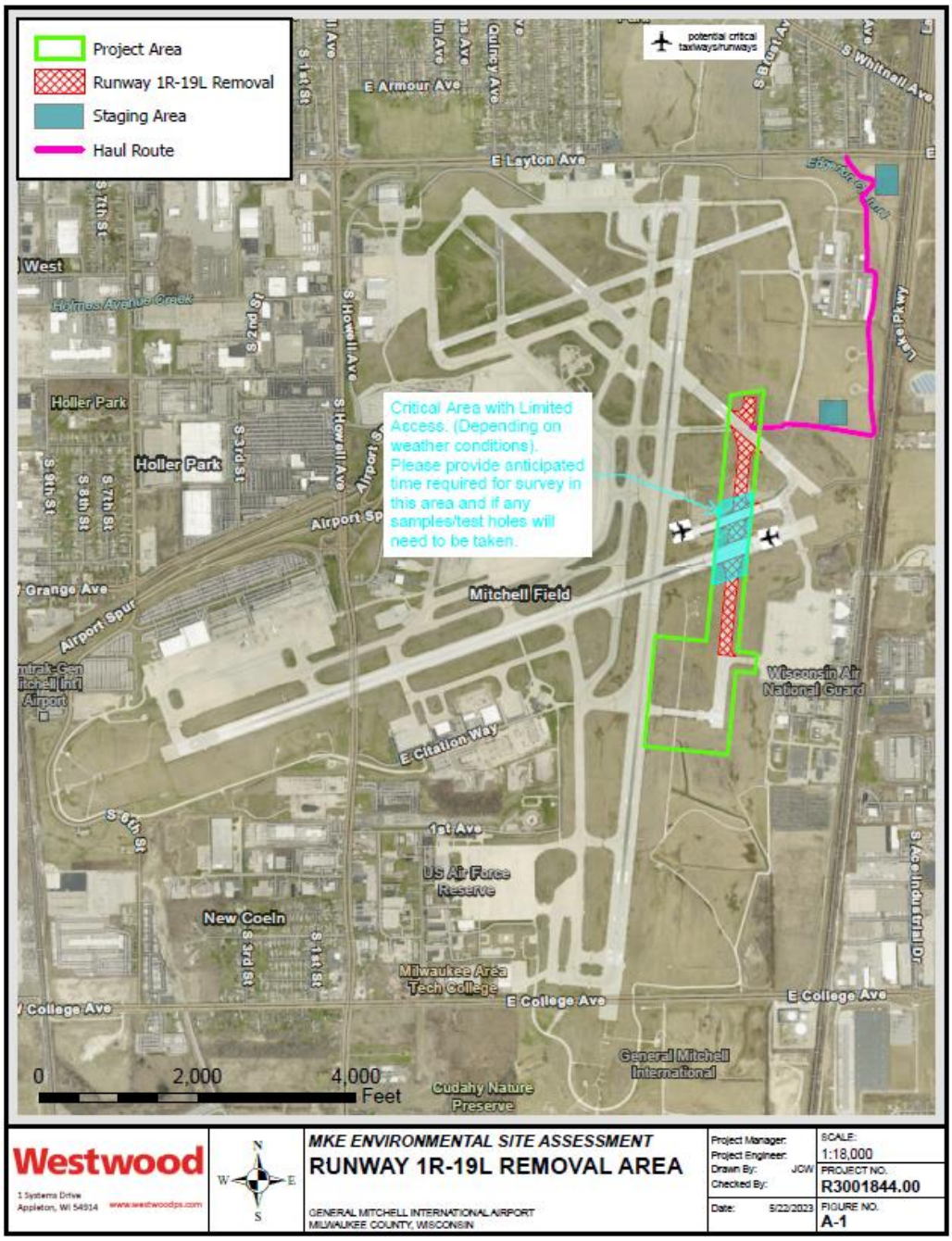

Figure 3.1-1

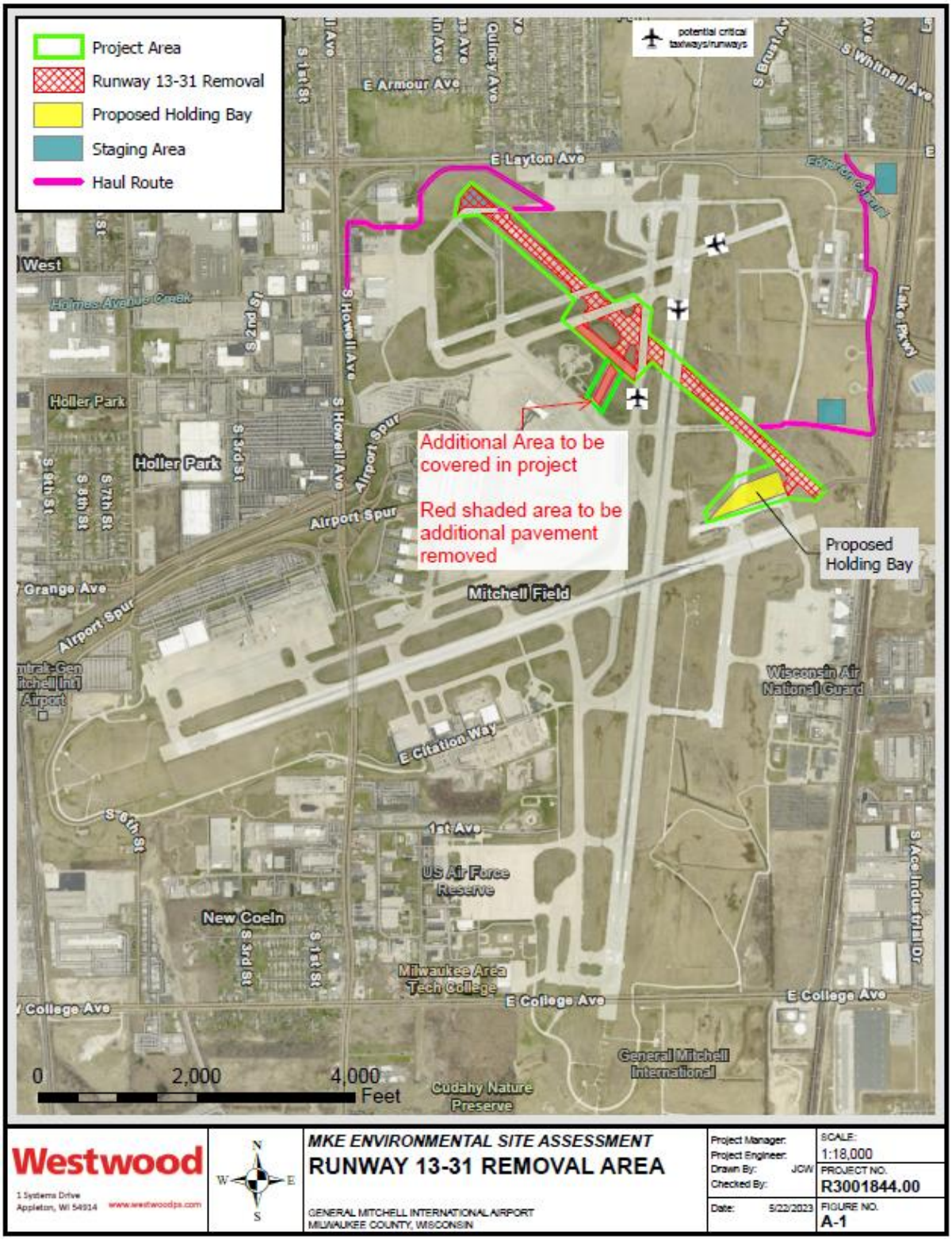
Project Area
Runway 13-31 Removal
Proposed Holding Bay
Staging Area
Haul Route
potential critical taxiways/runways
Additional Area to be covered in project
Red shaded area to be additional pavement removed
Proposed Holding Bay
E Armour Ave
E Layton Ave
S Howell Ave
Airport Spur
Mitchell Field
Holler Park
New Coeln
E Citation Way
1st Ave
US Air Force Reserve
Wisconsin Air National Guard
Milwaukee Area Tech College
E College Ave
General Mitchell International
Cudahy Nature Preserve
0
2,000
4,000
Feet
Westwood
1 Systems Drive
Appleton, WI 54914
www.westwoodps.com
MKE ENVIRONMENTAL SITE ASSESSMENT
RUNWAY 13-31 REMOVAL AREA
GENERAL MITCHELL INTERNATIONAL AIRPORT
MILWAUKEE COUNTY, WISCONSIN
Project Manager:
Project Engineer:
Drawn By: JCW
Checked By:
Date: 5/22/2023
SCALE: 1:18,000
PROJECT NO. R3001844.00
FIGURE NO. A-1

Figure 3.1-2

3.2 Area of Review

The Area of Review for this project is all of Runways 1R-19L and 13-31 including their immediate surroundings as shown in lime green linework in **Figure 3.1-1 & 3.1-2**.

3.3 Property Description

The entire Area of Review is comprised of the runways itself and manicured lawn surrounding the runway corridor on both sides. All unpaved areas showed evidence of routine mowing with no portions being avoided due to saturated conditions.

4.0 Review of Existing Information

4.1 NRCS Soils Summary

A review of the NRCS Web Soil Survey mapping revealed only one soil type as being present within the Area of Review (**Figure 4.1-1**).

Cv – Clayey land

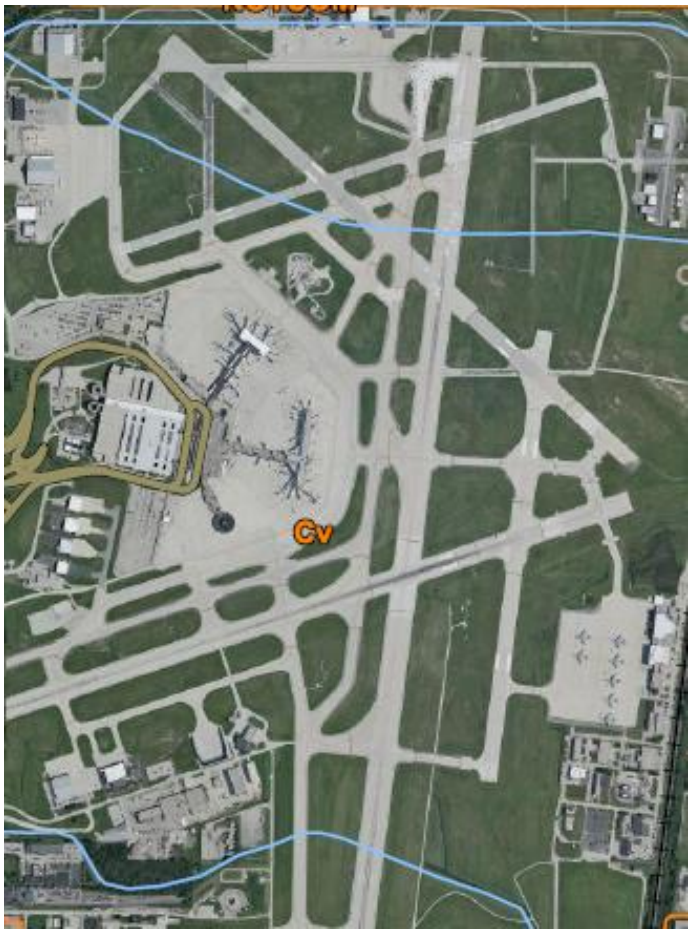

Figure 4.1-1

4.2 Wisconsin Wetland Inventory Mapping

The Wisconsin Wetland Inventory (WWI) mapping does not show any wetlands but does show wetland indicators to be present throughout the site (**Figure 4.2-1)**.

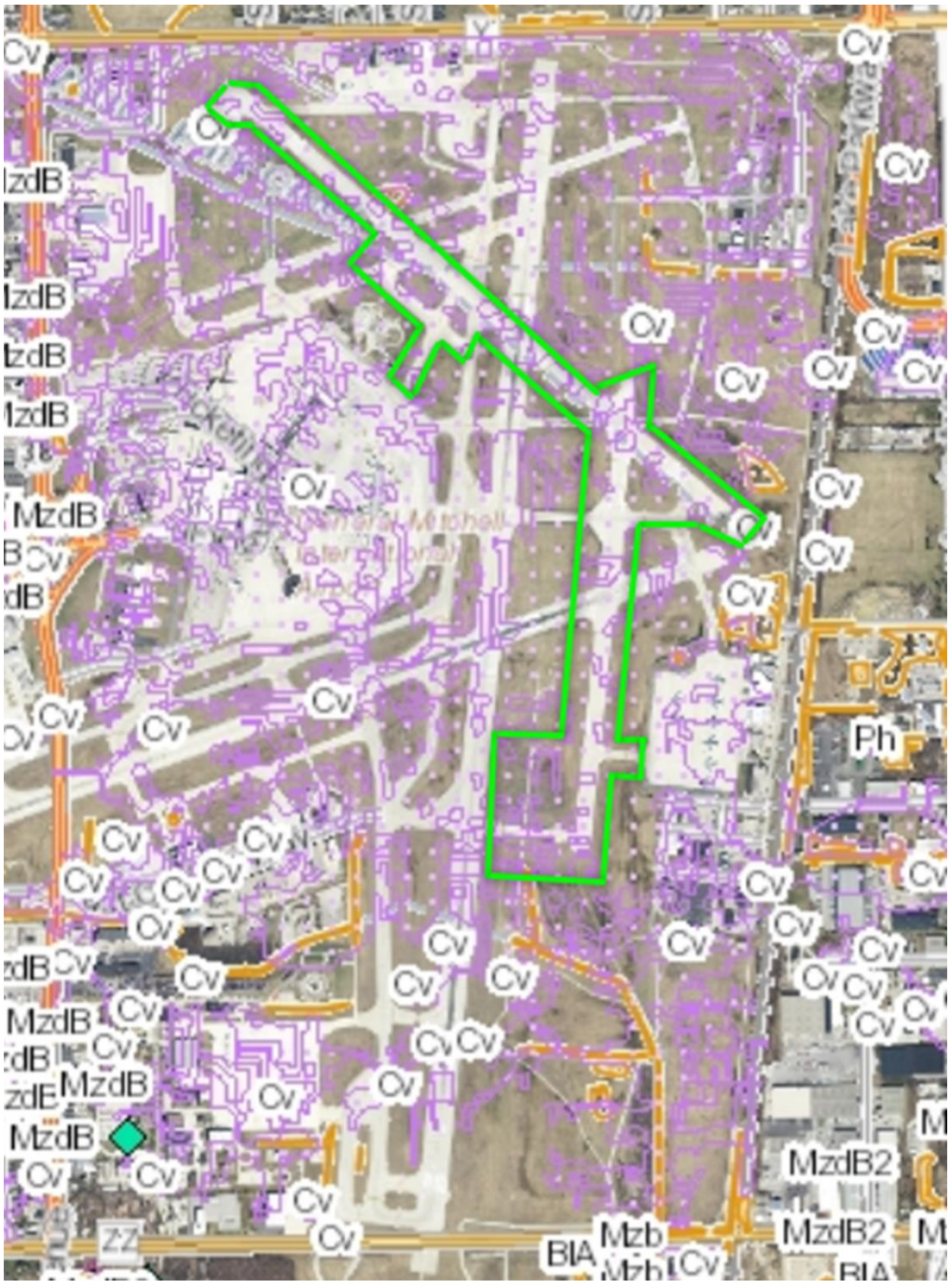

Figure 4.2-1

4.3 National Wetland Inventory Mapping

The National Wetland Inventory (NWI) Map mimics that of the Wisconsin's Wetland Inventory and does not show any wetlands to be present within the Area of Review (**Figure 4.3-1**).
https://www.fws.gov/wetlands/data/mapper.html

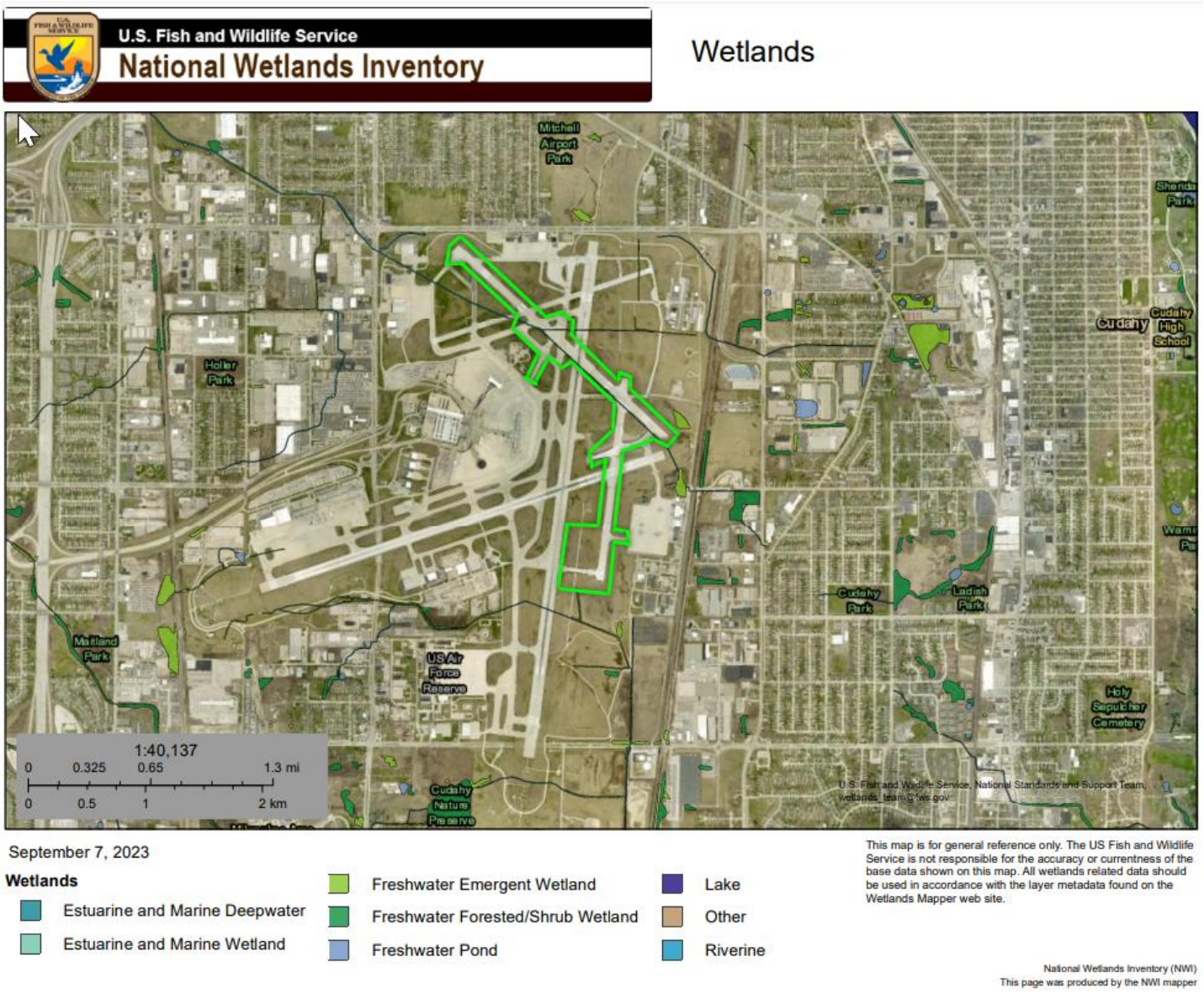

Figure 4.3-1

4.4 Topographical Mapping

The topography of the site is very flat. (**Figure 4.4-1**).

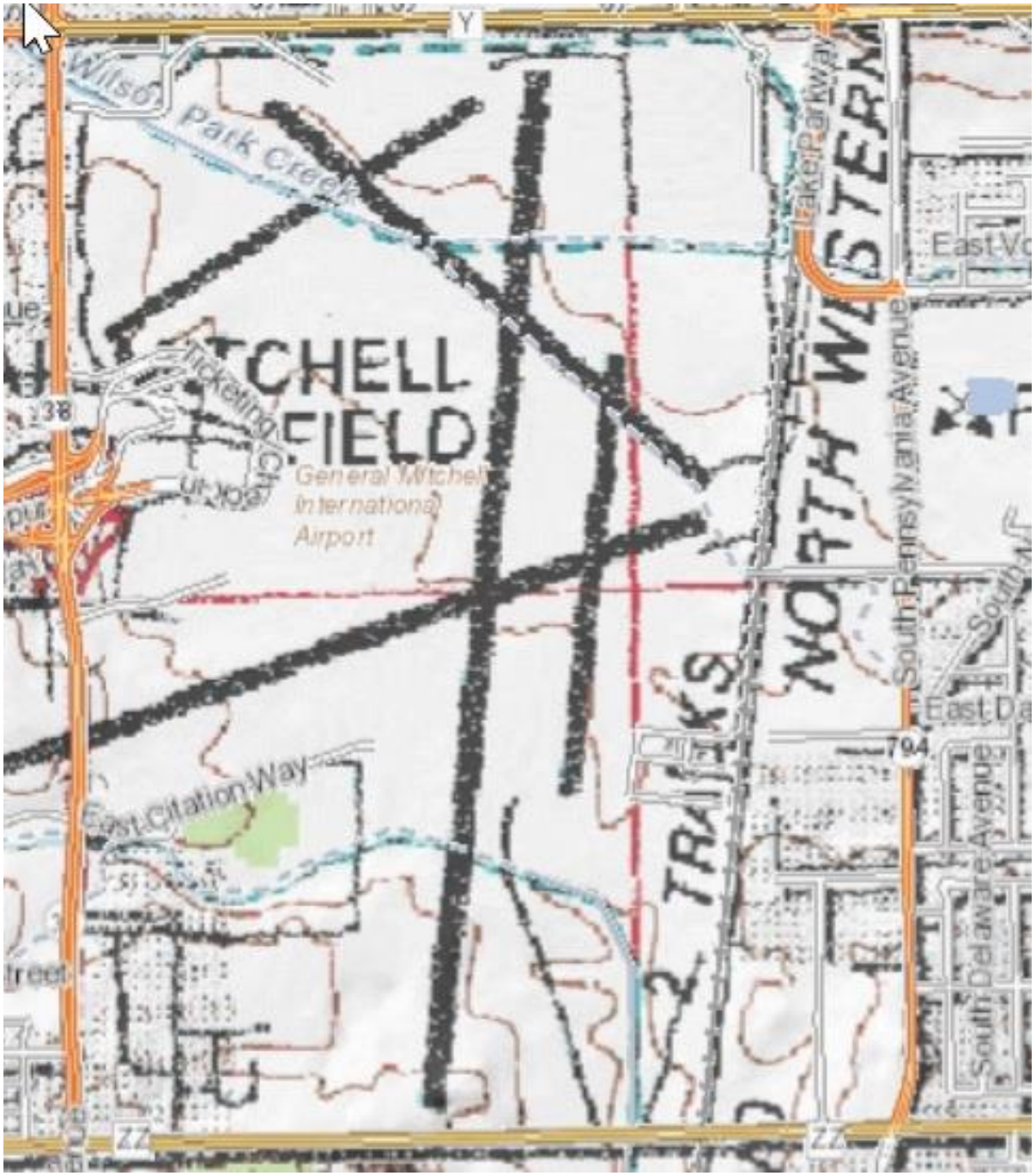

Figure 4.4-1

4.6 Antecedent Precipitation

An analysis of precipitation for the three-month period prior to the delineation was conducted and determined that prior precipitation levels for this period were classified as "Dry" for the site **(Table 4.6-1).**

WETS Analysis Worksheet										
Project Name:		**MKE Runway Abandonmnet - Runwasy 1R-19L &13-31**								
Project Number:		**ENV 2023 018 & 019**								
Period of Interest:		**June-**								
Station:		**June-Aug**								
County:		**Milwaukee**								
	Long-term rainfall records (from WETS table)							**Site Determination**		
	Month	**3 years in 10 less than**	**Normal**	**3 years in 10 greater than**		**Site Rainfall (in)**	**Condition Dry/Normal*/Wet**	**Condition** Value**	**Month Weight**	**Product**
1st month prior	**April**	2.40	3.56	4.26		1.82	Normal	2	3	6
2nd month prior	**May**	2.44	3.56	4.25		4.33	Dry	1	2	2
3rd month prior	**June**	2.86	4.03	4.77		2.60	Dry	1	1	1
		Sum =	**11.15**		Sum =	**8.75**			Sum*** =	
										9
	*Normal precipitation with 30% to 70% probability of occurrence							Determination:		_____Wet
										___x__Dry
**Condition Value:				***If sum is:						_____Normal
	Dry =	1		6 to 9	then period has been drier than normal					
	Normal =	2		10 to 14	then period has been normal					
	Wet =	3		15 to 18	then period has been wetter than normal					
Precipitation data source:		ACIS - NOAA Regional Climate Centers; http://agacis.rcc-acis.org								
Reference:	Donald E. Woodward, ed. 1997. *Hydrology Tools for Wetland Determination,* 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

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-Wisconsin State Herbarium, University Wisconsin – Madison, WisFlora: Wisconsin Vascular Plant Species, http://www.botany.wisc.edu/wisflora/

-United States Department of Agriculture – Natural Resource Conservation Service, Web Soil Survey, http://websoilsurvey.nrcs.usda.gov/app/

-Wisconsin Department of Natural Resources, WDNR Webview, http://dnrmaps.wisconsin.gov/img/imf.jsp?site=webview