

SUSTAINABLE SMALL HARBORS



Tools & Tactics for Sustainable Small Harbors

Michigan Association of Planning
6 October 2023



Michigan Sea Grant helps to foster economic growth and protect Michigan's coastal, Great Lakes resources through research, education and outreach.



MICHIGAN STATE
UNIVERSITY



Background



Photo Credit: Todd Marsee, Michigan Sea Grant

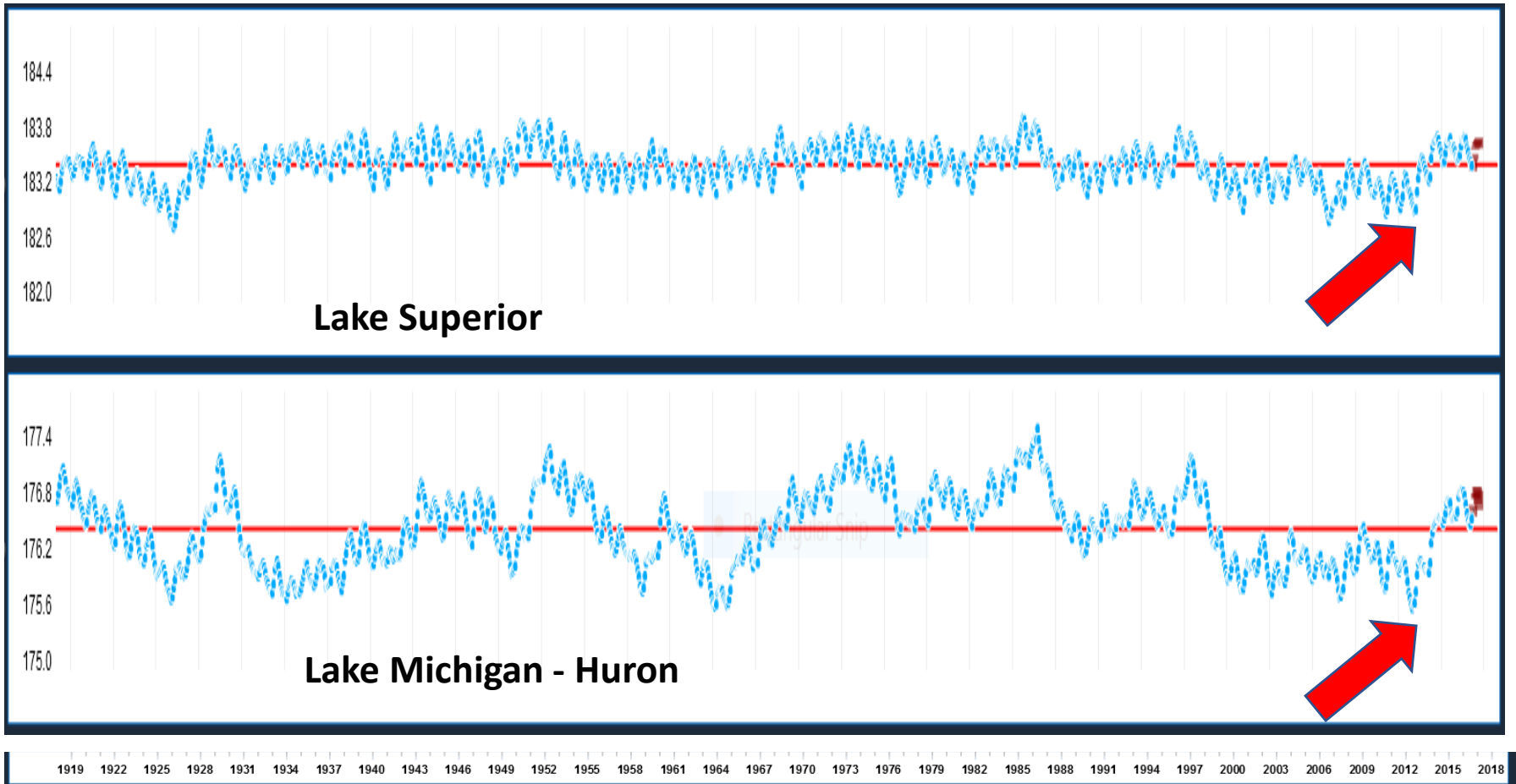
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Driving Factors

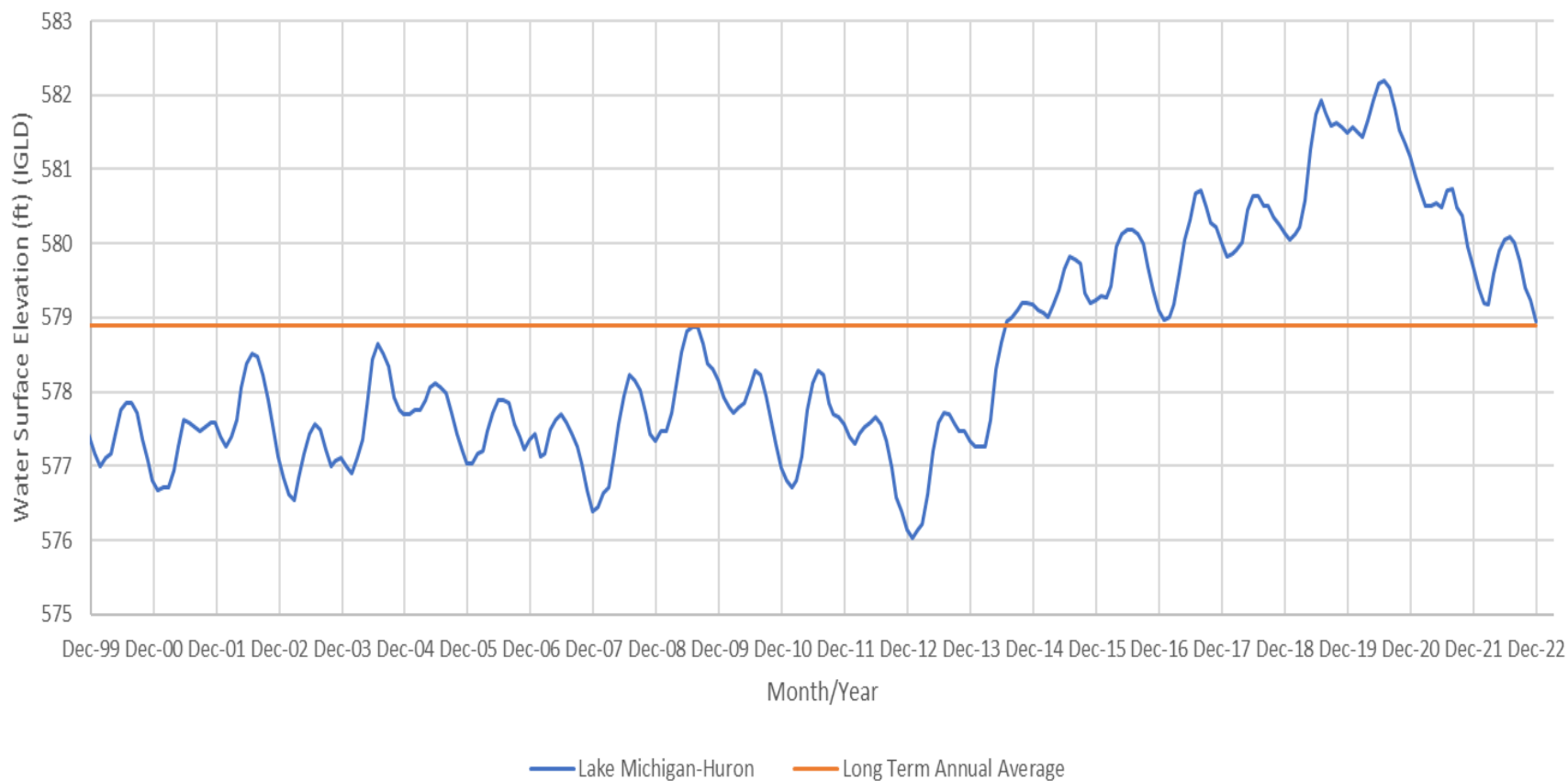
- Climatic and water level extremes threatening waterfronts
- Aging infrastructure
- Deindustrialization of Michigan's coastal economy
- Funding constraints for maintenance & improvements
- Need for new strategic vision at the local level



Great Lakes Water Levels 1919 to Present



Monthly Water Levels for Michigan Huron (2000 to Present)



January 2013 = 576.02 ft (Record Low)

July 2020 = 582.19 ft (near Record High)

October 1986 = 582.35 ft (Record High)

State Goals for Harbor Communities

- Recreational harbors are integrated into community and economic development planning as strategic assets.
- Harbors and waterways are well-maintained, vibrant, and support sustainable recreational and commercial use.
- Finite state resources are being invested in a strategic manner for public access to water amenities.
- Transferrable tools and resources are used to support development of a shared vision that integrates the harbor into the community's future.



Project History

- Michigan Sea Grant Research Project (2014-2017)

What are the barrier to small harbor economic, social, and environmental sustainability and what tools would help small harbor managers create more stability in their communities?

- Development a placemaking strategy and value creation analysis for coastal communities
 - National Charrette Institute (NCI) Process



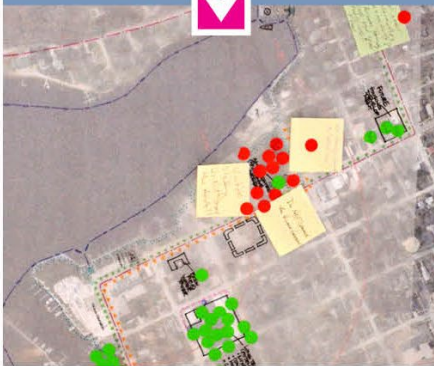
THREE VISITS TO THE COMMUNITY



March 25

INITIAL VISIONING MEETING 1 DAY

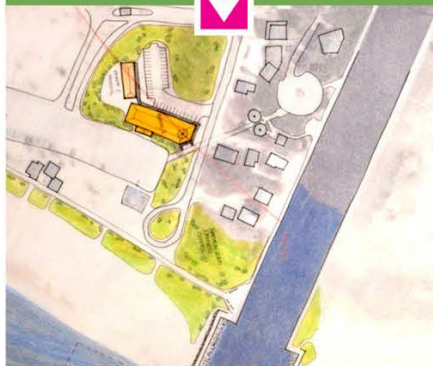
- a. Assets
- b. Weaknesses
- c. Barriers
- d. Connections



April 17-19

DESIGN CHARRETTE 3 DAYS

- a. Public Input Workshop
- b. Open House: Selecting A Preferred Option
- c. Public "Work in Progress" Session



June 8

FINAL PRESENTATION 1 DAY

- Presentation to City/
Village Council
- a. Updated graphics
 - b. Final Report



Iterative process balancing community input and expert design work.

Case-Study Communities

Ontonagon

St. Ignace

Rogers
City

Arcadia

Au Gres

Pentwater

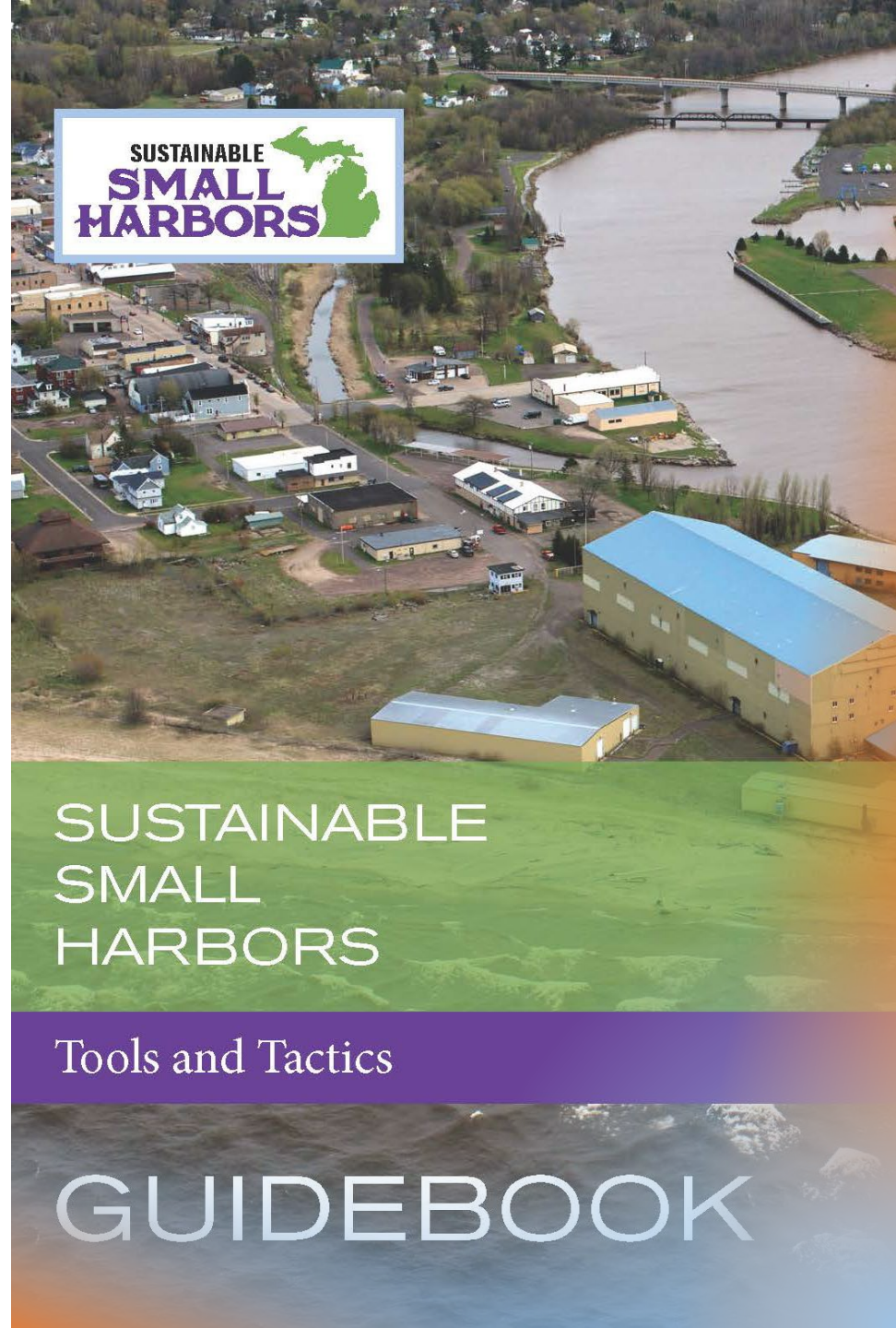
New
Baltimore

St. Joseph

Benton Harbor

Project History

- Michigan Sea Grant Research Project (2014-2017)
 - What are the barrier to small harbor economic, social, and environmental sustainability and what tools would help small harbor managers create more stability in their communities?*
- Development a placemaking strategy and value creation analysis for coastal communities
 - National Charrette Institute (NCI) Process
- Publish and Disseminate a Tools & Tactics Guidebook for small harbors including case studies (V1 – 2017)



Findings and Outcomes

Findings

- Unique Historical Impediments
- Need Supported Visioning Sessions
- Local Champions and Implementation Team
- Plan Alignment (Master, DDA, Parks, Harbor)
- Importance of Partnerships
- Visitor Experience (& Authenticity)
- Value Capture

VISITOR ATTRACTIONS

1

ACCESSIBLE

- Visual and physical public access to harbor, waterfront, parks
- Boat access for fishing, tours, safe harbor for boats small and large
- Harbor kept dredged

2

CONNECTED

- Walking, biking, car, boat, transit
- Public internet
- Linked to downtown
- Available parking

3

DIVERSE

- Working waterfront for commerce, industry, recreation
- Services, rentals, sales
- Physically and economically resilient

4

WELCOMING

- Food, beverage, lodging
- Retail and entertainment
- Safe, clean, well-lit



1

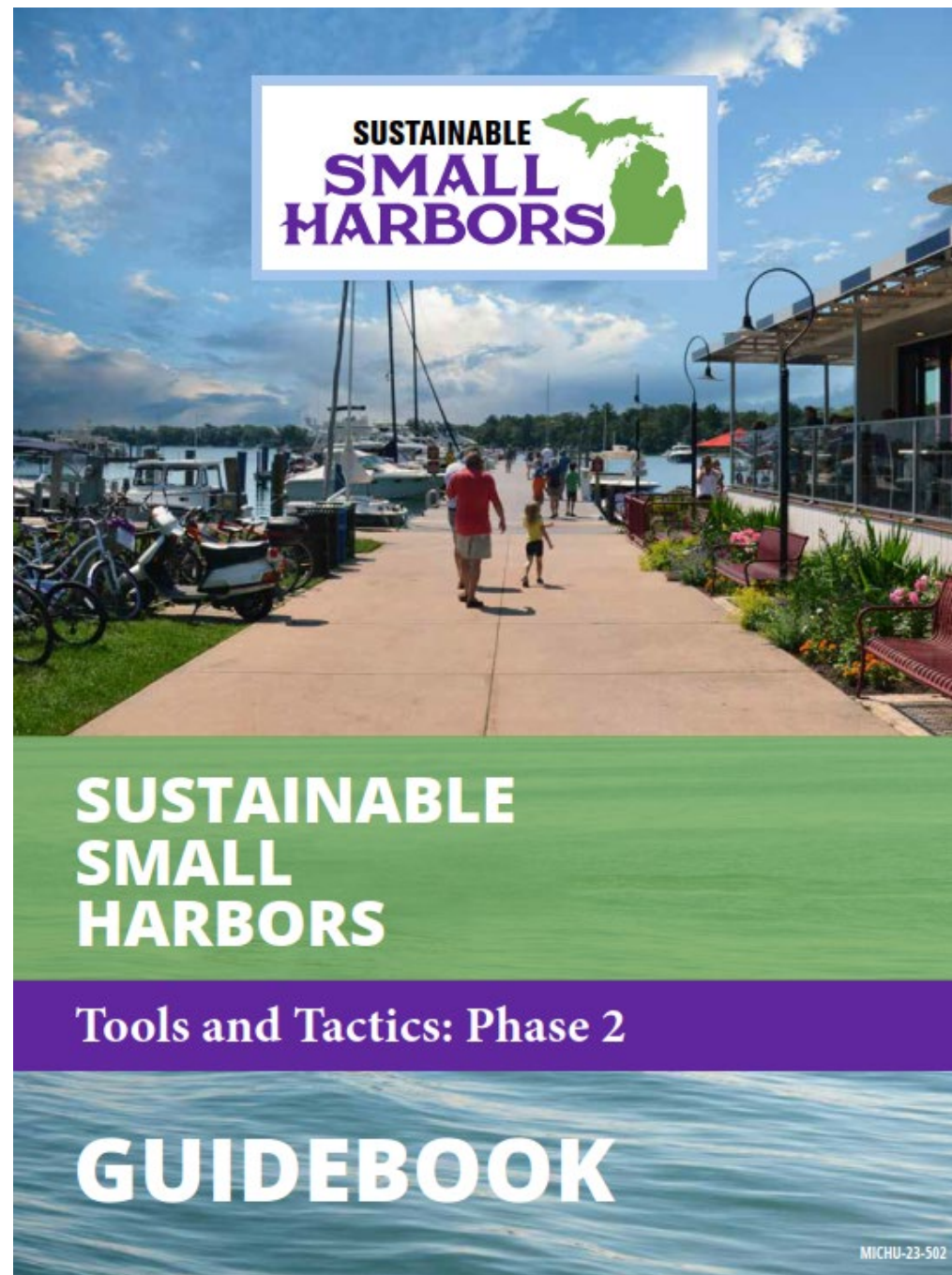
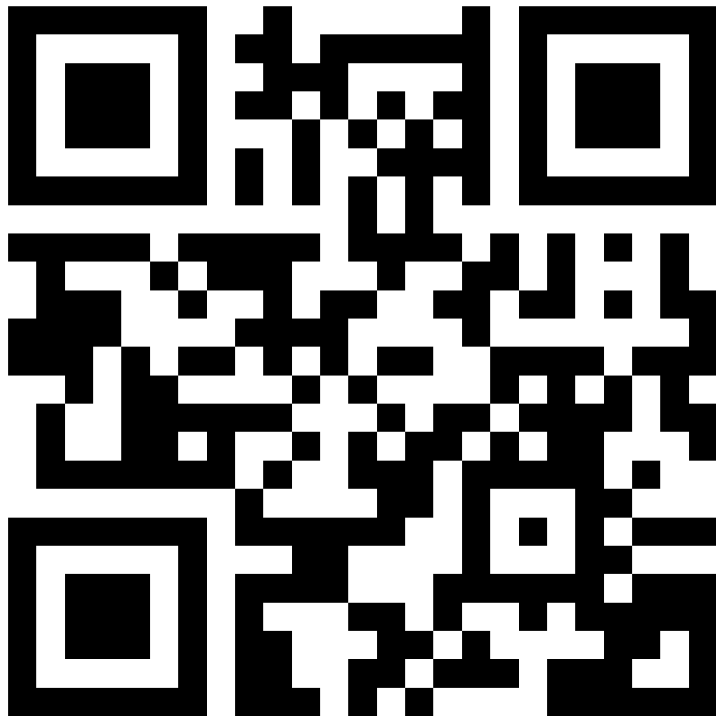
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3

4



Sustainable Small Harbors Guidebook



2023 Revisions

- Incorporating New Sections (& corresponding Tools & Tactics):
 - Engineering with Nature
 - Environmental Justice and Diversity, Equity, & Inclusion
 - Decarbonization, Energy Innovation and Electrification
 - Climate & Resiliency
- New & Revised Case Studies
- Updated Funding Strategies
- Robust Dissemination Strategy
 - Conferences (presentations & exhibiting)
 - Regional Councils of Government
 - Webinars, Listserves, and Articles



TABLE OF CONTENTS

1.0 PROJECT OVERVIEW

- 1.1 Project Purpose and Background
- 1.2 Guidebook Updates and Lessons Learned (pending)
- 1.3 Regional Scope and Context: Fit with other Coastal Efforts
- 1.4 Connecting People to Place – Building Connectedness and Opportunity
- 1.5 Attributes of a Sustainable Harbor

2.0 ENVIRONMENTAL CONSIDERATIONS

- 2.1 Dynamic Water Levels
- 2.2 Dredging in the Great Lakes
- 2.3 Engineering with Nature
 - 2.3.1 Engineering with Nature Case Study
 - 2.3.2 Green Infrastructure Case Study
- 2.4 Climate and Resiliency
 - 2.4.1 Decarbonization
 - 2.4.1 Energy Innovation and Electrification

3.0 SOCIAL CONSIDERATIONS

- 3.1 Community Engagement Process
- 3.2 2017 Community Updates (pending)
- 3.3 Social Sustainability, Environmental Justice and Diversity, Equity and Inclusion Strategies
- 3.4 Twin Cities Sustainable Small Harbor Case Study (pending)

4.0 ECONOMIC CONSIDERATIONS

- 4.1 Small Harbor Economic Sustainability Concepts
- 4.2 Financial Instruments, Programs and Strategies to Support Long Term Sustainability
- 4.3 South Haven Case Study
- 4.4 Buying a Dredge Case Study
- 4.5 Lake Ontario Dredging Case Study

5.0 TOOLS AND TACTICS

- 5.1 Flowchart
- 5.2 References and Tactics
 - 5.2.1 Inventory — Community
 - 5.2.2 Inventory — Waterfront
 - 5.2.3 Visioning/Planning
 - 5.2.4 Value capture
 - 5.2.5 Implementation

Michigan Sustainable Small Harbors Strategic Flowchart

INVENTORY

VISIONING/PLANNING

VALUE CAPTURE

IMPLEMENTATION

HIGHLY RECOMMENDED

- Identify community capacity and possible participants/leaders
- Collect existing data and documents:
 - Economic information
 - Existing tourist information (fliers, magazines, etc.) and wayfinding signage
- Recent planning or improvement grants received
- Community master plan
- Zoning maps
- Capital improvement plan
- Parks and recreation plan
- Regional plan(s)
- Land use data

- Collect marina statistics (boats berthed or launched, slip demand, etc.):
 - Compile three years of harbor financial summaries
 - Compile three years of harbor logs
- Complete the Clean Marina self-assessment checklist
- Determine water level variances
- Assess local sediment dynamics

- Conduct a facilitated community visioning meeting
- Initiate a Michigan Economic Development Corporation (MEDC) community development program
- Watch and Read resources from EGLE – Michigan's Resilient Coast Program
- Complete Land Policy Institute (LPI) Placemaking Assessment Tool
- Engage in local, county, and regional planning efforts

- Complete expense vs. income balance sheet
- Identify harbor marketing opportunities
- Evaluate value capture options:
 - Marine investment fund
 - Water resource tax increment financing (TIF)
 - Fee structures for public facilities
 - Public/private partnerships
 - Crowdfunding Michigan - Invest on Main Street

- Form implementation team and identify task leaders
- Develop or update existing plans with focus on the waterfront
 - Community master plan
 - Five-year recreation plan
 - Waterfront operations and maintenance plan
 - Zoning and ordinance
 - Capital improvement plan
 - Emergency response plan

RECOMMENDED

- Collect existing data and documents:
 - Organizational/leadership charts of the community
 - Employment and related census data
 - Aerial photos, maps, and GIS
 - User feedback and surveys
 - Great Lakes Climate and Demographic Atlas
- FEMA Resilience Analysis and Planning Tool (RAPT)

- Collect existing data and documents:
 - USACE jurisdiction and federal dredging
 - USACE oblique waterfront photos
- Visit the USACE Great Lakes Dredging Team website
- Complete *Nature-Based Solutions for Coastal Hazards – the Basics* training module
- Track *Great Lakes Region: Quarterly Climate Impacts and Outlook* reports
- Read *Clean Marina Program Dredging Best Practices*
- Read *Clean Marina Program Infrastructure Best Practices*

- Determine your community's waterfront and downtown Walk Score
- Review *Michigan Coastal Community Working Waterfronts* resources
- Review *Sustainable Working Waterfronts Toolkit*
- Review *Smart Growth for Coastal and Waterfront Communities* report
- Prioritize natural solutions
- Conduct a National Charrette Institute (NCI) Charrette
- Review American Planning Association - *Michigan Chapter Master Plans - Resilient Waterfronts*
- Read *Michigan's Statewide Comprehensive Outdoor Recreation Plan*
- Explore Michigan Catalyst Communities (MCC) Resources and Program
- Review *Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice, and Equitable Development*

- Review grant funding opportunities and requirements
- Review MIplace Resources section
- Review *Sustainable Working Waterfronts Toolkit* — Financing and Economics sections
- Review Additional Resources in Section 5.2.4 Value Capture

- Apply to applicable grant programs
- Pursue Redevelopment Ready Communities certification
- Pursue Clean Marina certification
- Create a dynamic water level plan
- Engage with the Michigan Green Communities network and consider completing the Green Communities Challenge
- Review resources and contacts at Michigan EGLE Shoreline Protection / Michigan Natural Shoreline Partnership
- Consider engaging with The National Park Service – Rivers, Trails, and Conservation Assistance program (NPS-RTCA)

ADDITIONAL RESOURCES

- Review Additional Resources in Section 5.2.1 Inventory - Community

- Review Additional Resources in Section 5.2.2 Inventory - Waterfront

- Review Additional Resources in Section 5.2.3 Visioning/Planning

- Review Additional Resources in Section 5.2.5 Implementation

4.2.1 INVENTORY COMMUNITY



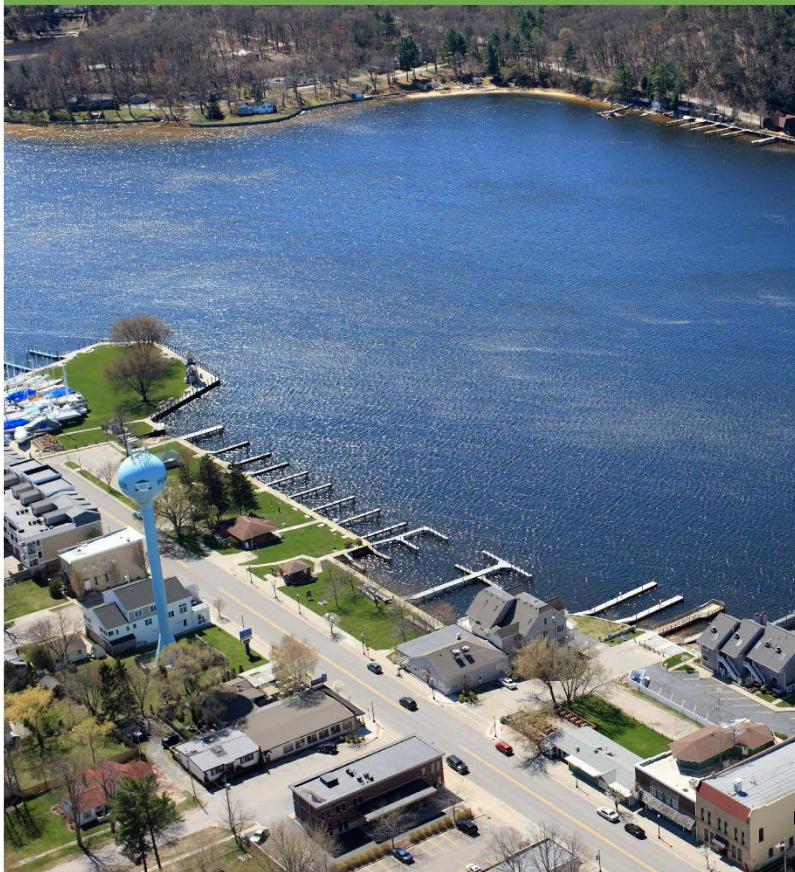
Highly Recommended

- Identify community capacity and possible participants/leaders
- Collect existing data and documents:
 - Economic information
 - Existing tourist information (fliers, magazines, etc.) and wayfinding signage
 - Recent planning or improvement grants received
 - Community master plan
 - Zoning maps
 - Capital improvement plan
 - Parks and recreation plan
 - Regional plan(s)
 - Land use data

Recommended

- Collect additional data and documents
 - Organizational/Leadership charts
 - Employment and Census data
 - Aerial photos, maps, GIS data
 - User surveys and feedback
 - Great Lakes Climate and Demographic Atlas
 - FEMA Resilience Analysis Planning Tool

4.2.2 INVENTORY WATERFRONT



Highly Recommended

- Collect marina statistics (boats berthed or launched, slip demand, etc.):
- Compile three years of harbor financial summaries
- Compile three years of harbor logs
- Complete the Clean Marina self-assessment checklist
- Determine water level variances
- Assess local sediment dynamics

Recommended

- Collect existing data and documents:
 - USACE jurisdiction and federal dredging
 - USACE oblique waterfront photos
 - Visit the USACE Great Lakes Dredging
 - Team website
- Complete Nature-Based Solutions for Coastal Hazards – the Basics training module
- Track Great Lakes Region: Quarterly Climate Impacts and Outlook reports
- Read Clean Marina Program Dredging Best Practices
- Read Clean Marina Program Infrastructure Best Practices

4.2.3 VISIONING/ PLANNING



Highly Recommended

- Conduct a Facilitated Community Visioning Meeting
- Initiate a MEDC community development program
- Complete the Land Policy Institute Placemaking Assessment Tool
- Watch and Read resources from Michigan's Resilient Coast Program (EGLE)
- Engage in Local, County, and Regional Planning Efforts

Recommended

- Determine Community Walk Score
- Review *Michigan Coastal Community Working Waterfronts Resources*
- Review *Sustainable Working Waterfronts Toolkit*
- Review *Smart Growth for Coastal and Waterfront Communities* report
- Prioritize Resilient Solutions & Engineering with Nature
- Conduct a National Charette Institute (NCI) charette
- Review American Planning Association *Michigan Chapter Master Plans - Resilient Waterfronts*
- Review *Michigan's Statewide Comprehensive Outdoor Recreation Plan*
- Explore *Michigan Catalyst Communities (MCC)* Resources and Program
- Review *Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth Environmental Justice, and Equitable Development*

4.2.4 VALUE CAPTURE

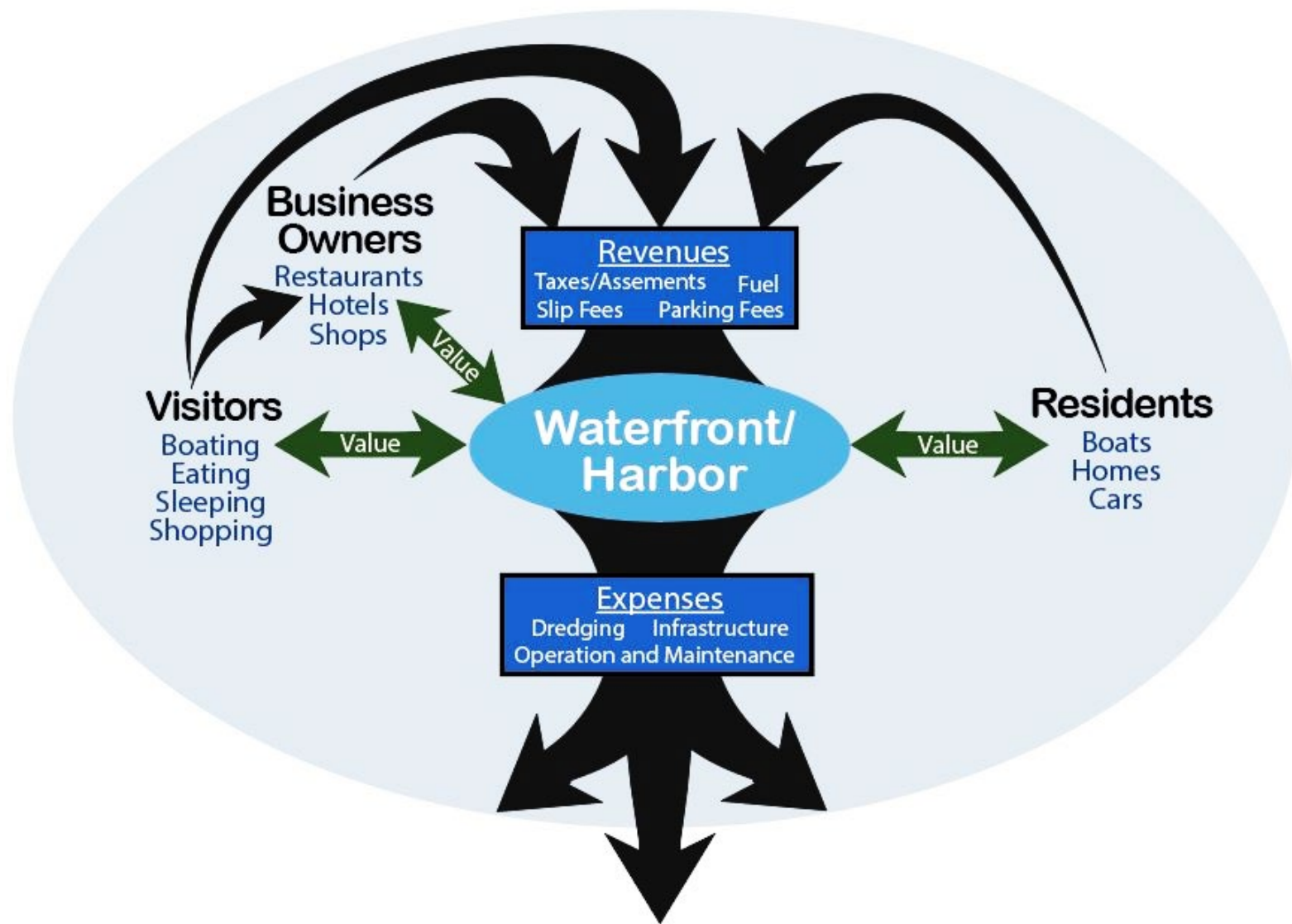


Highly Recommended

- Expense vs. Income Balance Sheet
- Marketing Strategy
- Evaluate Funding Sources:
 - Marine investment fund
 - Water resource tax increment financing
 - Fee structures for public facilities
 - Public/private partnerships
 - Crowdfunding Michigan – Invest on Main Street
- Grant Opportunities and Requirements

Recommended

- Review MIPlace Resources
- Review *Sustainable Working Waterfronts Toolkit*



4.2.5 IMPLEMENTATION



Highly Recommended

- Form Implementation Team and Identify Task Leaders
- Develop / update plans with a focus on the waterfront:
 - Community master plan
 - 5-year recreation plan
 - Waterfront operations / maintenance plan
 - Zoning and ordinance
 - Capital improvement plan
 - Emergency response plan

Recommended

- Apply for related grant programs
- Redevelopment Ready Certification
- Clean Marina Certification
- Dynamic Water Level Evaluation
- Engage with Michigan Green Communities network/ challenge
- Review resources and contacts at Michigan EGLE Natural Shoreline Partnership
- Consider engaging with The National Park Service – Rivers, Trails, and Conservation Assistance program (NPS-RTCA)

Rogers City – Case Study

- MEDC Redevelopment Readiness Community – certification (2021)
- MEDC Main Street program – Select Level (2021)
- Dedicated City Manager and Harbormaster positions
- Hydraulic Sling Load Trailer
- Increased from 8 to 60 boats for winter storage
- Increased Boater Amenities
- Marina Redesign and Plans
- Huron Pines Collaboration



Au Gres – Case Study

- Riverside Park Acquired
 - Refurbished Existing Infrastructure
 - Fish Cleaning Station
 - Splash Pad and Playscape
 - Kayak Launch
 - Barrier-free Fishing Pier
- Campground
 - Increased from 4 to 35 seasonal campers
 - Added 6 camping cabins
 - Need and plans for expansion
- Lake Huron Forever Community
 - Huron Pines Collaboration
 - First Community to take the pledge
 - Rain Garden and 2 Bioswales built

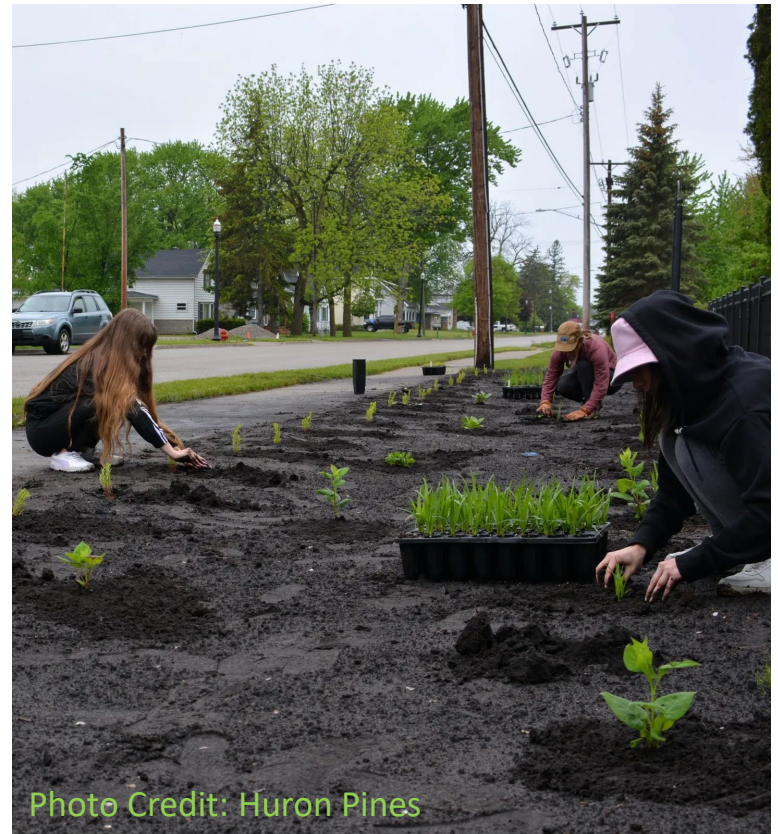


Photo Credit: Huron Pines

Project Website

Presentations, Project Resources, and Social Media
sustainablesmallharbors.org

Sustainable Small Harbors



The Visioning Process



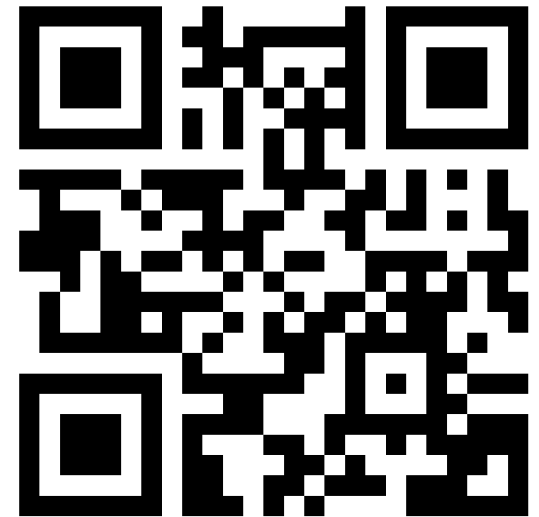
Tools and Tactics Guidebook



Communities



Contacts and Partners

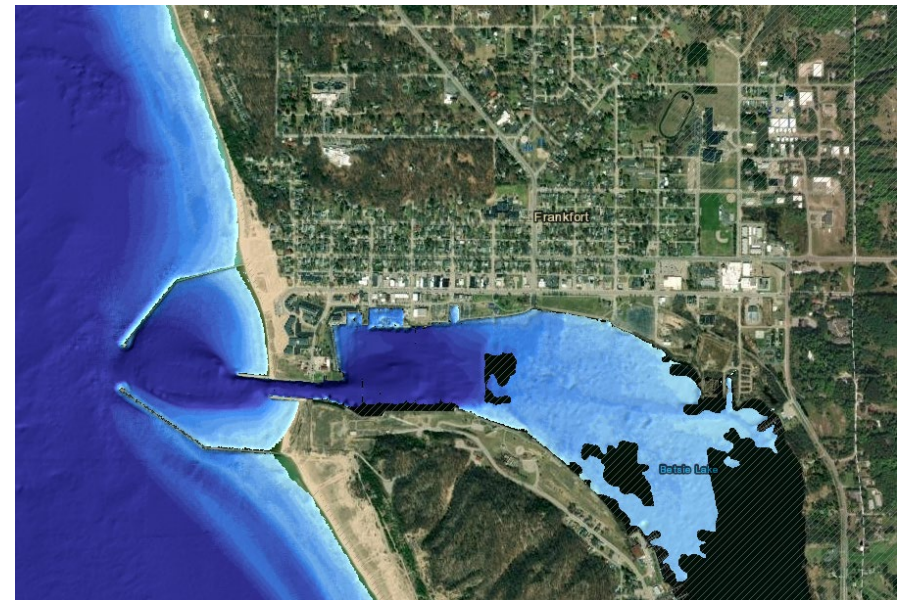
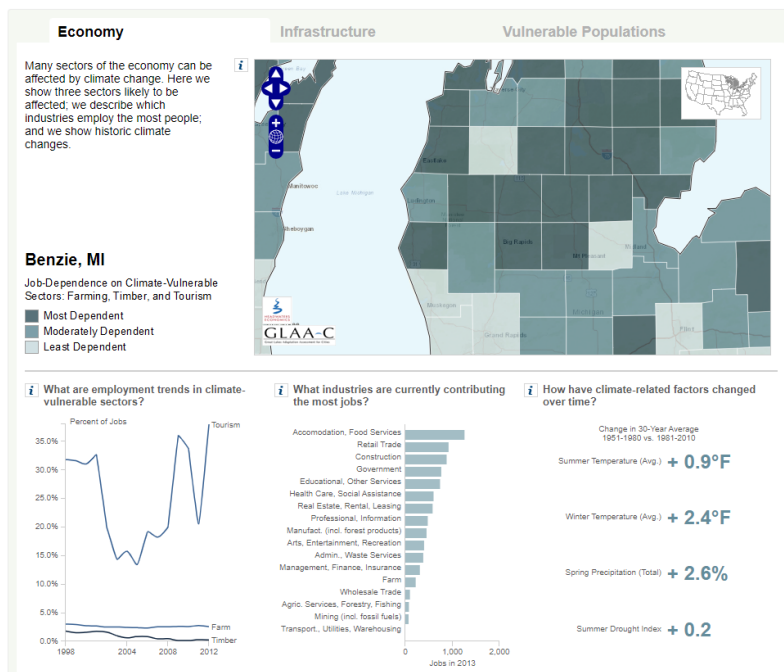


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Tools and Resources

Inventory

- Great Lakes Climate and Demographic Atlas
 - <https://graham.umich.edu/glaac/great-lakes-atlas>
- Lake Level Viewer
 - <https://coast.noaa.gov/llv/#/lake/michigan>



Tools and Resources

Inventory

- Michigan's Great Lakes Shorelines Throughout Time
 - Shoreline



Figure 2: Sediment motion in Great Lakes.

Tools and Resources

Visioning/Planning

- Placemaking Assessment Tool
 - [Land Policy Institute](#)
- Regional Collaboration
 - [Michigan Association of Regions Home \(miregions.com\)](#)
 - <https://www.networksnorthwest.org/community/recreation/>
- Michigan Natural Shorelines (EGLE)
 - <https://www.michigan.gov/egle/about/organization/water-resources/inland-lakes-and-streams/shoreline-protection>

The Michigan Association of Regions (MAR) is committed to the advancement and advocacy of Michigan's planning regions as a means to support sustainable, collaborative communities and a strong state.



Tools and Resources

Value Capture

- CrowdFunding Michigan
 - <https://www.crowdfundingmi.com/get-funded/>
- Marina Life Manager
 - <https://marinalifemanager.com/>
- SSH Funding Table
 - [Funding Opportunities](#)



Public Space & Community Projects: Crowdfunding & Crowdgranting

The Public Spaces Community Places (PSCP) program is a partnership between the League, MEDC, and crowdfunding platform **Patronicity**. The goal of the program is to fund public space projects like plazas, greenspace, access to public amenities, farmers markets, and other place-based initiatives. Qualifying communities can raise local money toward the project and get a matching grant from MEDC up to \$50,000. In just over two years, PSCP has helped fund more than 100 Michigan projects and raised more than \$3 million. Download a copy of the [application guide here](#) and learn more about the opportunity on **Patronicity's website**.

Case Study: Ironwood Art Park



A lot had been sitting vacant for years in downtown Ironwood. Through a civic engagement process, residents identified a need for a public gathering space and a desire for more local art, so it didn't take long for the city to connect the dots. Ironwood convened a leadership committee composed of municipal officials, the Downtown Development Authority, an arts nonprofit, and local artists to create a plan and funding strategy for the future art park. The committee worked with Patronicity to launch a PSCP crowdgranting campaign and raised more than \$15,000 locally and received a match from MEDC and MSHDA. Find out how they did it [here](#).



Tools and Resources

Implementation

- MEDC Community Building Programs
 - <https://www.miplace.org/>
- Michigan Green Communities
 - <https://migreencommunities.com/>



Join the green communities network



Take the Green Communities Challenge!



Learn about Federal & State Funding

TECHNICAL ASSISTANCE



Michigan Main Street

Michigan Main Street (MMS) assists communities interested in revitalizing and preserving their traditional commercial district.



Redevelopment Ready Communities

The Redevelopment Ready Communities® (RRC) program is available to communities across the state. It's a voluntary, no-cost certification program designed to promote effective redevelopment strategies through a set of best practices.



Resiliency

Many disasters, such as a pandemic, are disasters that ignore political boundaries and regional collaborative approaches are necessary. Yet the changes needed to move toward recovery happen fastest at the local level. This section explores strategies and ideas for recovery from disasters.



Developer Toolkit

This toolkit provides resources and awareness for individuals wanting to step foot into the real estate world and has been built to ensure there is equal access to MEDC community development programs and services.

SUSTAINABLE SMALL HARBORS



Q&A