

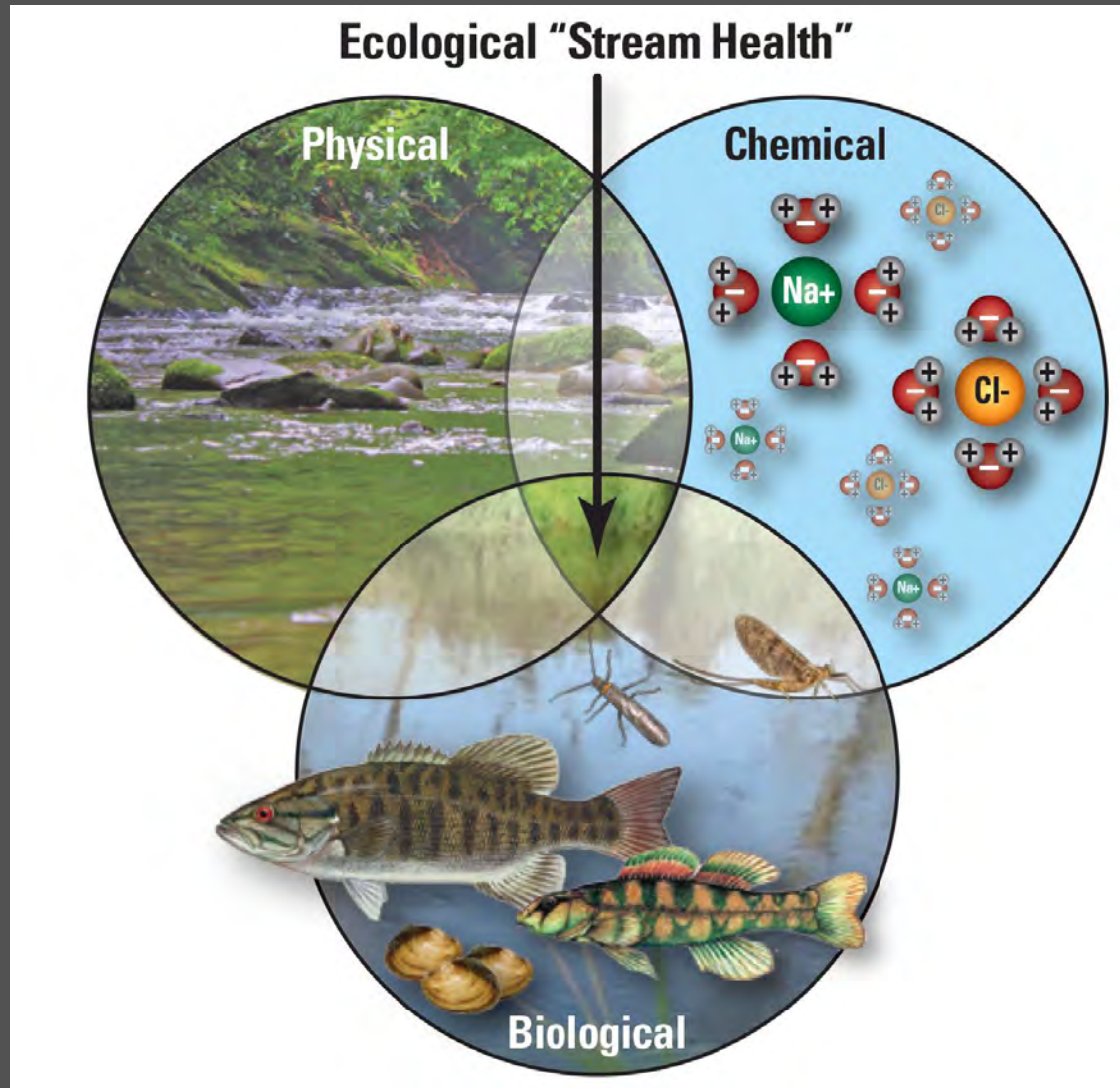
# Southeastern Wisconsin **Regional Planning Commission**



## **Natural Areas Plan Update** **Environmental Justice Task Force Meeting**

March 12, 2024  
Tom Slawski, Chief Biologist

# Background



Source: Illustrations by Frank Ippolito/www.productionpost.com. Modified from D.M. Carlisle and others, The quality of our Nation's waters—Ecological health in the Nation's streams, 1993–2005: U.S. Geological Survey Circular 1391, 120 p., <http://pubs.usgs.gov/circ/1391/>, 2013.

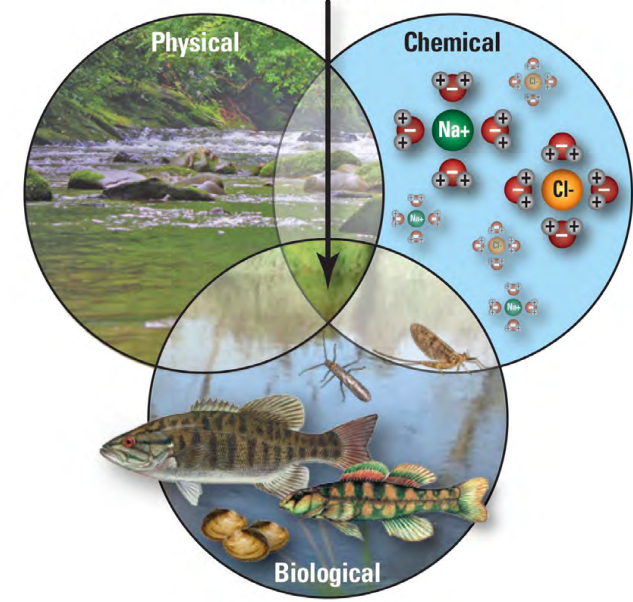


# Dynamics of a Natural Stream Ecosystem

Healthy stream ecosystems support diverse communities of aquatic organisms.



## Ecological "Stream Health"



Source: Illustrations by Frank Ippolito/www.productionpost.com. Modified from D.M. Carlisle and others, The quality of our Nation's waters—Ecological health in the Nation's streams, 1993–2005: U.S. Geological Survey Circular 1391, 120 p., <http://pubs.usgs.gov/circ/1391/>, 2013.

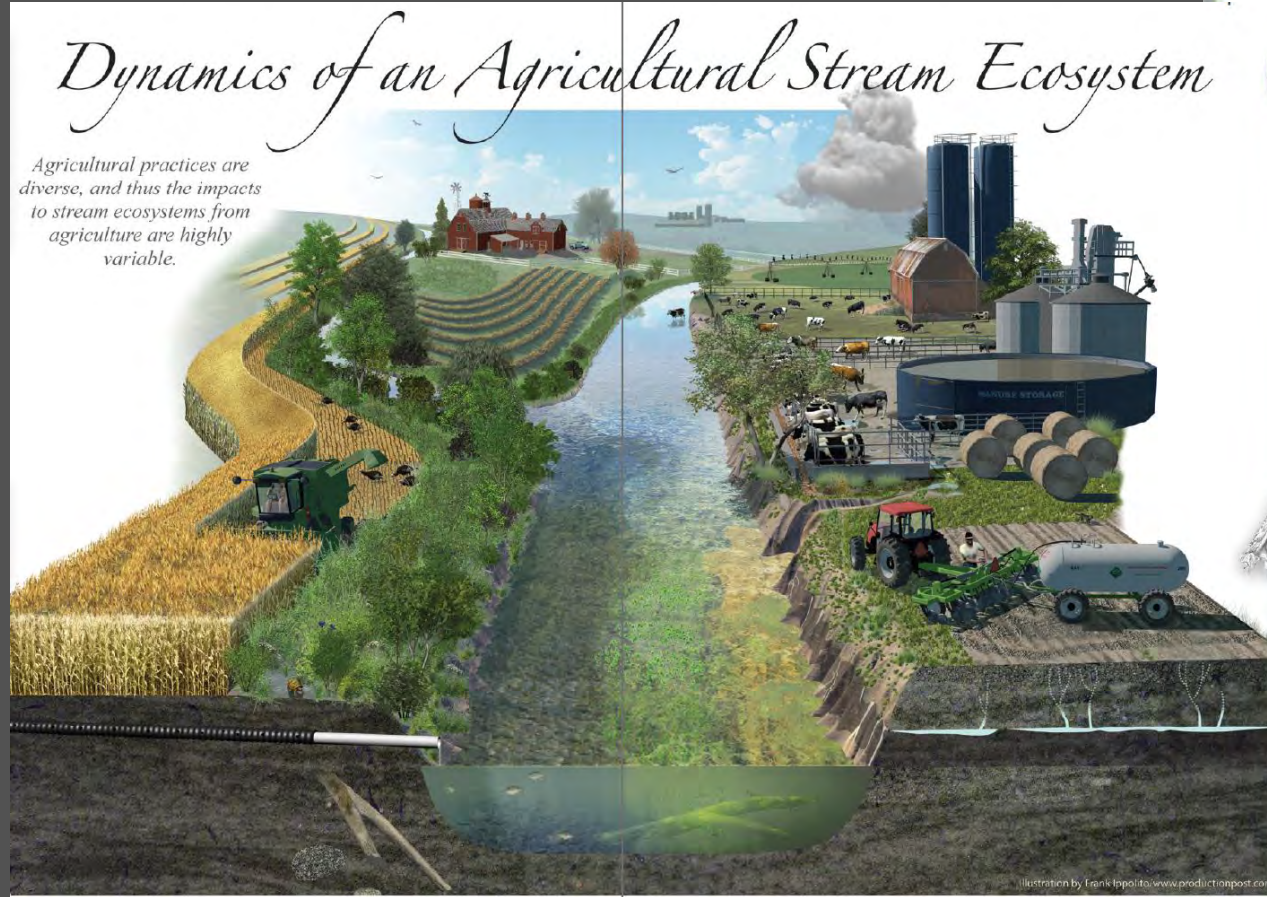
Illustration by Frank Ippolito/www.productionpost.com



# Background

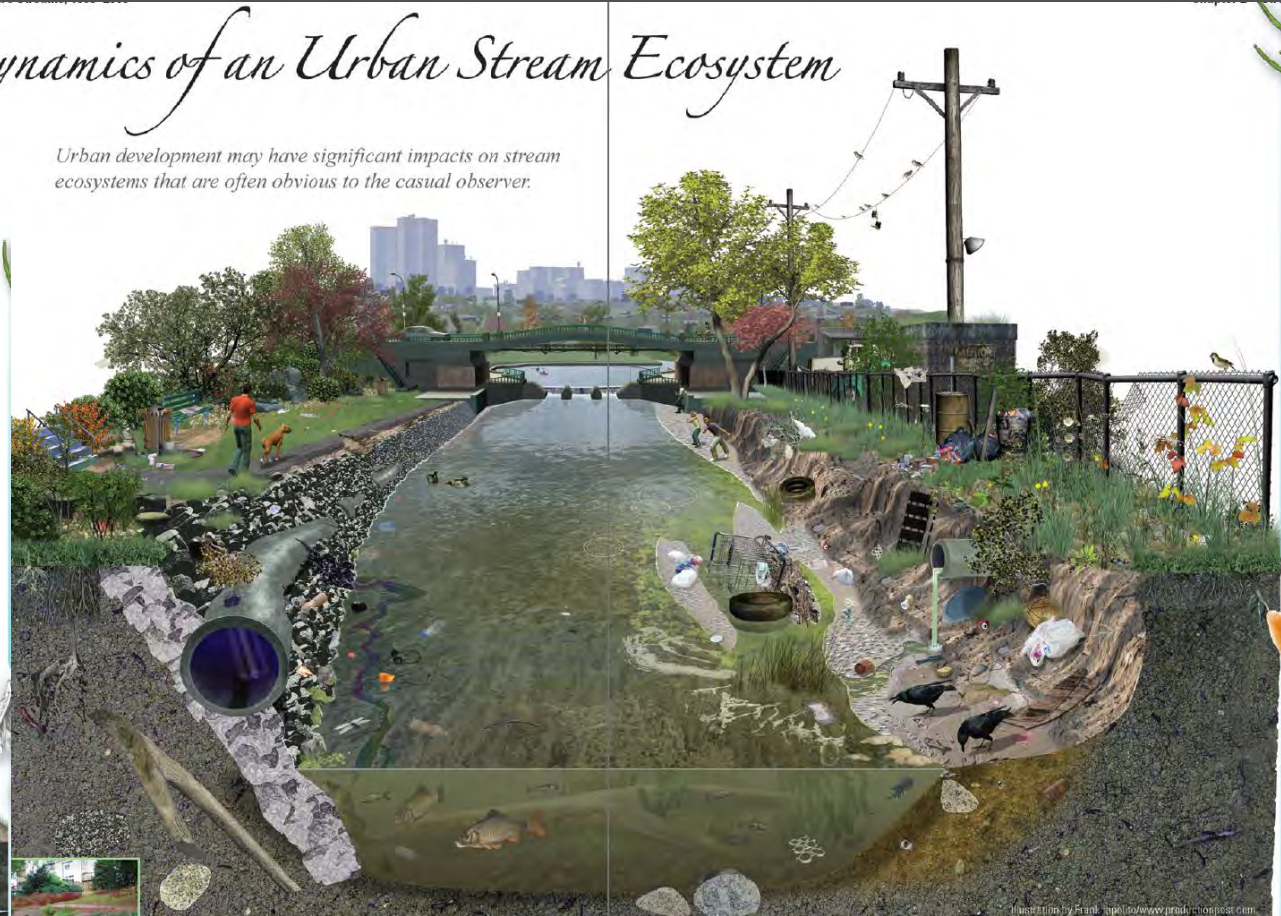
## *Dynamics of an Agricultural Stream Ecosystem*

*Agricultural practices are diverse, and thus the impacts to stream ecosystems from agriculture are highly variable.*



## *Dynamics of an Urban Stream Ecosystem*

*Urban development may have significant impacts on stream ecosystems that are often obvious to the casual observer.*



Source: Illustrations by Frank Ippolito/www.productionpost.com. Modified from D.M. Carlisle and others, The quality of our Nation's waters—Ecological health in the Nation's streams, 1993–2005: U.S. Geological Survey Circular 1391, 120 p., <http://pubs.usgs.gov/circ/1391/>, 2013.



# Background

## *Dynamics of an Agricultural Stream Ecosystem*

*Agricultural practices are diverse, and thus the impacts to stream ecosystems from agriculture are highly variable.*



## *Dynamics of an Urban Stream Ecosystem*

*Urban development may have significant impacts on stream ecosystems that are often obvious to the casual observer.*



August 1989-Natural Area Protection and Management Planning Program Prospectus—**Identified 3 serious problems:**

1. Loss of significant natural areas
2. Loss of rare, threatened, and endangered species
3. Need to identify and delineate natural areas and critical habitats for rare, threatened, and endangered species

Illustration by Frank Ippolito/www.productionpost.com

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# Background

## 494 Natural Areas Cover 101 Square Miles as of 2010

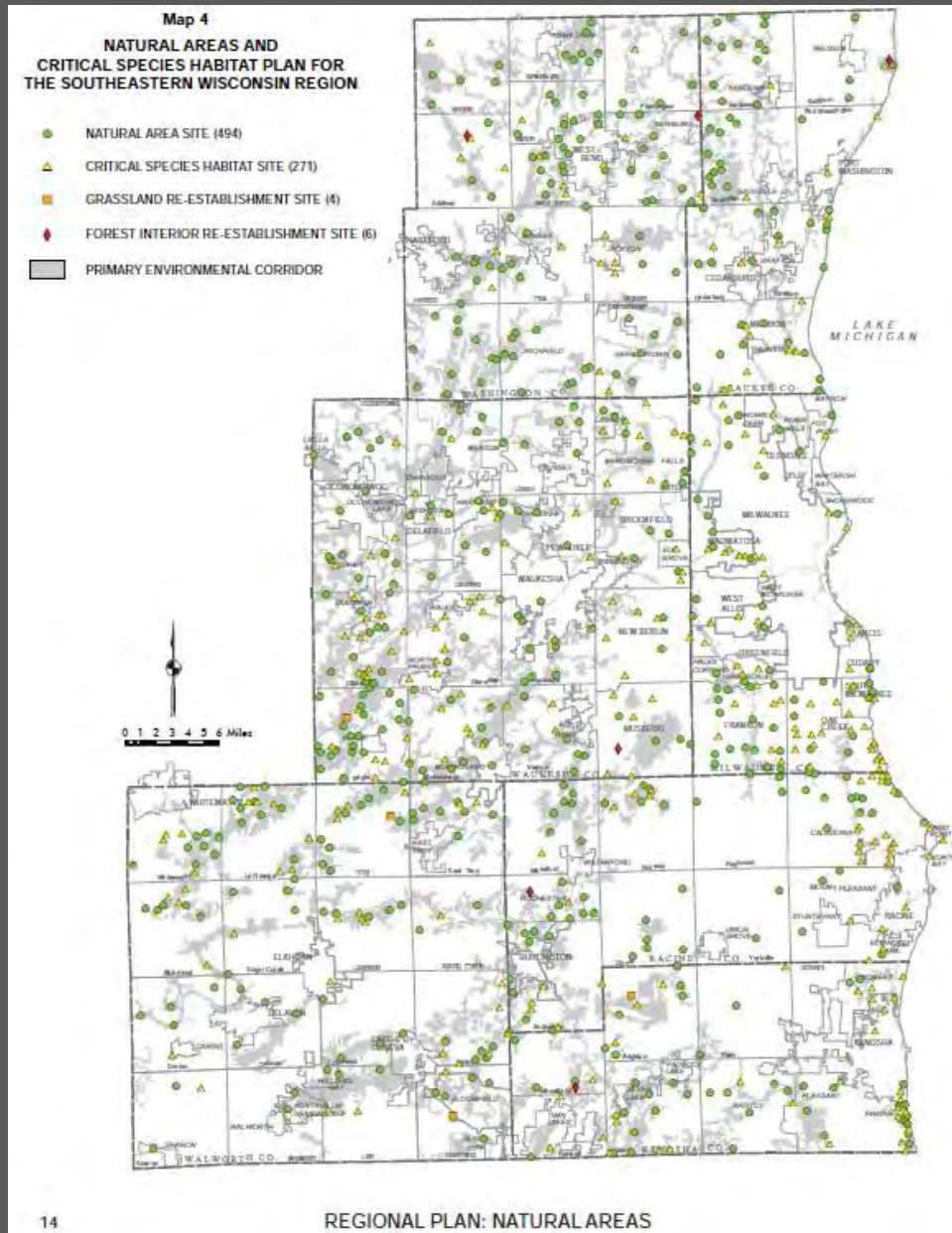
“Tracts of land or water so little modified by human activity, or which have sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the pre-European-settlement landscape.”

### Land Sites are Ranked

- NA-1: Statewide or greater significance
- NA-2: Countywide or regional significance
- NA-3: Local significance

### Factors in ranking and designation include:

- Biodiversity
- Natural communities present and their rarity
- Structural and ecological integrity
- Extent of human disturbance



# Background

Year-1997

118 Critical Stream Reaches




148 Critical Lakes

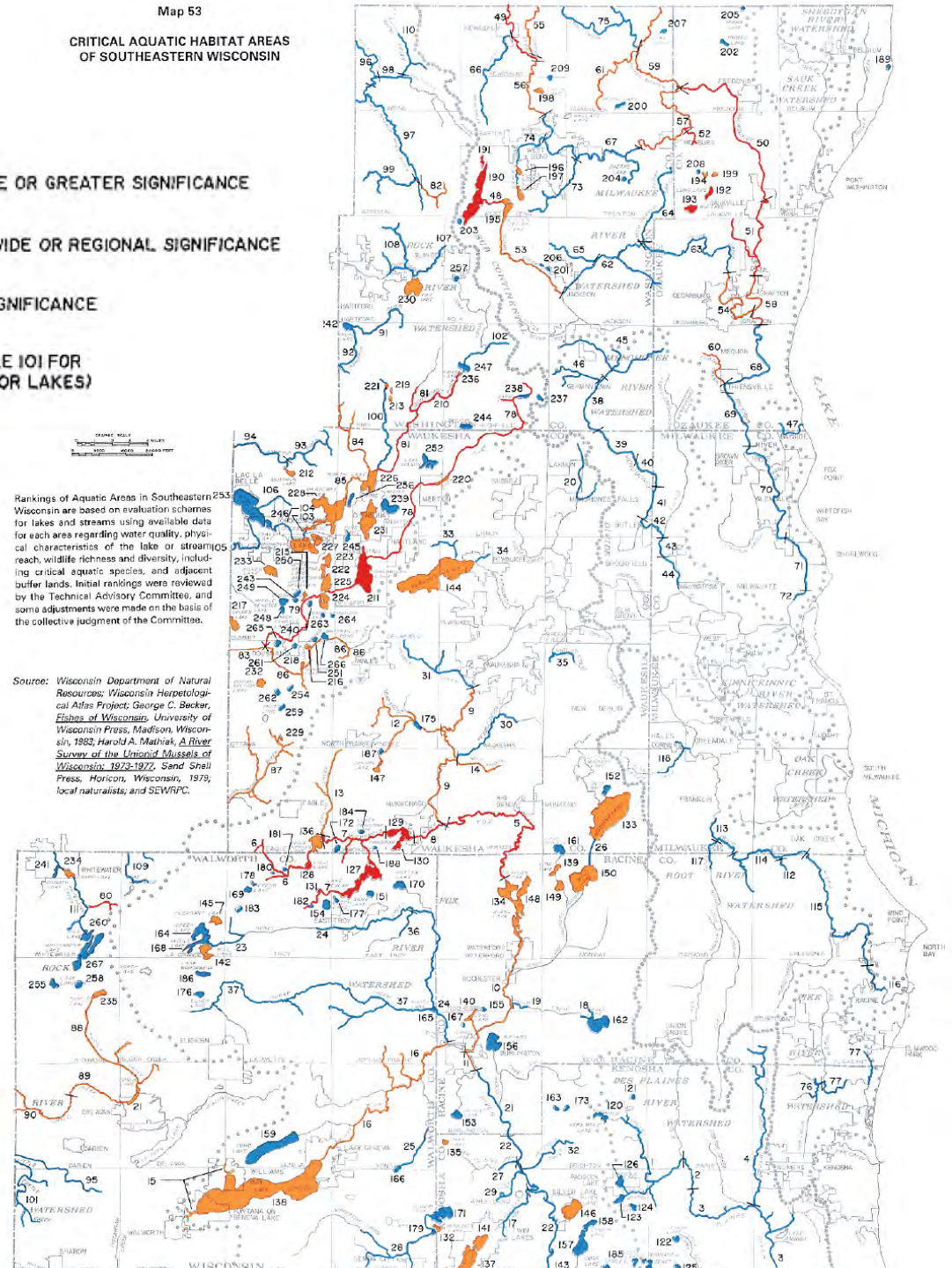
Water Sites are Ranked

- AQ-1: Statewide or greater significance
- AQ-2: Countywide or regional significance
- AQ-3: Local significance

Map 53  
CRITICAL AQUATIC HABIT AREAS  
OF SOUTHEASTERN WISCONSIN

## LEGEND

-  AQ-1: AQUATIC AREAS OF STATEWIDE OR GREATER SIGNIFICANCE
-  AQ-2: AQUATIC AREAS OF COUNTYWIDE OR REGIONAL SIGNIFICANCE
-  AQ-3: AQUATIC AREAS OF LOCAL SIGNIFICANCE
- 200 INDENTIFICATION NUMBER (SEE TABLE 101 FOR STREAM REACHES AND TABLE 103 FOR LAKES)





# ●●●●● Natural Areas Plan

## ➤ Objectives

- Maintain the integrity of the remaining biodiversity of the region
- Preserve and protect the remaining significant geological and archeological sites of the Region





## ➤ State

- SSA extension reviews
- Natural Heritage inventory database

## ➤ Regional/County

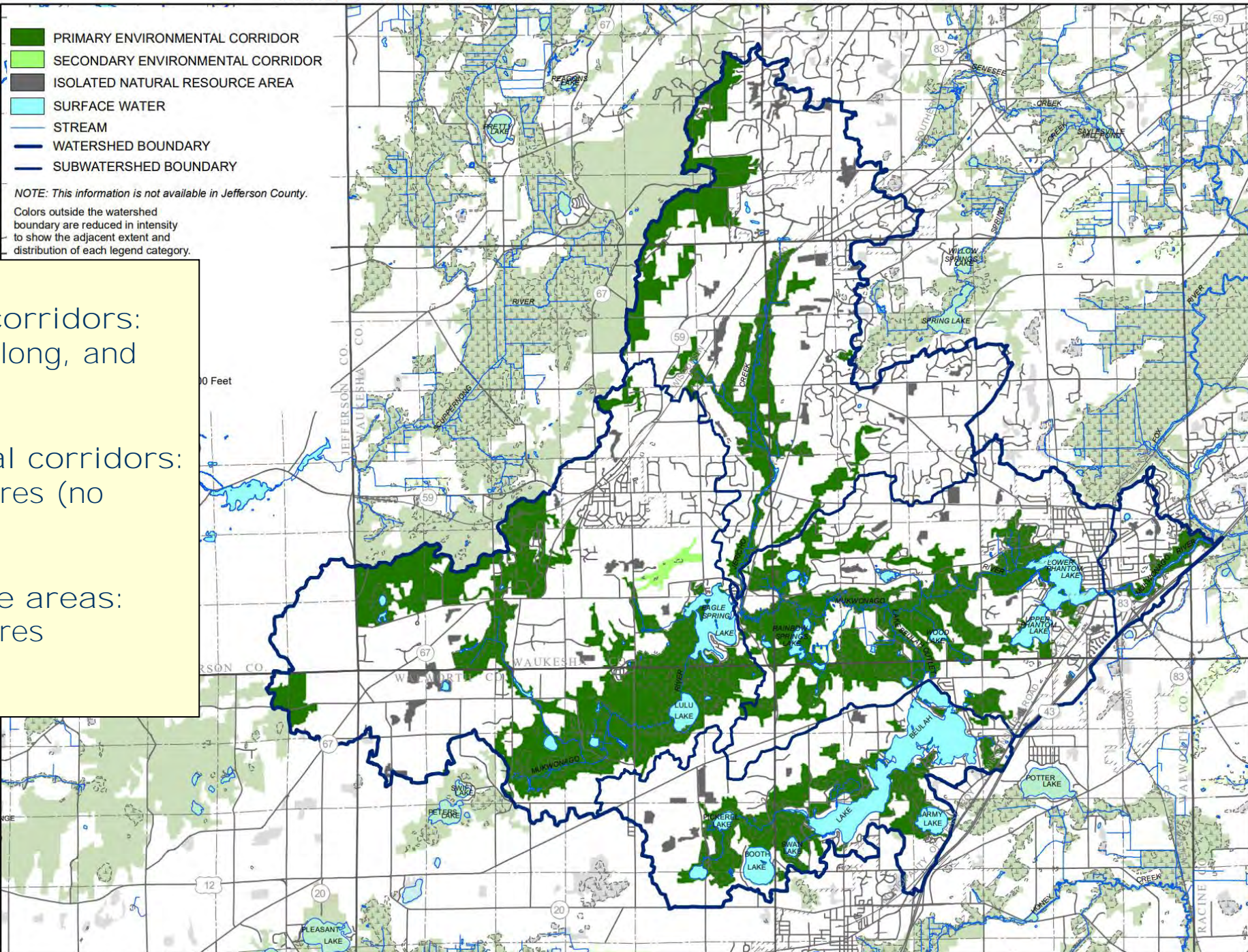
- Comprehensive plans
- Corridors
- County Park and Open Space plans
- Transportation plans
- County ordinance

## ➤ Municipal

- Local County Park and Open Space plans
- SSA amendment reviews
- Local ordinance development







Primary environmental corridors:  
200 feet wide, 2 miles long, and  
400 acres

Secondary environmental corridors:  
1 mile long and 100 acres (no  
minimum width)

Isolated natural resource areas:  
200 feet wide and 5 acres



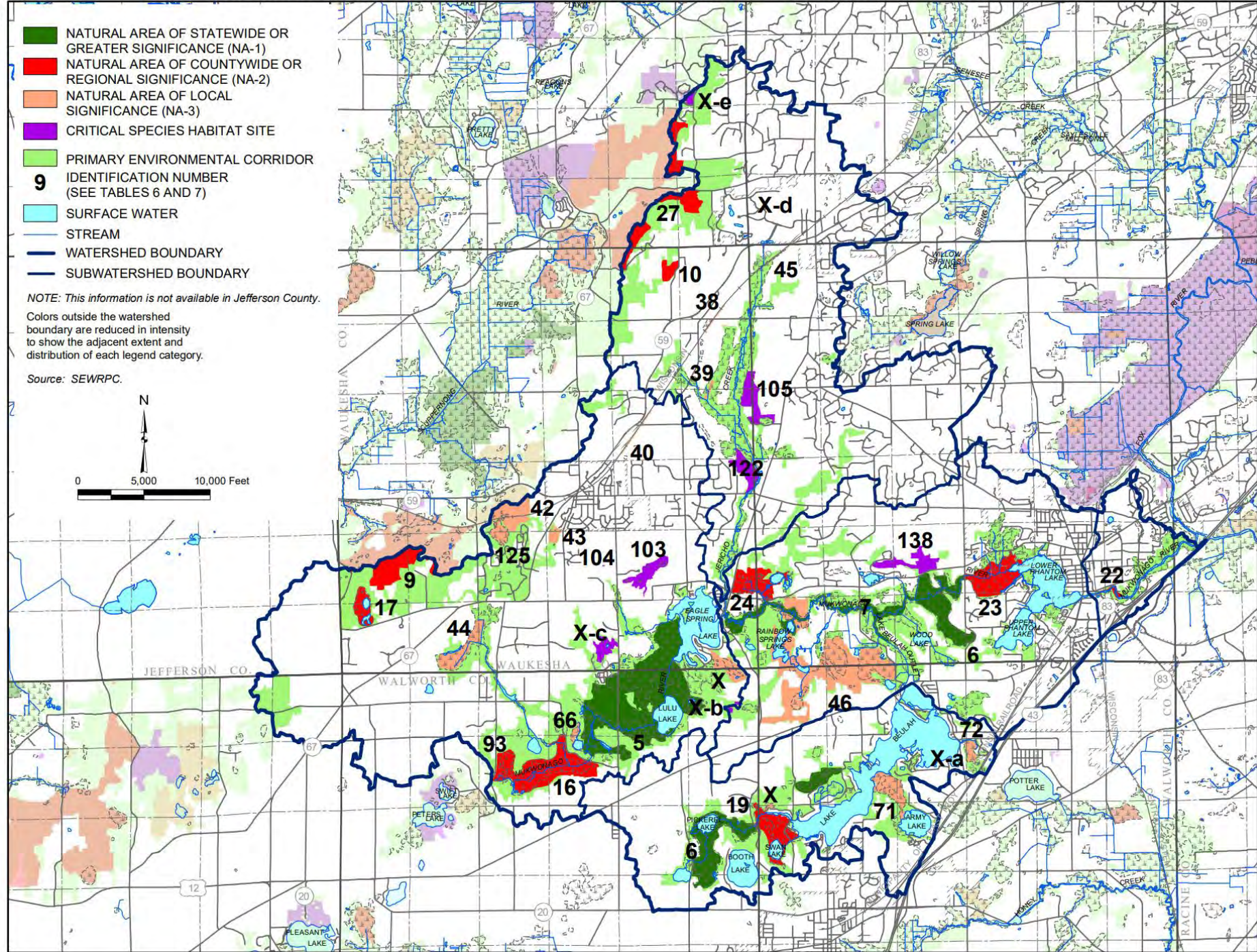
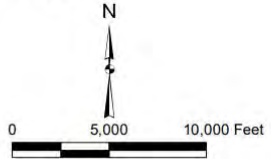
KNOWN NATURAL AREAS AND CRITICAL SPECIES HABITAT SITES WITHIN THE MUKWONAGO RIVER WATERSHED: 2005

- NATURAL AREA OF STATEWIDE OR GREATER SIGNIFICANCE (NA-1)
- NATURAL AREA OF COUNTYWIDE OR REGIONAL SIGNIFICANCE (NA-2)
- NATURAL AREA OF LOCAL SIGNIFICANCE (NA-3)
- CRITICAL SPECIES HABITAT SITE
- PRIMARY ENVIRONMENTAL CORRIDOR
- 9** IDENTIFICATION NUMBER (SEE TABLES 6 AND 7)
- SURFACE WATER
- STREAM
- WATERSHED BOUNDARY
- SUBWATERSHED BOUNDARY

*NOTE: This information is not available in Jefferson County.*

Colors outside the watershed boundary are reduced in intensity to show the adjacent extent and distribution of each legend category.

Source: SEWRPC.





# Aquatic Assessment scheme update

## Stream Aquatic Natural Area Rank

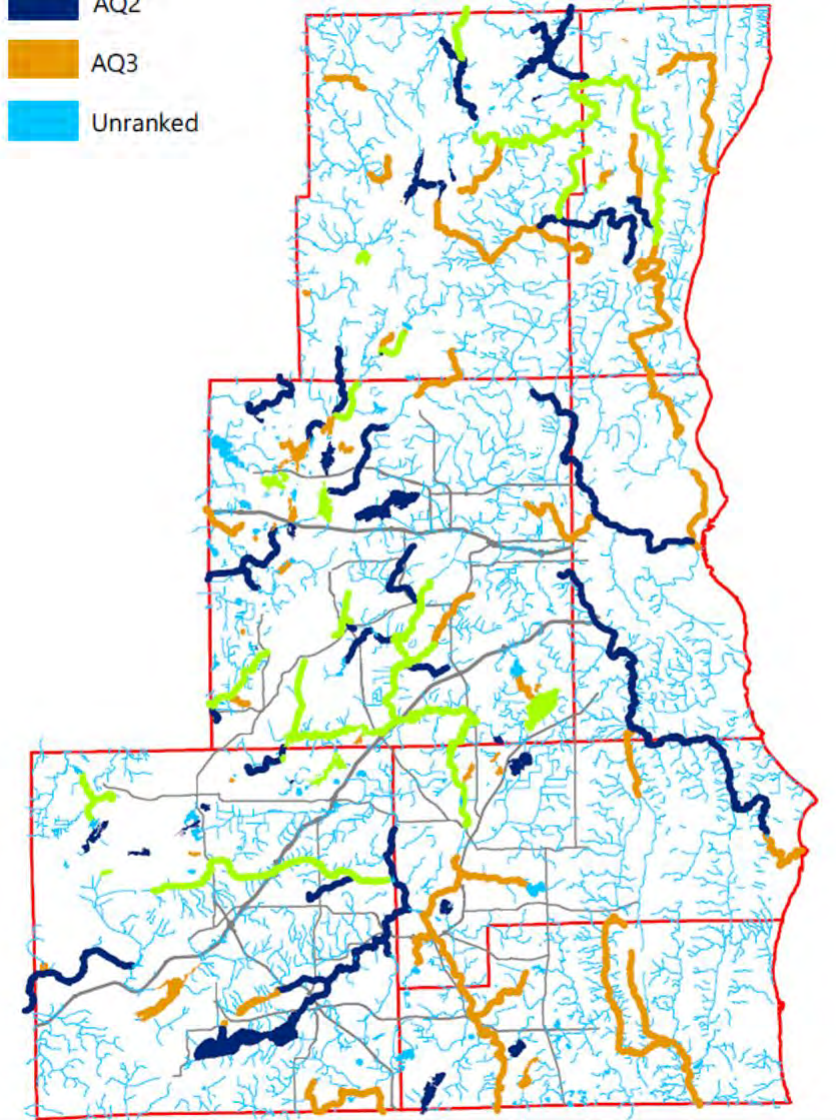
- AQ1
- AQ2
- AQ3
- Unranked

## Lake Aquatic Natural Area Rank

- AQ1
- AQ2
- AQ3
- Unranked

Lake Score ( $\leq 100$ ) = Morphology and Classification ( $\leq 7$ ) + Water Quality ( $\leq 8$ ) + Macrophytes ( $\leq 20$ ) + Shoreline Buffer ( $\leq 5$ ) + Connectivity ( $\leq 15$ ) + Fisheries ( $\leq 25$ ) + Natural Heritage Inventory Listings ( $\leq 20$ )

Stream Score ( $\leq 100$ ) = Morphology, Modification, and Classification ( $\leq 7$ ) + Water Quality ( $\leq 8$ ) + Macroinvertebrates ( $\leq 20$ ) + Riparian Buffer ( $\leq 5$ ) + Connectivity ( $\leq 15$ ) + Fisheries ( $\leq 25$ ) + Natural Heritage Inventory Listings ( $\leq 20$ )







# NA Summary by County

	PR 42	2010 A	2024	Change
Kenosha	38	41	26	-15
Milwaukee	43	55	53	-2
Ozaukee	48	50	53	+3
Racine	53	55	46	-9
Walworth	74	82	81	-1
Washington	90	93	94	+1
Waukesha	101	118	125	+7
	<b>447</b>	<b>494</b>	<b>478</b>	<b>-16</b>





# CSH Sites by County

	PR 42	2010 A	2024	Change
Kenosha	18	71	70	-1
Milwaukee	13	55	124	+69
Ozaukee	7	17	31	+14
Racine	33	37	36	-1
Walworth	23	39	37	-2
Washington	13	21	23	+2
Waukehsa	38	71	62	-9
	<b>145</b>	<b>311</b>	<b>366</b>	<b>+55</b>



# Natural Areas Interactive Mapping Tool



### Legend

**Southeastern Wisconsin Region Ranking Lakes**

**Ozaukee County Natural Areas**

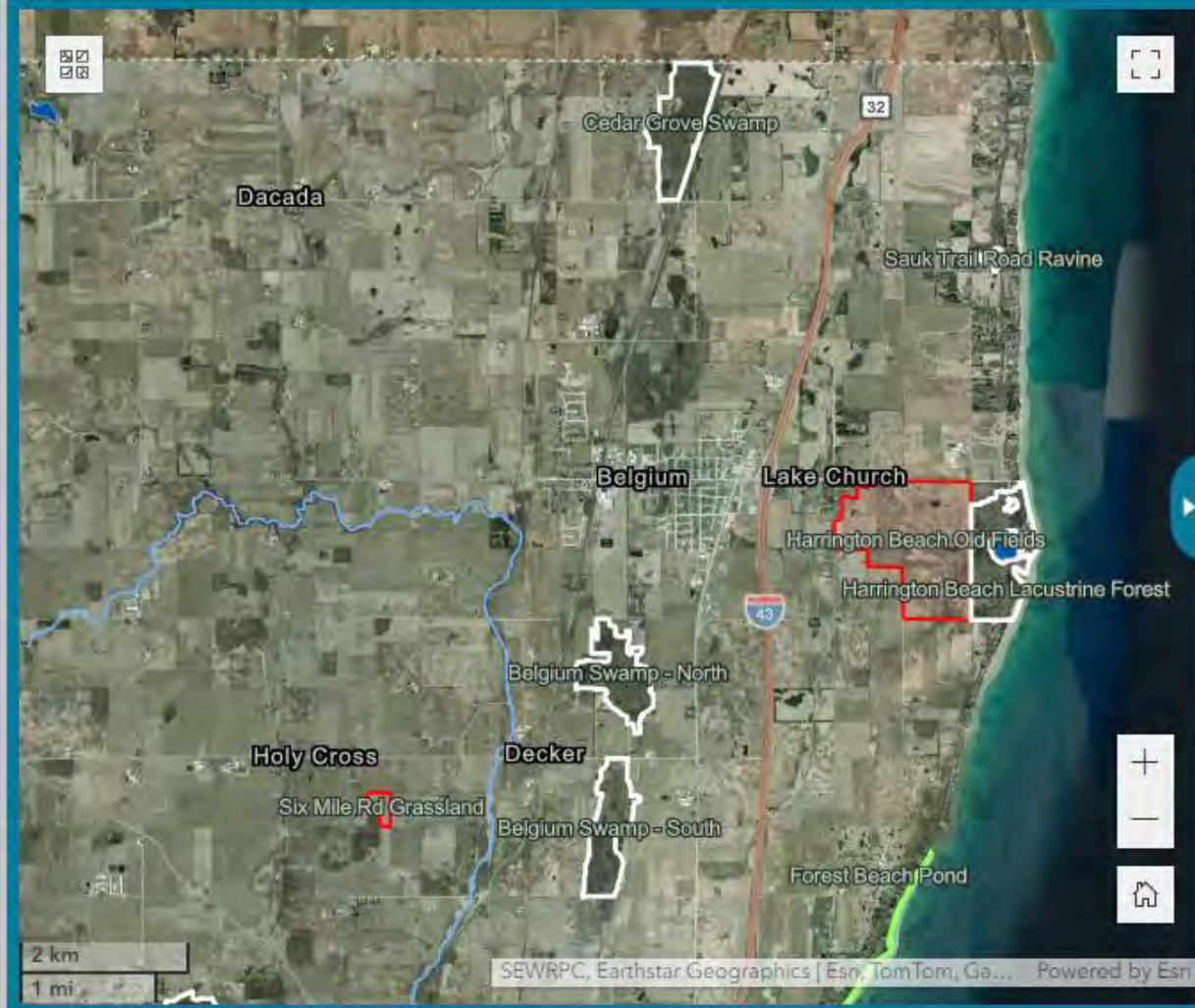
**Ozaukee County Critical Species Habitat Sites**

Animal

### Basemaps

Imagery Hybrid

Blueprint



### Filters

Ranked Streams Only

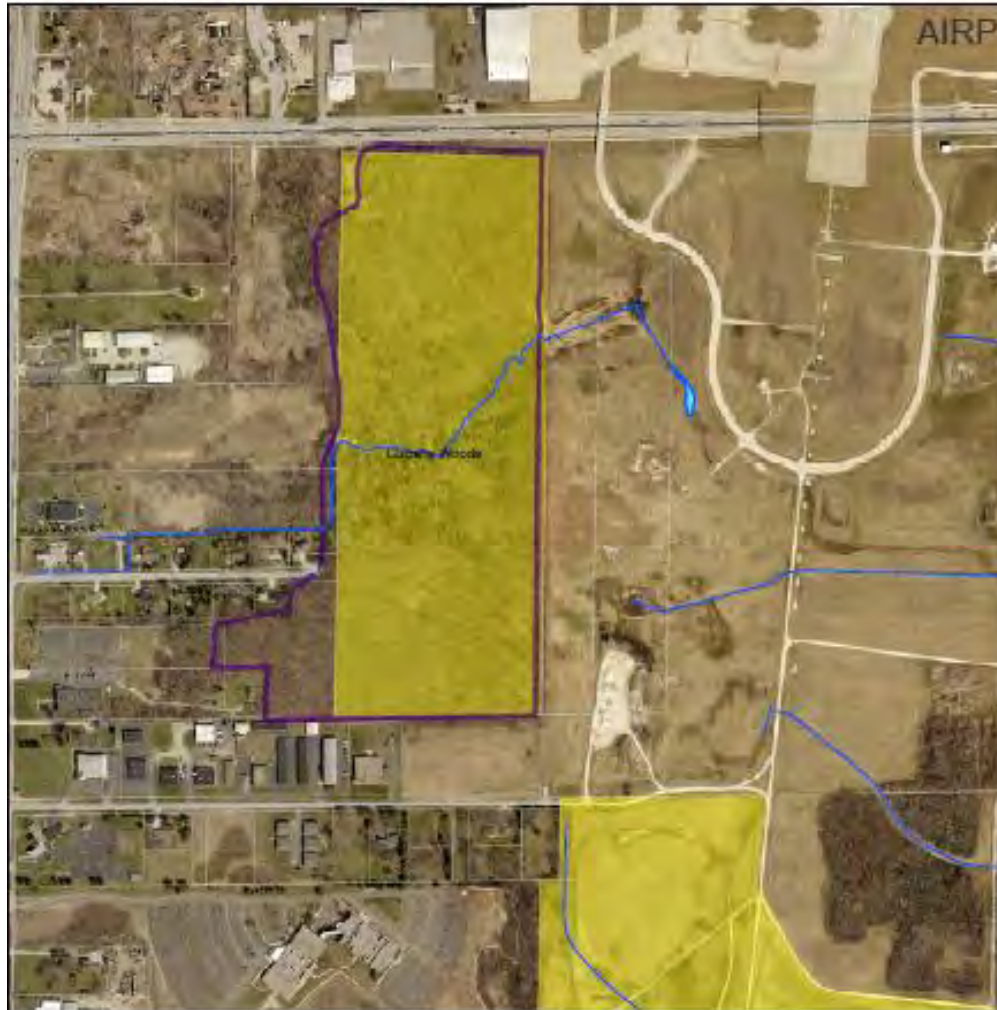
### Layers

- BASEMAP
- Municipal Labels
- Ozaukee County Natural Areas Overview
- Southeastern Wisconsin Region Ranking Lakes
- Ozaukee County Natural Areas



# Site Profile

Map X  
Cudahy Woods Natural Area Site No. 5 (NA-2)



- NATURAL AREA
- SURFACE WATER
- STREAM
- PARCEL BOUNDARY
- Lands Considered to be Protected Through Public or Private Ownership Interest (Defined as lands owned in fee simple by Federal, State, County, and local governments; public school districts; utility, sewerage, and lake districts; and lands owned fee simple by private organizations, including land trusts, schools, conservation clubs, campgrounds and other compatible groups (some of these lands may be vulnerable to development); and, lands protected by conservation easements.)



Note: the lands within the boundaries and/or highlighted are not a part

## Cudahy Nature Preserve: Natural Area of County-Wide or Regional Significance (NA-2)

Level of Protection: **High (Conservation Ownership with Site Management Plan)**

Level of Threat: **Medium (Invasive Species)**



<b>Size</b>	47 Acres
<b>Ownership</b>	Milwaukee County
<b>Site Management Plan</b>	Yes
<b>Number of Native Plant Species</b>	178
<b>Endangered, Threatened, or Special Concern Species</b>	Yes, Plant and Animal

Cudahy Nature Preserve, also a State Natural Area known as Cudahy Woods, consists of a relatively large remnant tract of white oak-red oak dry-mesic forest, beech-maple northern hardwood forest, and hardwood swamp with skunk cabbage seeps. It harbors a rich ground flora that includes trout lilies (*Erythronium albidum* and *E. americanum*), Spring cress (*Cardamine bulbosa* and *C. douglassii*), toothwort (*Cardamine concatenata*), and many other species that have been extirpated from most of the surrounding area. American cancer root (*Conopholis americana*) and Beech drops (*Epifagus virginiana*), both fully parasitic plants that lack chlorophyll, are two of the more unique members of the Cudahy Woods plant community. They respectively depend on the presence of oaks (*Quercus* sp.) and American beech (*Fagus americana*) as hosts. The woods also supports many bird species during migration and the breeding season.

Invasive species are the primary threats to the long-term preservation of biodiversity at Cudahy Nature Preserve. There are ongoing efforts to control garlic mustard (*Alliaria petiolata*), but perhaps the greatest threats the woods' diverse and irreplaceable spring ephemeral community are exotic "bulb" species, which are actively displacing spring ephemerals in parts of the woods. Siberian squill (*Scilla siberica*) and Bossier's glory-of-the-snow (*S. luciliae*) are the most problematic, but snowdrops (*Galanthus nivale*) also poses a threat. Other invasive species present in or at the margins of the woods and warranting consideration for eradication include bush honeysuckle (*Lonicera x bella*) and common buckthorn (*Rhamnus cathartica*).

Acquisition and afforestation of adjacent properties to the west and south of the woods, which already contain some mature oaks and wetland areas, would buffer the core remnant community from surrounding development and further enhance wildlife values.



**Left:** White trout lily, a spring ephemeral wildflower, carpets portions of Cudahy Nature Preserve in early spring. **Right:** Invasive Bossier's glory-of-the-snow expanding in a portion of the woods. Credit: SEWRPC staff – Dan Carter

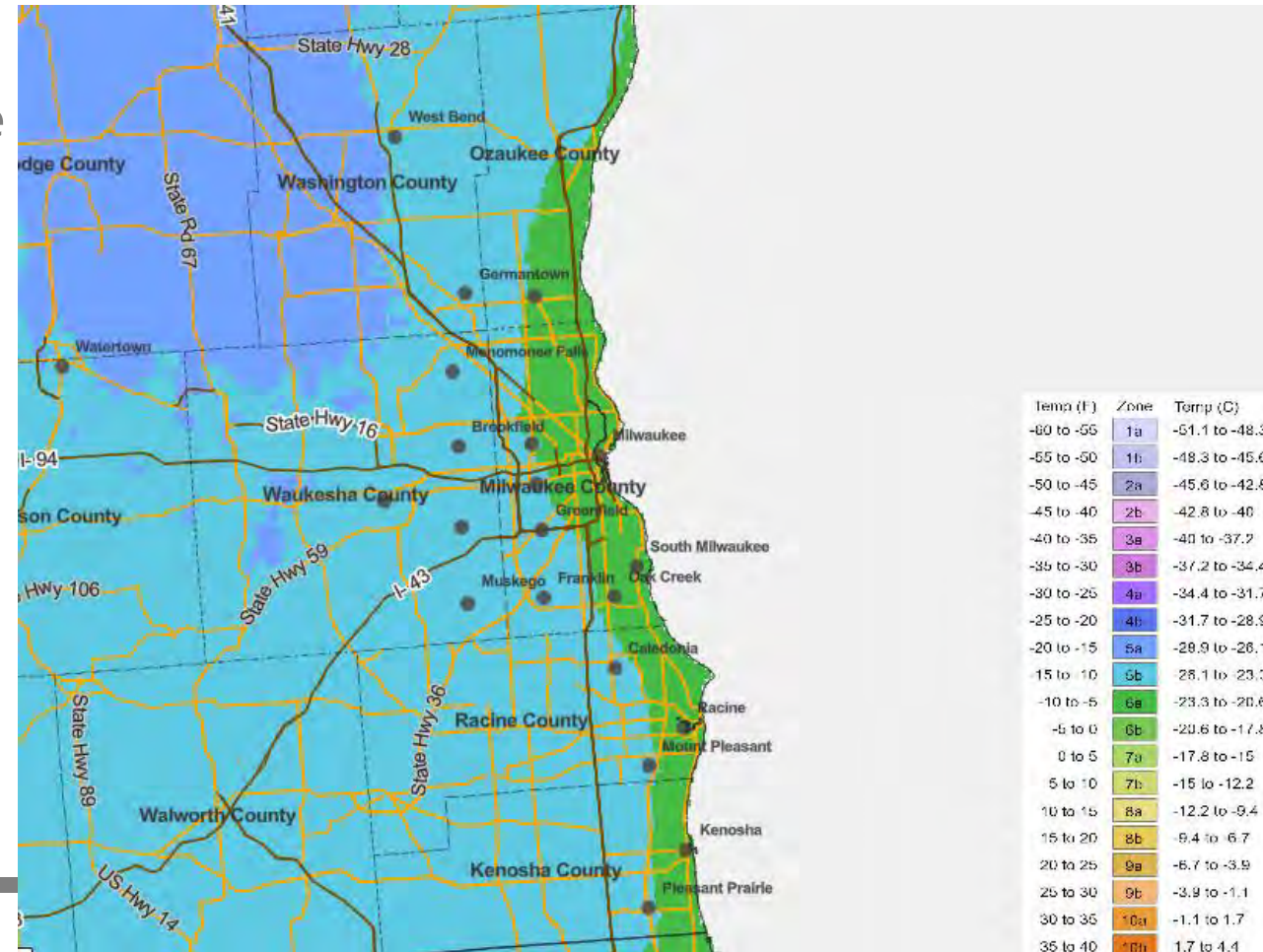


# Other Significant Plan changes



- Provide updated Natural Community management recommendations
- Provide recommendations to improve natural area climate resiliency
  - Wisconsin is getting warmer, wetter, with more frequent extreme weather events
  - The plan will synthesize information from existing plans and provide recommendations to improve resiliency of the Region's Natural Areas
- Provide updated Bi-annual approval process for future plan updates

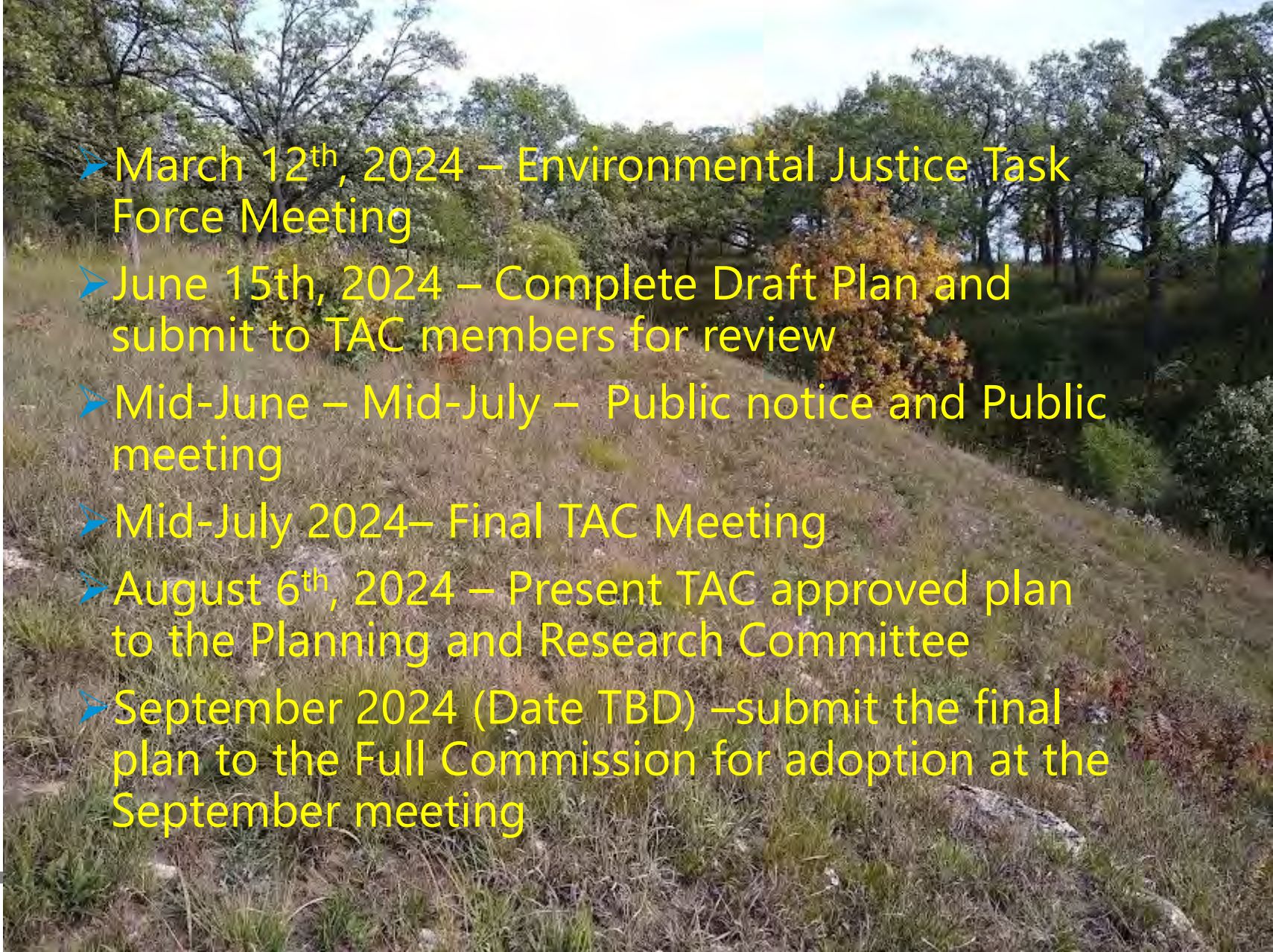
2023 USDA Hardiness Zone Map





# Adjusted Timeline



- 
- A photograph of a grassy hillside with scattered trees, some showing autumn foliage, under a clear sky. The image is used as a background for the text.
- March 12<sup>th</sup>, 2024 – Environmental Justice Task Force Meeting
  - June 15<sup>th</sup>, 2024 – Complete Draft Plan and submit to TAC members for review
  - Mid-June – Mid-July – Public notice and Public meeting
  - Mid-July 2024– Final TAC Meeting
  - August 6<sup>th</sup>, 2024 – Present TAC approved plan to the Planning and Research Committee
  - September 2024 (Date TBD) –submit the final plan to the Full Commission for adoption at the September meeting



# Thank You

**Tom Slawski** | Chief Biologist

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