

# APPENDIX M

## MADISON EAST-WEST BRT

Documented Categorical Exclusion

Wetlands, Floodplains, Water Quality, Navigable Waterways, and  
Coastal Zones Technical Report

May 10, 2022

Prepared for:

City of Madison



Prepared by:

SRF Consulting Group

Commonwealth Heritage Group

Cross-Spectrum Acoustics

# REVISIONS

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**Revision No.**

**Date**

**Prepared By**

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# 1. Introduction

The Madison East-West Bus Rapid Transit (BRT) Project (the project) is a proposed 15-mile route serving east-west travel needs in central Madison, Wisconsin. The project extends from East Springs Drive on the east side of Madison to a proposed new park-and-ride at Junction Road on the west side of Madison. Operating primarily via East Washington Avenue, University Avenue, and Mineral Point Road, the BRT line would serve the major regional destinations of the isthmus (downtown Madison), the University of Wisconsin-Madison (UW) campus, Madison Area Technical College, and major employers and several shopping centers located throughout the corridor. BRT buses would use a combination of center-running bus lanes, side bus lanes, and mixed-traffic lanes. The project also includes electric bus charging infrastructure at the Sun Prairie Park-and-Ride and the Metro Satellite Maintenance Facility where BRT layovers will occur.

This technical report describes the anticipated water quality impacts resulting from construction of the project. This report was prepared for the documented Categorical Exclusion (DCE) in accordance with NEPA requirements. The following sections provide an overview of the existing conditions, anticipated impacts, and avoidance, minimization, and mitigation measures.

## 2. Water Quality, Navigable Waterways and Coastal Zones

The proposed project is not within a coastal zone and does not propose any work within a navigable waterway, and thus would not result in impacts to navigable waterways and coastal zones. Project staff reviewed the Environmental Protection Agency's (EPA) Map of Sole Source Aquifers.<sup>1</sup> No sole source aquifers are located within or near the project. The project would not include a bus washing facility.

Pursuant to Ch. NR216,<sup>2</sup> the Wisconsin Department of Natural Resources (DNR) administers the Wisconsin Discharge System (WPDES) Storm Water Discharge Permit Program. Construction activities would disturb one or more acres of land area (including clearing, grading, and excavation); therefore, the city will be required to obtain a WPDES Construction Site Storm Water Discharge Permit. The permit application must be submitted at least 14 working days prior to commencing any land disturbing construction activities and is valid for a maximum of three years. Chapter 37 of the City of Madison's ordinance establishes stormwater design standards and requirements.

Proposed stormwater best management practices (BMPs) would be designed to comply with DNR and city stormwater management requirements. In accordance with state and federal regulations, a storm water management plan and an erosion and sediment control plan will be submitted as part of the WPDES Construction Site Storm Water Discharge permit application.

The project would increase the total amount of impervious surface area by approximately 3.4 acres resulting from construction of the project. Construction of the park-and-ride facility will require stormwater BMPs. The project proposes to construct an infiltration basin and wet pond adjacent to the proposed park-and-ride facility near the intersection of Mineral Point Road and Junction Road. Stormwater BMPs will be confirmed during final design of the project. Sheet P-0W, Appendix A illustrates the proposed stormwater BMPs.

## 3. Floodplains

Portions of the project intersect the 100-year floodplain boundary and regulatory floodway. The proposed BRT route along East Washington Avenue intersects the 100-year floodplain associated with the Yahara River, (FEMA

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1 U.S. Environmental Protection Agency (EPA). Available at <https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>. Accessed 27 May 2021.

2 Wisconsin Administrative Code Chapter NR 216. Available at [https://docs.legis.wisconsin.gov/code/admin\\_code/nr/200/216](https://docs.legis.wisconsin.gov/code/admin_code/nr/200/216). Accessed 24 November 2021.

Zone AE) and the 100-year floodplain and floodway associated with the Starkweather Creek West Branch near the Marquette Street intersection (FEMA Zone AE).<sup>3</sup> Figure 1 illustrates the 100-year floodplain and floodway within or adjacent to the project. Figure 2 and Figure 3 show the FEMA National Flood Hazard Layer FIRMettes for the 100-year floodplain and floodway locations within or near the project area. Proposed improvements within the regulated 100-year floodplain associated with the Yahara River are limited to pavement markings and lane re-stripping within the existing right-of-way. The project will not affect the existing Washington Avenue bridge crossing over the Yahara River. The project would not add new impervious surface and no impacts to the Yahara River floodplain will result from the project.

The proposed BRT route intersects the 100-year floodplain and floodway for the Starkweather Creek West Branch. The proposed Marquette Street Station is located approximately 90 feet west of the 100-year floodplain and floodway associated with the Starkweather Creek West Branch. Curb improvements on the east side of the East Washington Avenue/ Marquette Street intersection would be minimal and not result in changes to the roadway elevation. The project would not result in fill within the regulated floodplain. Existing impervious surface would be replaced, but no new impervious surface would be added.

## 4. Wetlands

Project staff identified wetlands within or adjacent to the East-West BRT Project area using the DNR Wisconsin Wetland Inventory (WWI)<sup>4</sup> database (updated December 13, 2019), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data,<sup>5</sup> and U.S. Geological Survey (USGS) National Hydrograph Dataset<sup>6</sup> (published December 1, 2020). Staff also reviewed DNR’s Surface Water Data Viewer<sup>7</sup> including the DNR wetland indicators map (updated May 5, 2021). The DNR wetland indicators map identifies locations of hydric soils mapped by the U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) and topography indicative of a wetland landscape based on USGS topographic data. Table 1 lists wetland resources identified within 500 feet from the proposed BRT route. Figure 4 identifies wetlands and hydric soils within the study area. There are no wetlands located within the project limits of disturbance.

*Table 1: Wetlands within 500 feet of the Project*

WWI ID	Wetland Code	Wetland Class
13423692992	T3K	Forested, Broad-leaved deciduous
13423692994	E2K	Emergent/wet meadow, Narrow-leaved persistent
13423693955	W0H	Open Water
13423693994	W0Hx	Open Water, Excavated
13423694004	W0Hx	Open Water, Excavated

Project staff reviewed the potential area of disturbance to identify potential areas of encroachment within wetland resources. Based on the potential area of disturbance, it is not anticipated that the project would result in impacts to wetland resources. Therefore, no avoidance, minimization or mitigation measures were considered,

3 FEMA National Flood Hazard Viewer. <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed 18 November 2021.

4 Wisconsin Wetland Inventory Geodatabase. Available at <https://www.arcgis.com/home/item.html?id=200c06fc04074ef7ae24c0b74737b187>. Accessed 19 November 2021.

5 U.S. Fish and Wildlife Service National Wetlands Inventory. Available at <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed 19 November 2021.

6 U.S. Geological Survey National Hydrograph Dataset. Available at <https://apps.nationalmap.gov/downloader/#/>. Accessed 19 November 2021.

7 Wisconsin Department of Natural Resources Surface Water Data Viewer. Available at <https://dnrm.wisconsin.gov/H5/?Viewer=SWDV>. Accessed 19 November 2021.

and it is not anticipated that a US Army Corps of Engineers (USACE) Section 404 permit or DNR permit would be required. This finding is subject to change as the final design is developed.

Figure 1: 100-Year Floodplain

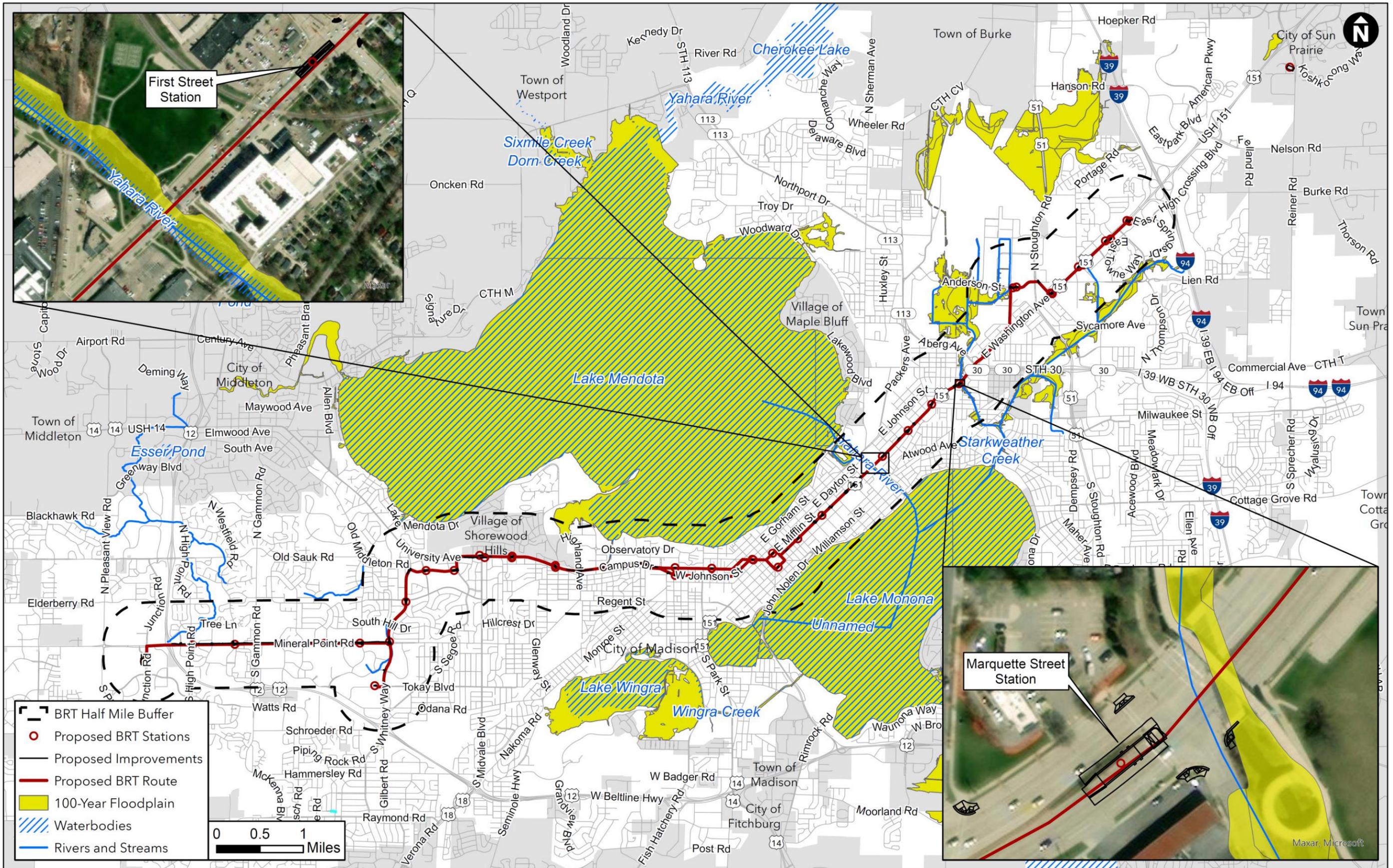
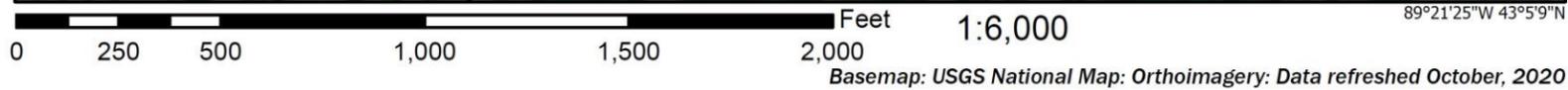
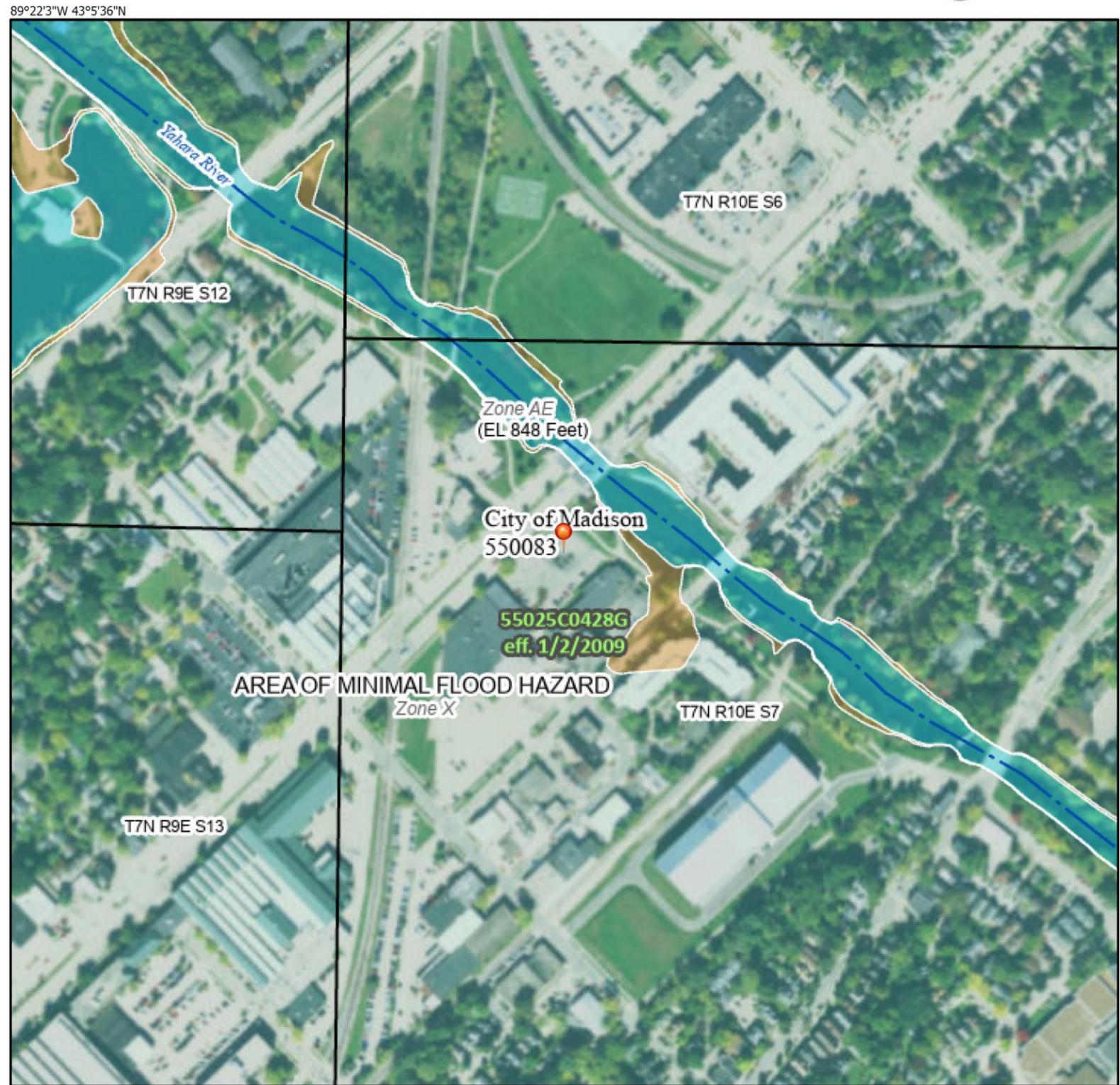


Figure 2: FEMA FIRMette Yahara River

# National Flood Hazard Layer FIRMette



## Legend

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

<b>SPECIAL FLOOD HAZARD AREAS</b>	<ul style="list-style-type: none"> <li>Without Base Flood Elevation (BFE) Zone A, V, A99</li> <li>With BFE or Depth Zone AE, AO, AH, VE, AR</li> <li>Regulatory Floodway</li> </ul>
<b>OTHER AREAS OF FLOOD HAZARD</b>	<ul style="list-style-type: none"> <li>0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X</li> <li>Future Conditions 1% Annual Chance Flood Hazard Zone X</li> <li>Area with Reduced Flood Risk due to Levee. See Notes. Zone X</li> <li>Area with Flood Risk due to Levee Zone D</li> </ul>
<b>OTHER AREAS</b>	<ul style="list-style-type: none"> <li>NO SCREEN Area of Minimal Flood Hazard Zone X</li> <li>Effective LOMRs</li> <li>Area of Undetermined Flood Hazard Zone D</li> </ul>
<b>GENERAL STRUCTURES</b>	<ul style="list-style-type: none"> <li>Channel, Culvert, or Storm Sewer</li> <li>Levee, Dike, or Floodwall</li> </ul>
<b>OTHER FEATURES</b>	<ul style="list-style-type: none"> <li>20.2 Cross Sections with 1% Annual Chance Water Surface Elevation</li> <li>17.5 Coastal Transect</li> <li>Base Flood Elevation Line (BFE)</li> <li>Limit of Study</li> <li>Jurisdiction Boundary</li> <li>Coastal Transect Baseline</li> <li>Profile Baseline</li> <li>Hydrographic Feature</li> </ul>
<b>MAP PANELS</b>	<ul style="list-style-type: none"> <li>Digital Data Available</li> <li>No Digital Data Available</li> <li>Unmapped</li> </ul> <p>The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.</p>

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/27/2021 at 11:15 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

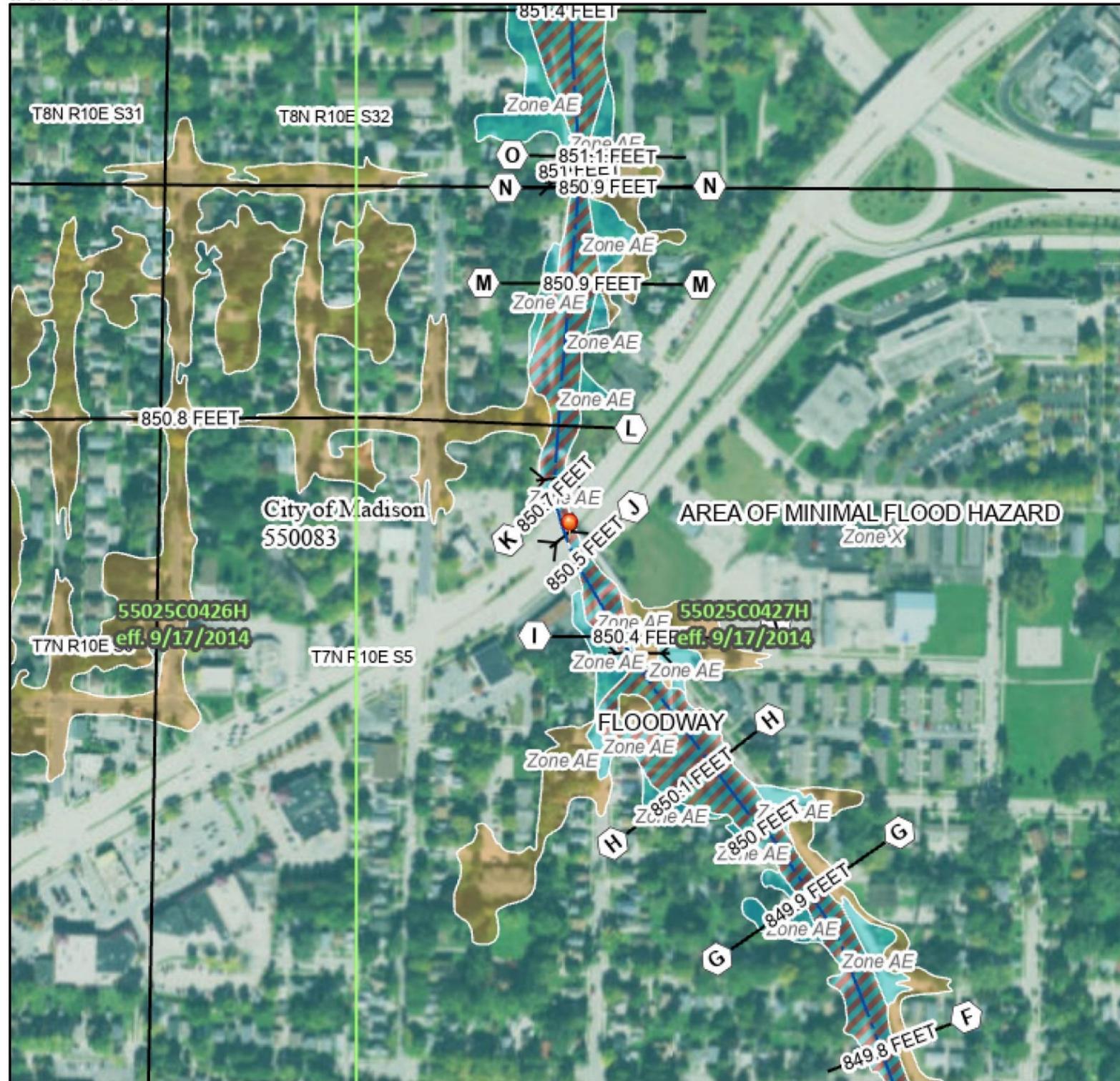
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory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

Figure 3: FEMA FIRMette Starkweather Creek

# National Flood Hazard Layer FIRMette



89°20'49"W 43°6'29"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000  
 Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
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OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
	Profile Baseline	
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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Figure 4: Wetland Resources

