

Southeastern Wisconsin **Regional Planning Commission**



Local Planning Team Meeting

Racine County

Hazard Mitigation Plan Update

May 31, 2023

Joel Dietl, AICP-- Chief Land Use Planner, SEWRPC

Laura Herrick – Chief Environmental Engineer, SEWRPC

#268389

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●●●●● **Agenda**

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- Welcome
- **Review of Summary Notes April 13, 2022 mtg**
- Review of draft Plan chapters
- Discussion of Public Meeting to follow
- Adjourn



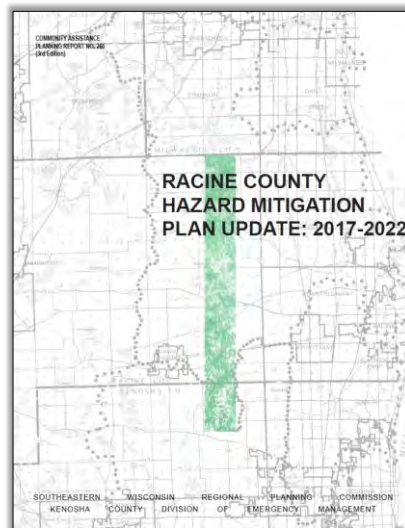
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Chapter 1

Introduction and Background



- 2004, 2010, 2017, 2023
- FEMA and WEM
 - Funding
 - Disaster Mitigation Act of 2000 Requirements
- Hazard Mitigation vs. Other Planning Mechanisms
- Plan Preparations, Maintenance, and Adoption
 - Local Planning Team
 - Plan Components



Chapter 1 Tables of Note

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- Table 1.1 Plan Participation
- Table 1.4 Outreach Activities by Community
- Table 1.5 Hazard Mitigation Activities 2017-2022



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Outreach Activities

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A screenshot of a website. At the top, there's a navigation bar with links like HOME, ABOUT, STRATEGY, PLANS, PROGRAMS, PARTNERS, POLYHAZARD RISK PROGRAM, REGULATORY, and EVENTS. Below this is a large photo of a group of people outdoors. The main content area features a section titled "Southeastern Wisconsin Clean Water Network" with a paragraph of text. To the right are social media icons for Twitter and Facebook. Below the main text are two smaller images: one of people looking at a wall and another of a garden. On the right side, there's a sidebar with "EMERGENCY MANAGEMENT" and "CURRENT EVENT NOTIFICATION" sections. The "EMERGENCY MANAGEMENT" section lists items like Risk & Safety, Disaster Information, Personal Preparedness, Hazard & Evacuation Routes, Business Preparedness, Flooded Offsets, Emergency Planning, Hazardous Materials, Public Alerts, Training and Workshops, Local Emergency Planning Commission, and Just for Kids. The "CURRENT EVENT NOTIFICATION" section has a "Hazard Mitigation Plan Update" with a paragraph of text and a "MUTUAL WARNINGS OR RESPONSES FOR RACINE WISCONSIN" logo. At the bottom left, there's a "Volume 55 | Summer 2022" logo for "The City's Official Newsletter" with the title "Inside Burlington".



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Implementation Activities

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LAKE BLUFF STABILIZATION PROJECT

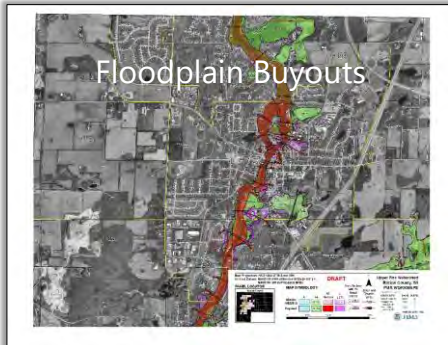
Emergency Bluff Stabilization in Lake Park

The village of Mount Pleasant is continuing its emergency bluff stabilization project along Lake Michigan in the Lake Park neighborhood. Michael Corporation, the general contractor, has made substantial progress to date with an expected project completion date in August.

The purpose of the project is to provide protection and stabilization of the falling bluffs along Lake Michigan in the project area in order to protect local public infrastructure. The project consists of placing heavy stones at the toe of slope in the water to help absorb wave action along the lake. Stone is placed from the water. Air the way to the top of bluff at a stable angle to prevent further bluff failures and protect the bluff and adjacent lands from wave action from the lake.

Before the project begins:

The left image shows the state of the bluff before the stabilization project began. The right-hand image shows stakes set out to measure elevation and plan for stabilization.



Tornado Sirens Study



Beach Resiliency Assessment



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Study Area: Map 1.1

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LOCAL GOVERNMENT TYPE
 CITY: RACINE
 VILLAGE: STURTEVANT
 TOWN: DOOR



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Chapter 2

Basic Study Area Inventory and Analysis



Chapter 2: Basic Study Area Inventory and Analysis



Chapter 2 Inventory

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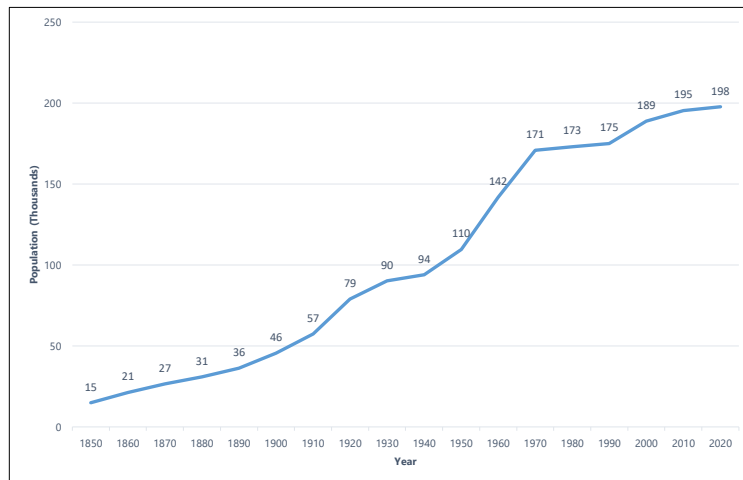
- Civil Divisions
- Demographic and Economic Characteristics
- Land Use
- Climate and Climate Change
- Emergency Services and Critical Facilities



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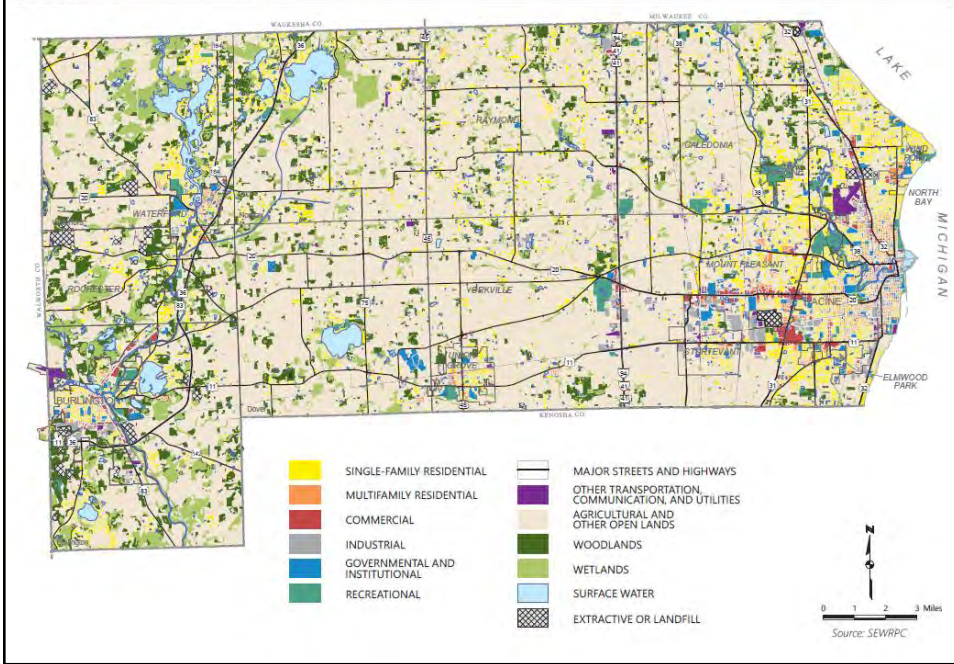
Figure 2.1 Population Levels

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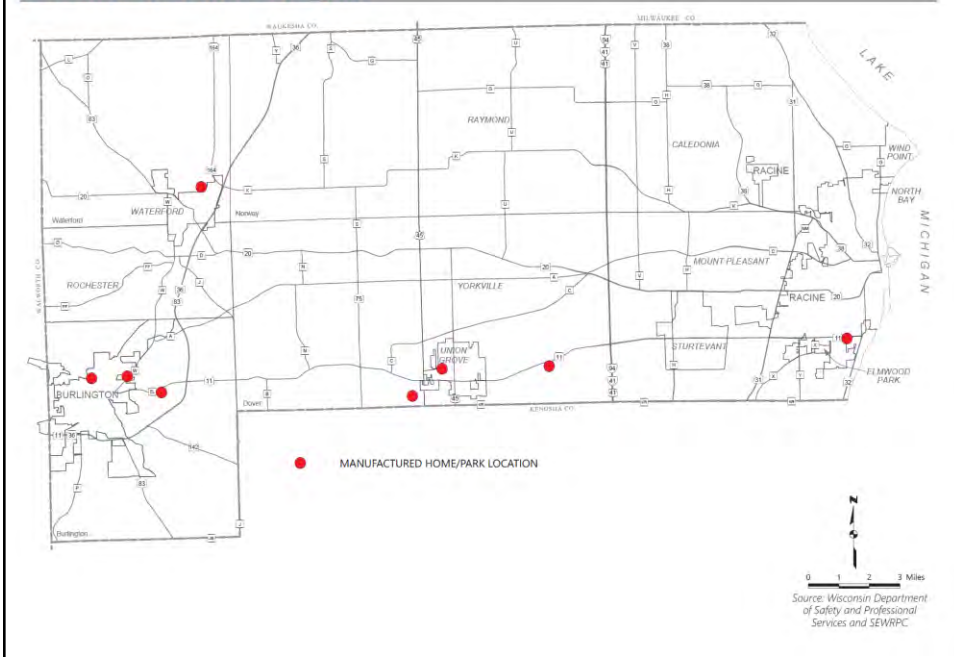
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Map 2.1
Existing Land Use in Racine County: 2015



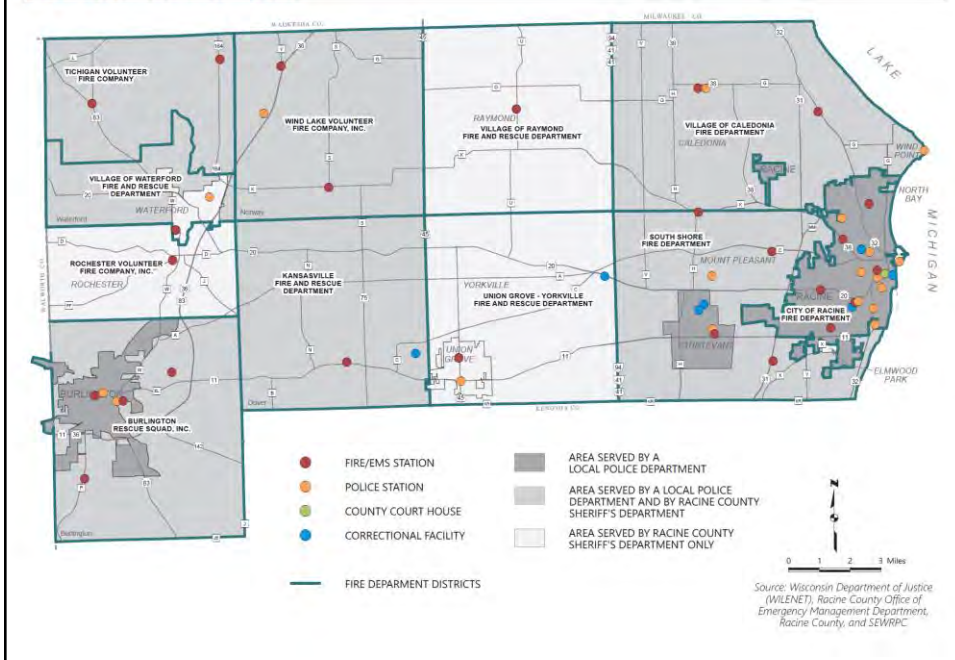
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Map 2.2
Manufactured Homes and Parks in Racine County: 2021

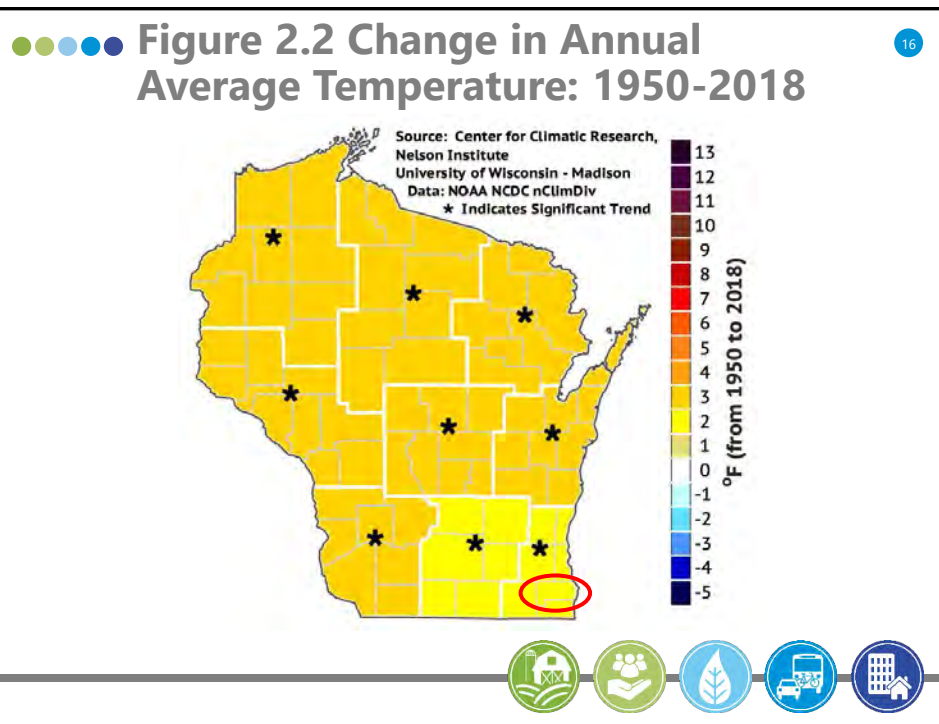


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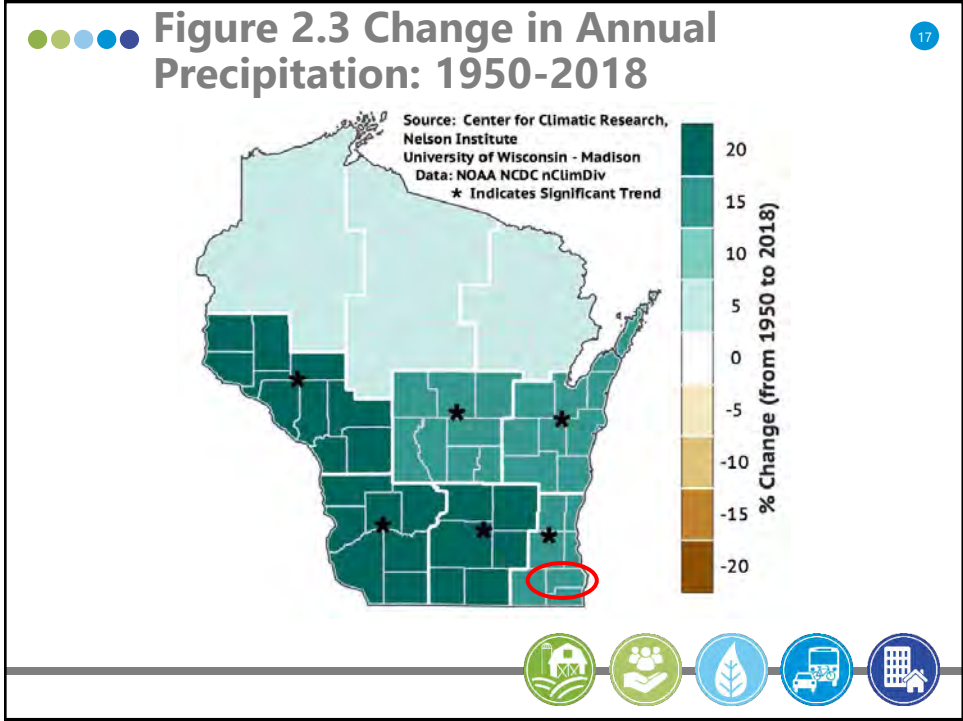
Map 2.4
Emergency Services in Racine County: 2022



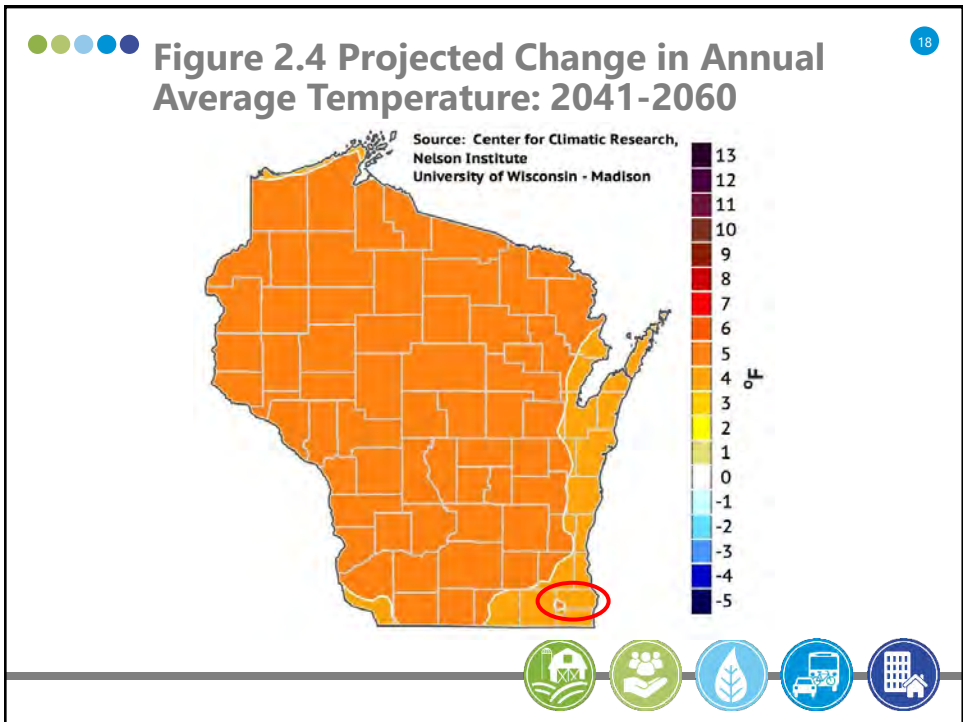
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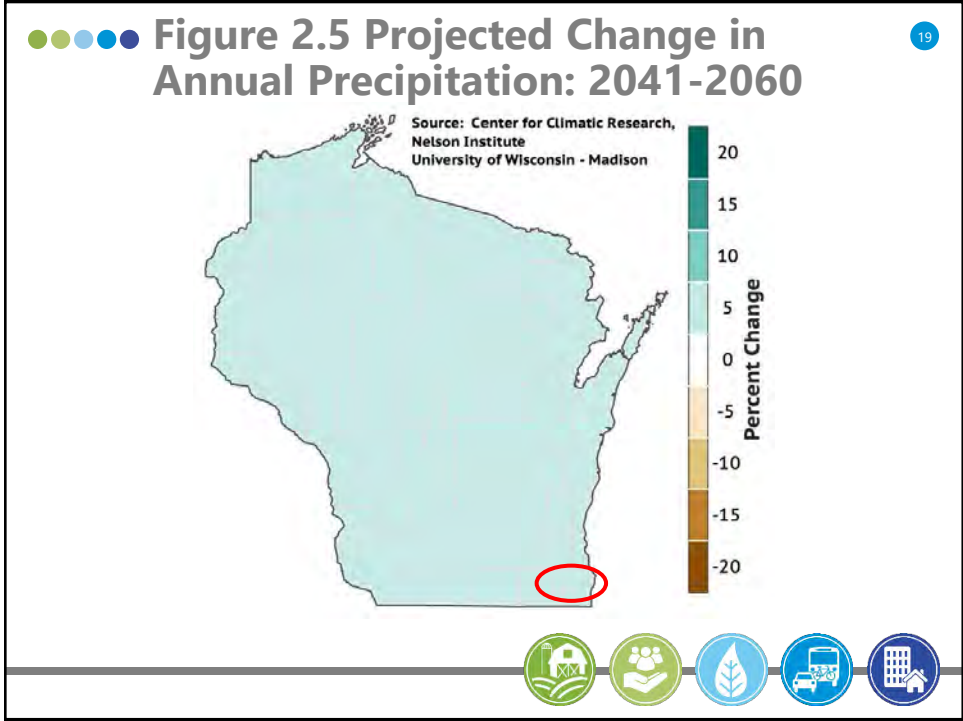
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Chapter 3

Analysis of Hazard Conditions

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Table 3.1 Perceived Risks of Hazards 21


1. Tornado
2. Stormwater Flooding
3. Ice Storm
4. High Straight-Line Wind
5. Heavy Snowstorm



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Chapter 3 Hazard Vulnerability and Risk Assessments 22

- Tornadoes
- Inland Flooding
- Severe Thunderstorms
- Temperature Extremes
- Lake Michigan Coastal Hazards
- Severe Winter Storms
- Drought



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Chapter 3 Hazard Vulnerability and Risk Assessments

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Format for each Hazard

- Describe hazard
- Recent Events
- Vulnerability and Community Impact Assessment
- Future Changes and Conditions
- Multi-Jurisdictional Risk Management

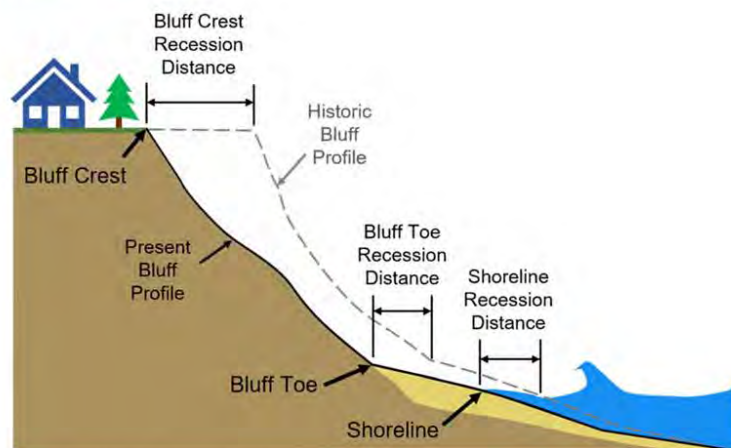


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Lake Michigan Coastal Hazards

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Figure 3.4
Bluff Recession Schematic

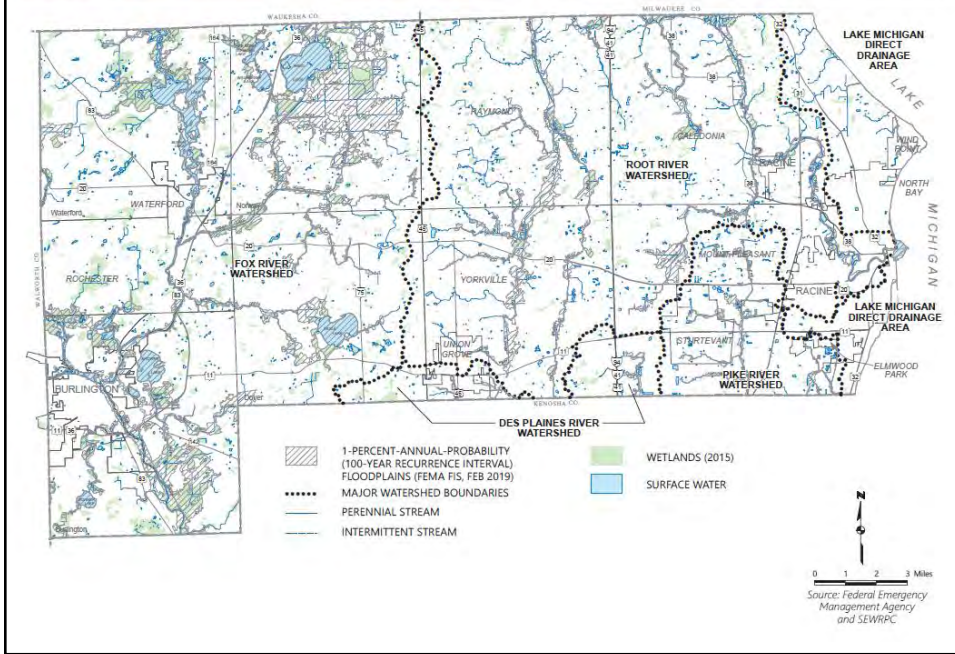


Source: Wisconsin Coastal Management Program and SEWRPC



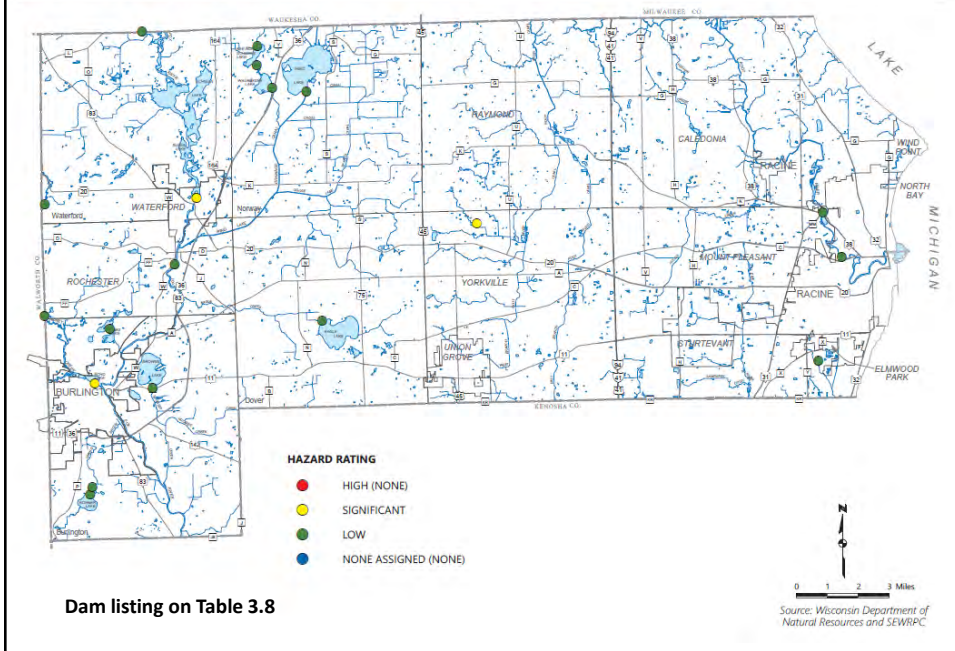
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Map 3.2
Surface Waters, Wetlands, Watersheds, and Floodplains in Racine County



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Map 3.3
Dams Located in Racine County: 2021



Dam listing on Table 3.8

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Map 3.4
Structures Located Within the 100-Year Floodplain: 2022

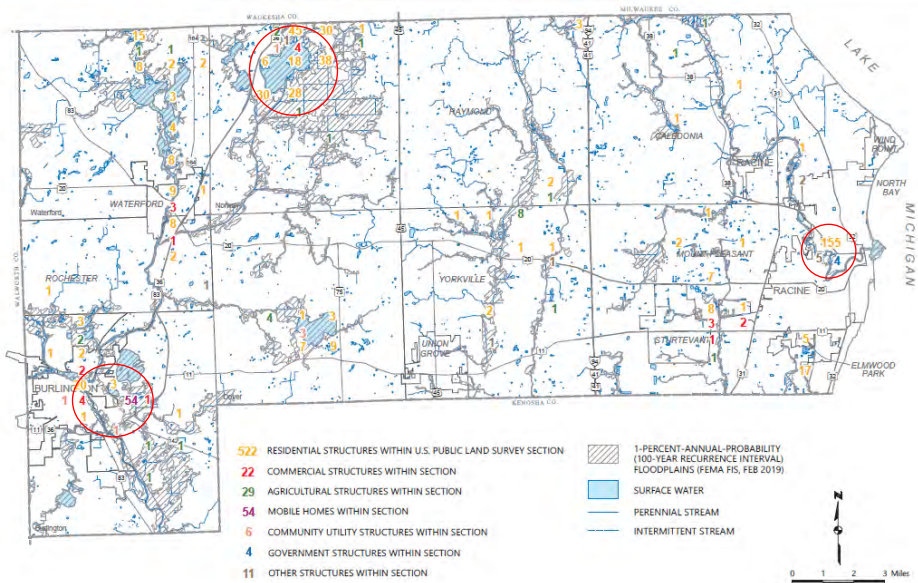
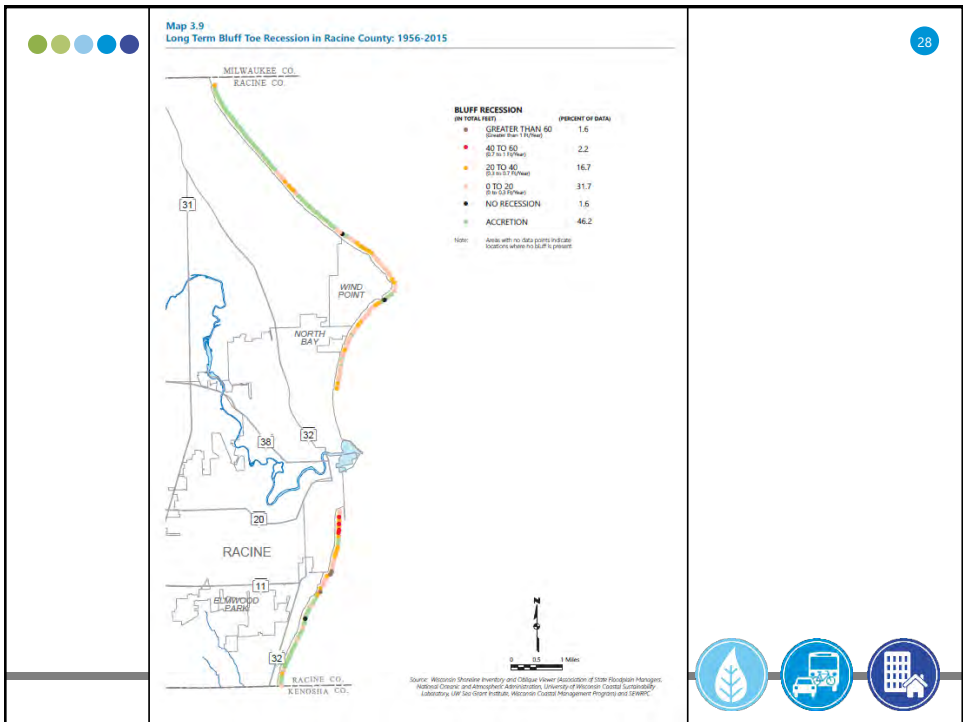


Table 3.10 Estimated Flood Damages \$19.3M

Source: Federal Emergency Management Agency, Racine County, and SEWRPC



Source: Wisconsin State Inventory and Update Viewer (revision of the Floodplain Manager, National Oceanic and Atmospheric Administration, University of Wisconsin - Coastal Community Laboratory, USGS Report Institute, National Coastal Management Program) and SEWRPC.





Chapter 4

Goals and Objectives



Chapter 4 Goals

1. A spatial distribution of the **various land uses** that minimizes hazards.
2. A spatial distribution of the various land uses that **maintains biodiversity** and will result in the protection and wise use of the natural resources of the County.
3. The provision of facilities necessary to maintain a **high quality of fire and police protection and emergency medical services** throughout the County.
4. The development of a **stormwater and floodplain management** system.
5. The identification of high erosion risk **Lake Michigan shoreline** areas and the development of a coastal erosion control program.
6. The identification and development of **programs which complement** County and local emergency operations plans to mitigate hazard risk.





Chapter 5

Hazard Mitigation Strategies



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Chapter 5 Mitigation Strategies

2. Inland Flooding
3. Severe Thunderstorms (high winds, hail, lightening)
4. Tornados
5. Extreme Temperatures (heat, cold)
6. Lake Michigan Coastal Hazards
7. Severe Winter Storms
8. Drought



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Chapter 5 Mitigation Strategies

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- Identified alternative strategies
 - Nonstructural, structural, public information and education
- Reviewed current programs
 - Federal and State, local
- Evaluation of alternatives and identification of mitigation actions
- Identified multi-jurisdictional considerations
- Select and set forth a revised set of priority mitigation measures



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Chapter 5 Table of Note

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Table 5.8 – Cost-Benefit Analysis for Recommended Measures for all hazards

Table 5.8
Cost-Benefit Analysis Summary of Measures Included in the Racine County Hazard Mitigation Plan

Mitigation Measures	Estimated Cost ^a		Costs of Implementation ^b			Direct Benefits				Indirect Benefits ^c	Community/Jurisdictions Affected	
	Capital (thousands of dollars)	Average Annual Operation and Maintenance (thousands of dollars)	Low	Medium	High	Reduced Property Damage	Reduced Injuries	Reduced Mortality	Reduced Property Damage			
Island Flooding (Stormwater, River Flooding, Lake, Dam Failure)												
Ecological and Environmentally Sensitive Area Preservation Element												
Floodplain and wetland zoning ^d	—	—	X	—	—	X	X	X	—	X	5	Racine County, Cities of Burlington and Racine, and Villages of Caledonia, Mt. Pleasant, Rochester, Sturtevant, Union Grove, Waterford, and Wind Point
Environmentally sensitive area and open preservation action ^e	\$4,911.6 ^f	—	—	X	—	X	X	—	—	—	4	Racine County, Cities of Burlington and Racine, and Villages of Caledonia, Elmwood Park, Mt. Pleasant, North Bay, Rochester, Sturtevant, Union Grove, Waterford, and Wind Point
Wetland Restoration of up to 6,800 acres of agricultural land to reduce flood-related agricultural and property damages	—	—	—	X	—	X	X	—	—	—	4	Racine County, City of Burlington, Villages of Caledonia, Mt. Pleasant, Rochester, Sturtevant, Union Grove, and Waterford, and Towns of Burlington, Dover, Norway, Raymond, Waterford, and Yorkville
Floodplain Management Plan Element												
Fox River Watershed												
Construction of dikes and floodwalls in City of Burlington ^g	3,196.11	4.0 ^h	—	X	—	X	X	—	—	—	—	City of Burlington
Structure floodproofing or removal ⁱ	76,314.7 ^j	—	—	X	—	X	X	—	—	—	4	Racine County, City of Burlington, Towns of Burlington, Dover, Norway, and Waterford, and Villages of Rochester and Waterford
Replacement of two 20-foot-wide radial gates and one actuator motor at Waterford	110.6	9.2	—	X	—	X	X	—	—	—	3.5	Racine County and Village of Waterford



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Chapter 5 Flood Mitigation Strategies

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- Preservation of open space and sensitive areas
- Voluntary purchase, demolition, and removal or floodproofing of up to 648 structures
- Channel cleaning, maintenance, or rehabilitation for selected streams
- Stormwater management planning, regulation, and maintenance
- Restoration of prairies and wetlands
- Survey of buildings near flood hazard areas
- FEMA map updating



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Chapter 5 Coastal Strategies

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- Continue to enforce County shoreland regulations related to setbacks
- Review municipal shoreland ordinances to be consistent with WCM guidance
- Re-evaluate current shoreland protection structures every 10 years
- Where feasible, relocate at-risk coastal buildings
- Provide information to property owners for allowable bluff and shoreline management



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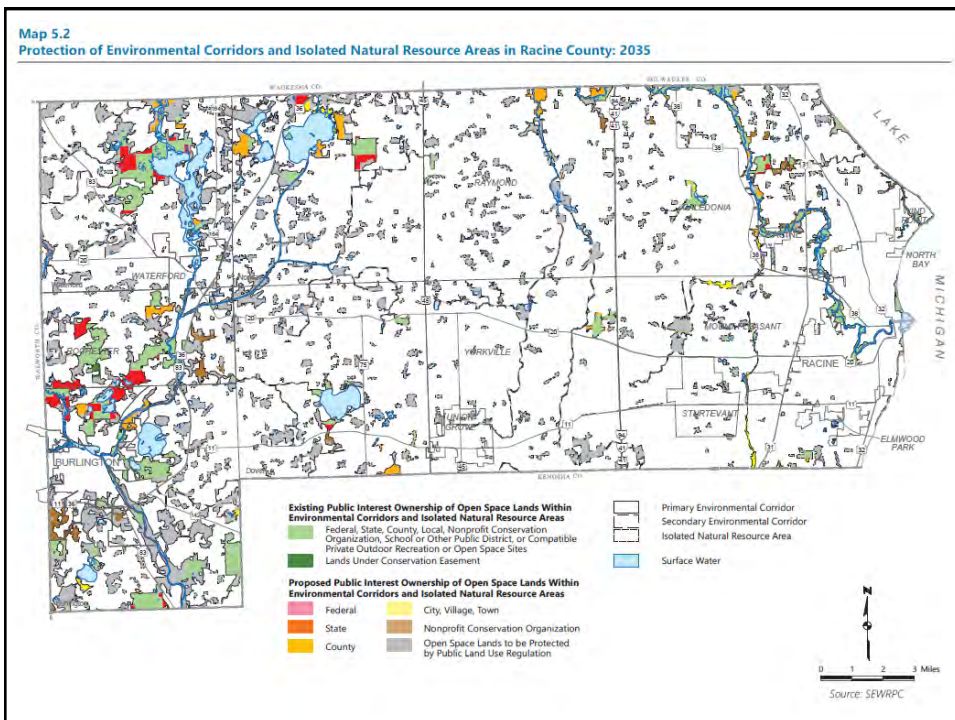
Chapter 5 Weather Related Strategies

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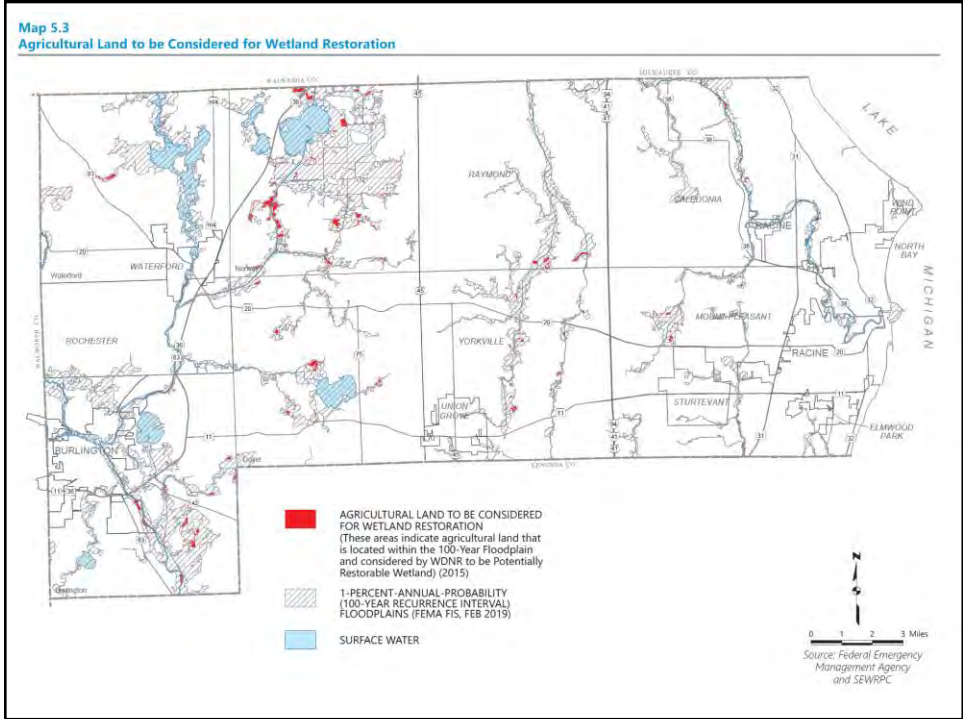
- Maintain early warning systems
 - NOAA Weather Radio, EAS broadcasting, CodeRED, Ready Badger App
- Public information and education
- Identify and advertise shelters (storm shelters, heating/cooling centers)
- Installation of community storm shelters at manufactured home parks
- Review and enforcement of building code requirements
- Continued coordination of local government emergency operations and response plan



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Chapter 6

Plan Adoption, Implementation, Maintenance, and Revision

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Chapter 6 Overview

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- Plan refinement, review, and adoption
- Plan implementation strategies
- Funding sources
- Plan monitoring and reevaluation strategies
 - Annual review
 - Post-disaster review



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Table of Note

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Table 6.1
Racine County Hazard Mitigation Plan Summary and Implementation Strategies

Mitigation Measures	Status	Priority	Implementation Timetable	Designated Management Agency (see notes for abbreviations)
Inland Flooding (Stormwater, Riverine, Inland Lake, Dam Failure)				
Floodplain and Environmentally Sensitive Land Preservation Element				
Floodplain and wetland zoning	Implemented	High	In place and ongoing	RCDPWDS, Municipal Planning Departments and Commissions
Environmentally sensitive area and open preservation action	Partially Implemented	High	Largely in place and ongoing, expand as funding and opportunities become available	RCDPWDS, Municipal Planning Departments and Commissions, Municipal Parks Departments, Municipal Common Councils/Village Boards, WDNR, Wisconsin Coastal Management Program, Seno K/RLT Conservancy
Wetland Restoration of up to 6,800 acres of agricultural land to reduce flood-related agricultural and property damages	Not Implemented	Medium	As funding and opportunities become available	RCDPWDS, Municipal Planning Departments and Commissions, Municipal Parks Departments, Municipal Common Councils/Village Boards, Seno K/RLT Conservancy, WDNR
Floodplain Management Plan Element				
<i>Fox River Watershed</i>				
Structure floodproofing or removal	Not Implemented	High	As funding and opportunities become available	Private Property Owners, RCOEM, RCDPWDS, Wisconsin Emergency Management
Replacement of two 20-foot-wide radial gates and one actuator motor at Waterford Dam	Implemented	---	Implemented	RCDPWDS
Installation of gates at Rochester Dam	Implemented	---	Implemented	RCDPWDS
Channel clean out in Fox River upstream from Waterford Impoundment	Not Implemented	Medium	As needed	Southeastern Wisconsin Fox River Commission, Waterford Waterway Management District, RCDPWDS, WDNR
Land acquisition	Not Implemented	Medium	As funding and opportunities become available	RCDPWDS, Southeastern Wisconsin Fox River Commission, Waterford Waterway Management District, WDNR, Seno K/RLT Conservancy
Maintenance dredging within Waterford Impoundment	Partially Implemented	Medium	As funding and opportunities become available	Private Lake Property Owners, Southeastern Wisconsin Fox River Commission, Waterford Waterway Management District, WDNR
Channel clean out of Wind Lake Drainage Canal	Not Implemented	Medium	As needed	Racine County Drainage Board
Channel clean out and deepening along Muskego Canal	Implemented	---	Implemented	---

Table continued on next page.

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Appendices



Appendices

- A – LPT members and meetings
- B – Emergency Services and Facilities
- C – Critical Community Facilities
- D – Disaster Supply Kit
- E – Potential Funding Programs
- F – County Adoption Resolution



●●●●● Remaining Effort on Plan Update

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- Public Meeting – tonight
- Additional comments received by June 16, 2023
- Review by the WEM – edits as needed
- Review by the FEMA – edits as needed
- Formal adoption by the Racine County Board – covers the Towns
- Formal adoption by the governing bodies of the incorporated municipalities of the County within **1 year**



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●●●●● Project Website

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➤ www.sewrpc.org/HMP

- Draft chapters
- Summary notes from meetings
- Presentations
- Comment screen
- Comments can also be sent to joel.dietl@sewrpc.org



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Thank You

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