

An aerial photograph of a small harbor area. A river flows through the center, with a bridge crossing it in the upper right. On the left bank, there are several buildings, including a large yellow one with a blue roof in the foreground. A parking lot with many cars is visible. On the right bank, there is a marina with several boats docked. The background shows a residential area with houses and trees.

**SUSTAINABLE
SMALL
HARBORS**



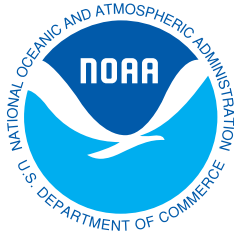
SUSTAINABLE SMALL HARBORS

Tools and Tactics

GUIDEBOOK

MICHU-17-502 Version 1

SUSTAINABLE SMALL HARBORS



MICHIGAN STATE
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SUSTAINABLE SMALL HARBORS **GUIDEBOOK**

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1.0 PROJECT OVERVIEW



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1.1 PROJECT PURPOSE AND BACKGROUND

NEED FOR THE PROJECT

In the original phase of the Sustainable Small Harbors project, conducted 2014-2017, the goal was to develop long-term, sustainable strategies that would enable Michigan's Great Lakes coastal communities to maximize the benefits of their harbor facilities in the face of challenges such as extreme water level variation and uncertainty surrounding future state and federal support for harbor maintenance. More specifically, this project was concerned with the sustainability of Michigan's small, shallower, primarily recreational harbors, as opposed to deeper, cargo-handling ports. While the historically low water levels of the 2000-2013 period initially motivated this project, its scope addresses other potential future scenarios, such as higher-than-normal water levels, increased storm volatility, flooding, erosion, and other disruptive, climate-related threats to small harbor viability.

Dramatic water level fluctuations — spanning a range of up to six feet on Lake Michigan and Lake Huron in the last three decades alone — have severely challenged recreational boating infrastructure in Michigan's harbor communities. Additionally, diminished federal funding for non-commercial, recreational harbors has further complicated harbor maintenance programs for coastal communities in Michigan and the rest of the Great Lakes. With direct and indirect boater spending almost entirely dependent upon their harbors' navigability, Michigan's coastal communities rely heavily on adequate dredging in low-water periods and strong, resilient coastal protection during high-water periods. Federal funding for dredging projects has grown scarce in recent years, leaving communities with few alternatives for keeping their harbors open for boating traffic. Without sufficient

harbor upkeep, communities are faced with declining revenues and suffering economies.

PROJECT RESPONSE

The *Michigan Sustainable Small Harbors Strategic Flowchart* describes a process for communities working to achieve a more sustainable future. The flowchart consists of four basic elements — Inventory, Visioning/Planning, Value Capture, and Implementation — that can be approached in a nearly sequential fashion. Each of the four elements has three levels: Highly Recommended, Recommended, and Additional Resources. Four coastal communities in Michigan went through the visioning process using a conceptual version of the flowchart, and their input helped the project team develop a final version of the recommendations. The Highly Recommended level lists actions that are essential for a community

working to create a sustainability plan. The Recommended level includes resources the project team and case study communities identified as being helpful. The last level, Additional Resources, contains resources that a community should consider reading or processes they might want to undertake depending on community capacity.

Completion of the flowchart will not make a community “sustainable,” but it does establish a long-term plan toward sustainability and prepares communities to apply for grant funding to implement the plan.

A community should start by designating a person to guide the community through the entire process (process manager) and coordinate engagement of the right people at the right time. Depending on the community, that person could be the mayor, manager, planner, or a key citizen appointee (assuming they have the authority or influence necessary to elicit participation). This role can be shared between two or three individuals — such was the case in two of the case study communities — but a single point of contact is preferred. Once the process manager or process management team has been identified, they should begin guiding the community through the flowchart starting with the Inventory element. Overall, completion of the flowchart is likely a 6- to 12-month process depending on community capacity and level of engagement in the individual elements.

The outcomes of this project are designed to have particular value for the ongoing maintenance and viability of small public harbors. In 2015, a five-year recreation master plan (detailing capital improvements, dredging, harbor logs, financial summaries, etc.) became a necessary component for public harbors applying for Natural Resources Trust Fund grants from the Michigan Department of Natural Resources (MDNR) Waterways Program.

Through this process, the project team suggests that communities gather documents that are also required to submit a MDNR Waterways Program grant and to develop a five-year recreation master plan.

1.2 CONNECTING PEOPLE TO PLACE – BUILDING CONNECTEDNESS AND OPPORTUNITY

Definition of Placemaking

Placemaking is the process of creating quality places where people want to live, work, play, shop, learn, and visit.

Placemaking is a simple concept — people choose to live in walkable, mixed-use places that offer the amenities, resources, and social and professional networks and opportunities to support thriving lifestyles.

Young and creative people today are the most mobile of any generation, ever. Many will move to another city without a job, and then find or create a job after they've moved. Quality places are essential to attracting and retaining talented workers, and where they concentrate, jobs are also plentiful. ***Place matters and quality places matter most of all!***

Source: The Land Policy Institute (LPI) at Michigan State University's *Placemaking as an Economic Development Tool Guidebook*.

At its core, sustainability is about community and a sense of place. People need to feel connected to their community and see opportunities for an economically, socially, and environmentally sustainable future. Communities with high-quality “places” provide opportunities for individuals and families to live, work, play, and learn. The places need to include diverse housing, transportation, recreation, and educational enrichment offerings.



Sense of Place

“Sense of place” is a term that reflects the emotion or perception felt by a person when visiting a certain space. It is our relationship with a place. It embodies our experiences, activities, memories of the past, and perhaps hopes for the future. The physical form of a place, its function, and what happens within it all support this relationship. A location with a strong sense of place exhibits a unique identity and character of its own that both residents and visitors can identify with and appreciate. A strong sense of place engenders affection and commitment from local residents, while serving as a magnet that attracts visitors and new residents.

For more information on placemaking, see Section 3.3 “Financial instruments, programs, and strategies to support long-term sustainability.”

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INTERCONNECTEDNESS OF PLACEMAKING, ZONING, AND GOVERNANCE

Communities — large and small — that provide a range of amenities are better positioned for economic growth. For an illustration of the relationship between business, talent, and place, see Figure 1: Business-Talent-Place Triangle. This important cycle does not develop quickly or by accident. High-quality places are formed through numerous community



Figure 1: Business-Talent-Place Triangle. Source: Content from the Michigan Sense of Place Council. Figure by the Land Policy Institute (LPI) at Michigan State University, 2014

and governmental decisions and are most often the result of public-private partnerships. For more information, see the Michigan State University Land Policy Institute report: *Placemaking as an Economic Development Tool* (landpolicy.msu.edu/resources/pmedtguidebook). The public sector needs to design, build, and maintain infrastructure, including waterfront access, community recreation centers, and attractive and safe downtowns and parks. The private sector needs to create spaces for social interactions, shopping, and economic opportunity.

PLANNING

Placemaking starts with community visioning (see Section 2 “Case Studies” for examples) where local stakeholders identify and leverage local assets. Once those elements are clearly articulated, they need to be integrated into local and regional plans. In many communities, elected officials may be the primary channel for implementing a community vision. When visions are developed with public participation, there is stronger trust and transparency within a community. Having a clear vision for the waterfront may simultaneously protect important aspects of the waterfront while enabling desired forms of development to stimulate economic activity.

For example, in a community where form-based code is established (e.g., building requirements for height and view lines), a potential developer knows the requirement and can move more efficiently than if faced with a lengthy review process. Including form-based code elements in local zoning regulations can help developers focus on conformity with the community vision and not strictly on “zoned use.” For example, Marquette, MI, uses form-based code to protect its historic downtown while also developing the waterfront. Additional opportunities for a community to implement the vision include adoption of goals in a recreation plan, capital improvements plan, and downtown development authority plan.

GREEN INFRASTRUCTURE

The use of green infrastructure presents another unique set of placemaking opportunities that can be leveraged for economic, social, and environmental gain. Green infrastructure installations create natural areas that can provide social and environmental value, and installations near waterfront spaces can also be major economic drivers. By improving visual and physical access to natural systems, in addition to drawing attention to working waterfront elements, a community can double the value of the space.



What is Green Infrastructure?

“Green infrastructure uses vegetation, soils, and natural processes to manage water and create healthier urban environments. Green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water.”

Source: United States Environmental Protection Agency

1.3 REGIONAL SCOPE AND CONTEXT: FIT WITH OTHER COASTAL EFFORTS

The Sustainable Small Harbors project has been unique in its focus on public harbors as assets to Michigan's coastal communities. Several related and complementary efforts to improve coastal resilience are also in progress. Some of these are described below.

SUMMARY OF SELECTED INITIATIVES AND PROGRAMS

Planning for Resilient Communities Project (i.e., Resilient Michigan, www.resilientmichigan.org): This planning assistance program is led by Land Information Access Association (LIAA, www.liaa.org) in partnership with Michigan Municipal League, Michigan Townships Association, Michigan Chapter of the American Planning Association, and University of Michigan Taubman College of Architecture and Urban Planning. The project supports community planning efforts “that lead to the adoption of significant revisions to existing master plans to promote community resilience in the face of rapid economic changes and increasing climate variability.” Initial case study communities include: Monroe, East Jordan, Ludington, Grand Haven, St. Joseph, Holland, and St. Clair Shores/Macomb County. Project funding was provided through the Kresge Foundation, Americana Foundation, Margaret A. Cargill Foundation, Michigan Coastal Zone Management Program, and University of Michigan Water Center.

Master Planning for Sustainability and Resiliency Grant Competition: Through a 2015 Michigan Coastal Zone Management Program grant, the Michigan Association of Planning (MAP, www.planningmi.org) conducted workshops with coastal communities to help incorporate coastal resources

into master planning. MAP will provide direct financial assistance in the form of cost-share grants to government entities (e.g., municipalities, counties, regions, and tribal councils, as well as partnerships or collaborations among multiple municipalities) to prepare master plans, updates, plan elements, or subarea plans that integrate best practices and policies for improving community resiliency. Financial assistance for this project is provided, in part, by the Michigan Coastal Zone Management Program, Office of the Great Lakes, Department of Environmental Quality, under the National Coastal Zone Management Program, through a grant from the National Oceanic and Atmospheric Administration. For more information, see: www.planningmi.org/deq2016.asp

Increasing Resilience at Harbors and Marinas: Michigan Sea Grant led this project in 2014 with support from the Great Lakes Integrated Assessments and Sciences Center to assist marina and harbor operators in sector-specific problem identification, decision-making, and planning related to climate change adaptation. Resources include identification of harbor-specific climate risks and best practices for infrastructure, dredging, planning, and financing. Read more about the project at: ow.ly/o91D30b9zbg

RELEVANT STATE PROGRAMS

MDNR Waterways Grant Program: As of April 2015, harbor communities applying for public funding through the Waterways Grant Program must specifically address their harbor in their five-year recreation plan. The recreation plans are reviewed by MDNR Michigan Natural Resources Trust Fund staff. See: ow.ly/3j9D30b9zjH

MIPlace (miplace.org): This is a state-led initiative to assist communities with developing their “sense of place” — the qualities of a given community that inspire people to want to live, work, and play there. MIplace and Michigan State University have released the *Placemaking as an Economic Development Tool* that addresses housing, transportation, historic preservation, downtown, and green space components, as well as efforts to encourage business development.

Michigan Coastal Zone Management Program: This program from the Michigan Department of Environmental Quality was established in 1978 in partnership with the National Oceanic and Atmospheric Administration (NOAA). The program focuses on three central goals: 1) Improving the administration of existing state shoreline statutes (e.g., Shorelands Act, Submerged Land Act, Sand Dunes Act, and Wetlands Act); 2) Providing substantial technical and financial assistance to local partners for creative coastal projects; and 3) Improving governmental coordination to reduce delays, duplication, and conflicts in coastal management decision-making. See: ow.ly/zCTP30b9zqs

Redevelopment Ready Communities (www.miplace.org/communities/rrc): The Michigan Economic Development Corporation (MEDC) administers this voluntary, no-cost certification program promoting effective redevelopment strategies through a set of best practices. Waterfront best practices and a toolkit for waterfront communities are provided.

1.4 DREDGING IN THE GREAT LAKES

SEDIMENT TRANSPORT

The Great Lakes' dynamic coastal environment makes dredging a necessity for harbor access. Nearshore sediment transport, also known as littoral transport, is the movement of sand in the nearshore zone by waves, currents, and other processes. The sediment can be transported both parallel (longshore) and perpendicular (cross-shore) to the shoreline. This mechanism is responsible for the formation of evolving coastline features such as beaches, dunes, bars, accretion fillets, and longshore spits. When considering the nearshore system, sediment can be either lost (erosion) or gained (accretion) depending on the wind, waves, currents, and human interaction (Figure 1 – Pentwater). Sources of sediment in the nearshore zone include sediment moving from

adjacent longshore areas, onshore from smaller beach-generating waves, or from backshore areas such as dunes. Sediment can be lost from the nearshore zone from larger storm waves (moving sediment offshore) or through dredging. Typically, long-term erosion of a coastal zone occurs in response to rising water levels, storm waves, and instability in slope soils caused by rising groundwater levels and surface water runoff. Resistance to long-term erosion is based on either natural or human-influenced shore protection.

The dominant direction of sediment transport in the Great Lakes varies depending on location, prevailing wind directions, and material availability (Figure 2 – sediment motion in Great Lakes). If longshore sediment transport is interrupted by

a manmade structure, such as a jetty or breakwater, then sediment will accrete on the updrift side and erode farther down on the downdrift side. However, since sediment can move in both directions alongshore, a smaller accretionary fillet can form on the downdrift side in the area protected from the erosive waves. Longshore sediment motion and sediment flowing from rivers can cause the need for dredging to keep harbor entrances free from sand bars and spits. The frequency of the required dredging depends on the volume of longshore sediment transport and lake levels, which fluctuate seasonally and annually.



Figure 1: Pentwater materials budget for the littoral zone.



Figure 2: Sediment motion in Great Lakes.



FUNDING AND REGULATORY FRAMEWORKS

By David Knight

For Michigan's small harbor communities on the Great Lakes, new challenges are emerging to complicate the function of harbor maintenance. Not only have some historically reliable government funding sources become sporadic, but climate models also project dramatic swings in water levels and increased storm volatility, both of which significantly impact Great Lakes harbor viability.

Chief among recent policy concerns is a shift by the U.S. Army Corps of Engineers (USACE) away from its historical role of dredging and maintaining navigation infrastructure in non-commercial harbors. Michigan has 46 federally authorized Great Lakes recreational harbors. Most of these were built and maintained by the federal government for waterborne transportation of freight and passenger travel.

While the commercial navigation component for most small harbors has been replaced with recreational boating, maintaining safe and reliable navigability is still critical. Michigan's small harbor communities rely heavily on the direct and indirect economic

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Loss or impairment of harbor access, even for limited periods, can result in significant economic hardship, especially given the relatively short boating season on the Great Lakes. Small harbor communities also serve as harbors of refuge in severe weather events, thus playing a role in protection of human health and safety.

In recent years, budget constraints in the USACE operation and maintenance budget have resulted in de-prioritization of recreational, shallow draft harbors, as well as low-use commercial ports handling less than one million tons of freight annually. Between fiscal years 2011 and 2016, only seven recreational harbor dredging projects on the entire Great Lakes were budgeted by

USACE. Compounding the hardship has been the elimination by Congress of earmarks in spending bills, a tool historically used by federal legislators to fund harbor maintenance projects in their respective districts.

The State of Michigan, more than any other Great Lakes state, has helped maintain small harbors through the Department of Natural Resources Michigan Waterways Fund and through emergency dredging assistance during extreme low-water periods. The Waterways Fund is available to the federally authorized small harbors, plus another 40 state grant-in-aid harbors and harbors of refuge. It is funded primarily through boater registrations and the state gas tax, and it makes about \$5 million available annually for harbor maintenance work.

Programs also have been initiated — most notably by the Michigan Department of Environmental Quality (MDEQ) and the Michigan State University Institute for Water Research — to identify and mitigate upstream river-borne sedimentation to preemptively reduce downstream dredging needs.

Grassroots advocacy efforts on behalf of recreational harbors, such as the Great Lakes Small Harbors Coalition

established in 2008, have helped build awareness, particularly at the federal level, of the needs of recreational harbors. These efforts were buoyed by enactment of the Water Resource Reform and Development Act of 2014, which establishes annual target appropriations levels for increased spending of funds from the Harbor Maintenance Trust Fund (HMTF) leading to full use by 2025. In recent years, the HMTF has generated up to \$2 billion annually with less than half of that going to actual harbor maintenance. But there remains little assurance that small harbors will enjoy the potential “rising tide” of federal dollars without additional legislated direction such as a set-aside program.

Until and unless the federal funding returns, many Great Lakes small harbors are being compelled to explore new options to support the maintenance dredging needed to keep them viable. These include state assistance, such as the \$21 million emergency dredging program offered by the state of Michigan in the water level crisis of 2011. Coastal communities also have benefited from privately funded contracting; city, county, and other municipal general funds; and locally administered user fees.

For federally authorized small harbors interested in augmenting the USACE dredging program with contributed funds to support dredging of their harbors, two alternatives are available:

- 1) Enacting an agreement to provide funding to USACE, which would execute the dredging project, including design, contractor acquisition, and dredging quality assurance; or
- 2) Obtaining a 10-year permit from USACE for the community to carry out the dredging with its own resources after securing all necessary permits and approvals from the state.



Some Great Lakes small harbors, including at least two in Canada, have explored acquiring and operating their own dredging equipment in partnership. This may help spread the significant costs while ensuring an ongoing, self-sustaining solution to dredging needs, both for regular maintenance and for emergency situations of storm-induced shoaling. See Section 3.5 “Buying a dredge: The ultimate in harbor maintenance self-sustainability” for information about one such venture in Leland, MI.

One innovative approach taking shape in New York State involves a “Regional Dredging Management Plan” (RDMP) in which six county governments and two municipalities along Lake Ontario’s south coast would collectively operate a dredging program to maintain some 19 small harbors within their purview. The idea was originally proposed in 2000 by Dr. Frank Sciremamanno, an engineering professor at the Rochester Institute of Technology and a member of the International St. Lawrence River Board of Control and the International Lake Ontario-St. Lawrence River

Study Board of the US-Canadian International Joint Commission. The concept was updated in 2014.

Sciremamanno proposes a not-for-profit corporation that “would allow for a focus by the organization solely on the dredging program, would provide bonding capabilities, would allow some sharing and/or donation of equipment from the participating counties, would allow seamless funding by governments, and would allow for control of the program by the participating counties through combined incorporation and representation on the corporate Board of Directors.”

2.0 COMMUNITY PROFILES



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2.1 COMMUNITY PROFILES AND LESSONS LEARNED

Four community profiles are provided in this guidebook to summarize the visioning process conducted in four Michigan communities:

- Au Gres
- New Baltimore
- Ontonagon
- Pentwater

These profiles will summarize the community-specific process and vision developed through the charrette process. For complete details, refer to the full charrette reports. See: sustainablemallharbors.org

A design charrette is distinguished from other community-engaged planning processes by the engagement of a design team that is tasked with developing images of conceptualized visions. The opportunity for participants to see drawn and digital images of design alternatives has provided a distinct richness to the process. The design charrettes conducted as part of this project were supported by the following designers and their teams:

- Constance Bodurow, Studio c(i): studio-ci.net
- Greg Weykamp, Edgewater Resources: edgewaterresources.com
- Richard Neumann, Richard Neumann Architect: richardneumannarchitect.com

COMMUNITY PROFILE: AU GRES



The Sustainable Small Harbors project received funding from Michigan Sea Grant, Michigan Department of Natural Resources – Waterways Program, Michigan Department of Environmental Quality – Office of the Great Lakes, and Michigan State Housing Development Authority to engage stakeholders in waterfront communities around Michigan. In 2015-2016, through public workshops and design charrettes, the project team helped community leaders assess challenges and opportunities related to the economic and environmental sustainability of their waterfronts. This community profile captures the insights and future visions developed through that process. For more information, see: sustainablesmallharbors.org.



Community Basics

Waterfront: Au Gres River (approximately 3 miles upshore from Saginaw Bay on Lake Huron)

County: Arenac

Area: 2.33 square miles

Population: 899 in 2010 (-13.5 percent change from 2000 to 2010)

Median Household Income: \$25,104

Median Age: 49.8

Source: U.S. Census, 2010; 2010-2014 American Community Survey 5-Year Estimates

COMMUNITY INVENTORY

The City of Au Gres is located alongside the Au Gres River, approximately two miles upstream from the outlet to Saginaw Bay in Lake Huron. The water entering Saginaw Bay drains 15 percent of Michigan's total land area from all or parts of 22 counties — the largest watershed in the state. The riverfront community is accessible by US-23 and features several shops, restaurants, wineries and pubs, disc golf and golf courses, and a riverfront campground. Special events in the community include the Au Gres Car Show and Cruise, Walleye Tournaments, Arts and Crafts Show, Memorial Day Parade, Downtown Parade of Lights and Tree Lighting, 4th of July Fireworks Festival, and the Summer Concert Series. A ferry is available to carry tourists to Charity Island in Saginaw Bay.

French explorers referred to the area as having “gritty stone,” hence the name Au Gres — translated from French as “of sandstone.” The city lies atop what was once a glacial lake, which left behind a geologic feature consisting of clay and shallow layers of sand over clay. In early years, Au Gres was considered a logging community; however, as that industry faded, a new focus for natural resources tourism now provides economic activity. The city has been known in the past to unofficially be “The Perch Capital” and is also a highly regarded portal to Saginaw Bay's walleye fishery and duck and deer hunting. The Au Gres River bears a heavy sediment load and influences channel depth; the channel was dredged in 2014 with funding assistance from the State of Michigan.

The City of Au Gres has experienced both population growth and

population decline in the last 20 years, reaching a high of 1,028 people in 2000 before returning to pre-1990s levels in 2010 with a population hovering around 889 people. The city is influenced by seasonal residency, with roughly 20 percent of the available housing seasonally occupied on an annual basis.

Source: City of Au Gres, Pure Michigan

PLANNING DOCUMENTS

- Au Gres Master Plan — Update 2010
- City of Au Gres Tax Increment Finance Authority: Development and Tax Increment Financing Plan (amended 2015)
- USACE Point Lookout Harbor Fact Sheet (2015)
- Arenac County Blue Water Trail Development Plan (August 2014)
- Bay County Saginaw Bay Blue Water Trail Development Plan (2015)

WATERFRONT INVENTORY

Point Lookout Harbor: Point Lookout Harbor is located on the west shore of Lake Huron at the entrance to Saginaw Bay, on the Au Gres River (about 17 miles northeast of the mouth of the Saginaw River). The project features more than 7,800 feet of breakwaters and approximately three miles of maintained Federal channel. This site serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests. The Point Lookout pier and channel lights provide navigational aids in locating the mouth of the Au Gres River.

Source: [USACE, 2016](#)

MDNR Au Gres Boating Access Site: The Au Gres Boat Launch is one of the largest, most popular boat access sites to Lake Huron. Facilities include four boat ramps which can launch eight boats at one time, restrooms, and a pier along the Au Gres River and Saginaw Bay. The pier is used by walkers and joggers and has views of Saginaw Bay. Fishing occurs off the boat ramps and along the pier.

Source: [Pure Michigan](#)

Au Gres Mooring Facility: Located 1.4 miles up the Au Gres River, the marina facilities at Au Gres Mooring Facility (aka Au Gres State Harbor) are closed. Until further notice, Au Gres shall be a harbor-of-refuge without any amenities or on-site staff. 30 slips are non-reservable and are free on a first-come, first-serve basis. MDNR is in the process of transferring ownership of the property to the City



Figure 1: Point Lookout Harbor. Source: USACE

of Au Gres. This site is a focal point for the sustainable harbors visioning effort.

Source: [USACE, 2015](#)

Harbortown: A private marina with approximately 76 slips is stationed directly across from the downtown Au Gres Mooring Facility. Slips are typically sold in conjunction with a condominium.

Au Gres Yacht Club: A membership-based club which includes more than 300 slips, condominiums, homesites, clubhouse, boat storage and a marine store. All slips at the Au Gres Yacht Club have been sold as condominium slips. Slip rentals for seasonal and overnight are available. The slips range in size from 28' to 50'. The clubhouse is located at the end of the channel connecting the Au Gres River with Saginaw Bay. A fuel dock and marine store are in operation adjacent to the club house, which includes a restaurant, pool and hosts activities during the boating season.

City of Au Gres Riverfront Campground: Michigan's best kept secret has 111 sites featuring riverfront, full hook up, off river sites,

Dredging and Federal Infrastructure

- Project depth is 12 feet in the entrance channel in Lake Huron, 10 feet in the inner harbor channel, and 6 feet at the upstream end of the project.
- Approximately 3 miles of maintained Federal channel.
- More than 7,800 feet of breakwaters.
- Dredged material is placed in an upland placement site, which is provided by the State of Michigan as needed.
- Requires periodic maintenance dredging of approximately 20,000 cubic yards on a 5-to 6-year cycle; the harbor was last dredged in 2014 with funds provided by the State of Michigan under a contributed funds agreement with USACE.

Source: [USACE, 2015](#)

and two cabins for rent. Located along the Au Gres River, campers and non campers can easily access the river for silent watersport use. There is a beautiful shower house, fish cleaning station, playground, and pedestrian walking bridge for easy access to Downtown Au Gres.

Point Au Gres Marina and Campground: Located x miles south of the Au Gres River channel inlet, the 10 acre campground provides 76 boat slips and a boat ramp. The site provides 75 campsites and cabin rentals with plans for installation of a fuel dock.

Inland Marine, Inc.: A full-service dealership, providing sales and service, located along the Au Gres River. Provides promotion for dry-dock storage at a "sister company," Northport Marine, which is located 2 miles north on US-23.

VISIONING AND PLANNING

ASSETS AND VISION

In an early phase of the engagement process, the community self-identified the following assets and visions for the future:



Figure 2: Assets (left) and weaknesses or barriers (right) reported by the community, where larger text size indicates a higher frequency of mentions.
Source: Sustainable Small Harbors

COLLABORATORS

To draw upon community expertise, the following technical meetings were convened:

- Planning Commission;
- Historical Society;
- Parks and Recreation, Arenac County Parks Commission and Arenac County Blue Water Trail.

To facilitate implementation support, the following initial state and regional partners were identified:

- Michigan Department of Transportation;
- Saginaw Chippewa Indian Tribe;
- Regional Prosperity Initiative field staff;
- Michigan Sea Grant staff; and
- Michigan State University Extension staff.

Full Charrette Report

For additional information on the three alternatives the community evaluated and the development of the “preferred alternative,” please see the full charrette report, [available for download on the website](#).

PREFERRED ALTERNATIVE: “AU GRES 2035”

“Au Gres 2035” represents a shared future vision of the community based on the charrette design process. Both the breakwater improvements and city park improvements were incorporated because they received positive feedback.



Figure 3: Preferred Alternative for City Park and Downtown. Features mini-cabins in City Park, visitor information and observation tower, band shell and city green, beach, waterfront restaurants, fishing docks, kayak/board rental, day docks and water taxi landing. US-23 is envisioned as a boulevard. Source: Sustainable Small Harbors



Figure 4: Au Gres Design Focus Areas. Source: Sustainable Small Harbors

For the Au Gres City Park and Campground focus area, improvements were suggested for the northern portion of the site: addition of a second playground, improved shoreline access by softening the edge of the river with stone, and updated shoreline access featuring installation of stone and steps rather than sheet piling. Mini-cabins were added in the design to introduce another option for accommodations at the campground.

The downtown, US-23, and mooring facility focus area design features a band shell with a city green leading down to a beach area. The beach would be separated from the water by fishing docks that step down to the water's edge. The current mooring facility frontage would be converted for kayak/paddleboard rental and day docks with a water taxi landing.

The current mooring docks and concrete walkways would be replaced with a wooden boardwalk and docks. Adjacent to the docks are the beach and splash pad. The lighting and signage used in downtown were continued into the park and along the boardwalk running between the beach and new docks. Across the river from the Au Gres Mooring Facility, an existing building would be repurposed as a waterfront restaurant.

This design also includes redevelopment that will be highly visible from US-23, intended to capture the interest of those passing through Au Gres: an information and observation tower, waterfront restaurant(s), fishing docks,



Figure 5: Mooring facility redevelopment design. Source: Sustainable Small Harbors



Figure 6: Au Gres Mooring Facility design. Source: Sustainable Small Harbors

and a boulevard layout for a section of US-23.

As proposed, the Visitor Information Center and Lookout Tower would also feature a rock climbing wall on one

side. Looking farther into the park, the beach area and city green for the band shell would be visible. US-23 would be reduced to one lane in each direction with parallel parking along the sides and a boulevard center.



Figure 7: Current view and artistic rendering of the view from US-23. Source: Sustainable Small Harbors

The breakwater and boat launch focus area design increases recreational opportunities at the site by including a boardwalk, playground, pavilion, pocket beach, kayak launch, and fishing platforms. The proposed boardwalk would provide bird observation, walking opportunities, and controlled access to wetland habitat. This design includes adding a pocket beach in the area protected from erosional waves.

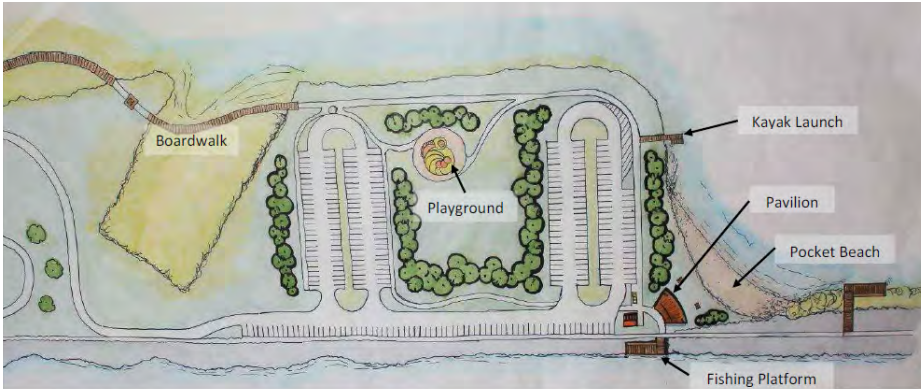


Figure 8: Point Lookout design. Source: Sustainable Small Harbors



Figure 9: Artistic rendering of the view of the pocket beach. The beach area is located in a protected corner which is currently overgrown with invasive phragmites. This area has shallow water and sandy soils and also hosts a proposed kayak launch. Source: Sustainable Small Harbors



Figure 10: The design also provided improved fishing access along the breakwater. Handicap-accessible platforms extend over the water to improve accessibility to the water's edge. Source: Sustainable Small Harbors

**BOULEVARD DESIGN
US-23 STREET SECTION**
(Example section near Au Gres Mooring Park)

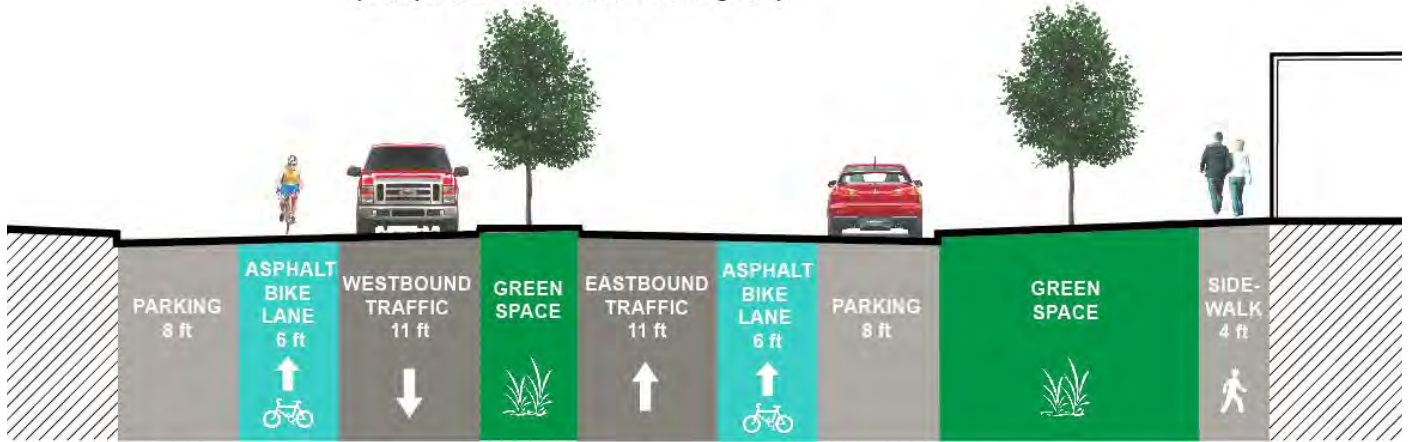


Figure 11: Redesign of US-23. The proposed complete streets/boulevard layout features only one lane of traffic in each direction, crosswalks that increase safety for crossing pedestrians, reduced paved area to reduce stormwater runoff, and bike lanes that connect with regional trails. The overall width of the roadway is not changed, and the design allows for safer pedestrian crossing. Source: Sustainable Small Harbors

CONNECTIVITY

Connectivity is a key feature for a sustainable community; connections via car, bike, walking, and boating are all important within Au Gres. Connections already exist between the city and the boat launch for pedestrians and vehicular traffic. Linking existing bike paths with regional trails and designated biking trails would enhance a popular recreational opportunity within the community. Specifically, trails could link to the Tawas bike path with connection to the statewide Iron Belle trail, running from Iron Mountain to Belle Isle.

The Au Gres River provides a connection opportunity for kayaking and shallow draft boats. The section of river from the mouth to Au Gres City Park should be marked and marketed as an extension of the Arenac Blue Water Trail and Saginaw Bay Blue Water Trail initiatives. The City Park currently rents kayaks and has a kayak launch. Additional rental opportunities and incorporation of launches or stopping points along the river, which is predominated by private property, would increase accessibility.

At the center of the city, US-23 is the main connection to other communities but is a barrier for pedestrians between the north and south sides of the road. New crosswalk locations and boulevard changes to US-23 could improve pedestrian safety and opportunities. Increased and more consistent signage in Au Gres will help define the city for those passing through. Many assets in the community currently go unnoticed by drivers along US-23 given the overall lack of wayfinding signage on US-23.

VALUE CAPTURE – INITIAL EFFORTS

As a part of the engagement process, the team encouraged the community to consider ways to increase tourism in Au Gres, namely by engaging in placemaking efforts and exploring new uses for the mooring facility. Marketing the birding, walleye, perch, restaurant, and accommodations offerings will be important in bringing new visitors to Au Gres. Value capture can occur through existing taxes and consideration of waterfront-specific financing options including marine investment funds or water resources tax increment financing. The team

outlined opportunities to incorporate the overall design vision into existing planning documents and provided an overview of potential funding sources.

ECONOMIC ANALYSIS

Au Gres offers plentiful outdoor recreation opportunities, thanks to the area's natural beauty and excellent perch and walleye fishery. Located 2 hours from Detroit, Au Gres is readily accessible via state and interstate highways. The community is poised to capture a greater revenue stream from tourist activity, particularly aquatic and land-based recreational users.

The final charrette design for Au Gres includes a variety of new or improved amenities along US-23 and within the city. Amenities such as a boardwalk, kayak launch, band shell, rock-climbing wall, and fishing platforms would draw residents and visitors toward downtown and the waterfront. In addition, the design proposes constructing 28 miniature cabins for additional on-site lodging. Renting at \$80 per night with 80 percent occupancy for 100 days per year, the cabins could generate \$179,200 in annual revenue.

IMPLEMENTATION

USE OF DESIGN AND VISIONING

PRODUCTS. The City of Au Gres City Manager reports having used the final presentation slides and materials in talking points to various groups, including Huron Pines, a non-profit organization dedicated to community development, conservation, water quality, habitat, and river restoration. The idea of marketing Au Gres as a “silent watersport-friendly” location and the complete streets/boulevard concepts have already gained support and may be the pieces that gain the most support moving forward.

INITIAL IMPACTS. Au Gres has been awarded a \$50,000 grant from the Saginaw Chippewa Indian Tribe for proposed improvements at the mooring facility property — the central focus of the charrette. The project reportedly had a significant influence in Au Gres being selected to receive the grant. The funds will be made available to the city when the ownership transfer from the state to the city is complete. Initial ideas for use of the funding include improvements to the restroom facilities, which have been closed for several years.

As facilitated by project partners, city staff have been in contact with the local Michigan Department of Transportation (MDOT) transportation service center representative to gain information on advancing the complete streets vision.

The city completed a revision of their master plan just prior to this engagement process, so proposed revisions will be incorporated in the next revision.

CHALLENGES. City staff will need to remain committed to the complete streets/boulevard vision due to a projected multi-year process for pitching the vision to the Department of Transportation. Similarly, participants report wanting to: “make sure the visions do not lose steam. Keeping people’s interest piqued is a huge piece when a lot of the initial work is done behind the scenes and can’t be visually seen.”

PRIORITIZATION AND FUNDING. City leadership have not yet settled on the selection or prioritization of design elements from the “Au Gres 2035” vision due to delays in the ownership transfer of the marina.

MOMENTUM. During the community engagement process, a “young professionals” group was pitched on site. The group is reportedly still fledgling, but there are plans to engage with the group more in the future as the city crafts the next steps of the process. The group may engage with the Au Gres Chamber of Commerce to highlight and market attractions in the area.

COMMUNITY PROFILE: NEW BALTIMORE



The Sustainable Small Harbors project received funding from Michigan Sea Grant, Michigan Department of Natural Resources — Waterways Program, Michigan Department of Environmental Quality — Office of the Great Lakes, and Michigan State Housing Development Authority to engage stakeholders in waterfront communities around Michigan. In 2015-2016, through public workshops and design charrettes, the project team helped community leaders assess challenges and opportunities related to the economic and environmental sustainability of their waterfronts. This community profile captures the insights and future visions developed through that process. For more information, see: sustainablesmallharbors.org.



Community Basics

Waterfront: Lake St. Clair

County: Macomb

Area: 6.73 square miles

Population: 12,084 people in 2010 (+63 percent change from 2000-2010)

Median Household Income: \$78,377 in 2013

Median Age: 40.7 (2014)

U.S. Census, 2000, 2010; City Data

COMMUNITY INVENTORY

The City of New Baltimore is located on the north coastline of Lake St. Clair, at the western edge of Anchor Bay. The city, located along the boundary line of Macomb and St. Clair Counties, offers a public park, beach, farmers market, restaurants, public library, and historic downtown shopping district.

Incorporated as a village in 1867 and as a city in 1931, New Baltimore initially served as a getaway for urban Detroiters for many years due to the inter-urban railroad. The city also had a robust shipping trade thanks to its location on Lake St. Clair. While New Baltimore has since seen a decline in tourism, it is increasingly serving as an outlying community for Detroit.

New Baltimore is listed as one of the 50 Safest Cities in Michigan and benefits from active promotion from the county executive's office, including the "Make Macomb Your Home" campaign.

New Baltimore has seen significant demographic changes over the last 25 years. From 2000 to 2010, the New Baltimore population rose 63.2 percent, outpacing the Macomb County population growth rate of 6.7 percent. The largest demographic changes experienced by New Baltimore have been a proportional increase in citizens aged 14 and younger and in citizens between the ages of 35 and 54.

Source: City of New Baltimore Parks and Recreation Master Plan (2012), Macomb County Executive

PLANNING DOCUMENTS

- City of New Baltimore Master Plan (2005)
- City of New Baltimore Parks and Recreation Master Plan (2012)
- Downtown and City-Owned Property Vision (2014)
- New Baltimore Downtown Development Authority — Development and Tax Increment Financing Plans (2009)

HISTORICAL REFERENCES

During the community engagement process, the team learned about the city's longstanding discussion and debate about introducing a public harbor and access point to the waterfront. A few of the supplied materials include:

- The New Baltimore Recreational Harbor — Citizens for the Harbor and Recreation Team (1994) — promotional brochure describing

benefits of a harbor at Washington and Front Street waterfront.

- City of New Baltimore Refuge Harbor brochure (1980) — schematic drawing of a proposed harbor at Washington and Front Street frontage.
- Village of Ashley (previous name for New Baltimore) map of historic piers: Ashley Mill Docks, John Lozen Boat Pier, and William Baker Lumber Dock. Several historical pilings are still standing.



Figure 1: Schmid Marina and view of lakefront Walter and Mary Burke Park, Front Street, and Washington Street. USACE 2012

WATERFRONT INVENTORY

Schmid Marina: A privately owned and operated marina since the 1960s, the 12-acre property features approximately 1,200 linear feet of shoreline on Anchor Bay on Lake St. Clair. The marina provides 160 slips with some reserved for transient use. The marina provides dry racks, indoor winter storage, gas dock, 30-amp electric service, water, and pump-out service, plus an 18-ton travel lift. Amenities include shower, restroom, and walkable access to downtown New Baltimore (approximately half a mile). The marina was put up for sale around 2010 and was the focus of the design charrette.

Public Dock at Park Waterfront:

In 2013, the Department of Homeland Security Marine Division dedicated a public dock for use by division staff and the public. Public perception of the docks is mixed, with some indicating that they would not dock there due to lack of protection from wind and waves. The docks are managed through public safety officials and are frequented in the summer by day users.

SALT RIVER MARINAS (APPROXIMATELY 3 MILES EAST OF NEW BALTIMORE):

Anchor Bay Marina: This marina specializes in dry rack storage, accommodating up to 300 boats up to 51 feet in length with a 3-mile commute from storage to the lake. Amenities located at the marina include a ship store, restrooms

with showers, gas dock, pump-out station, and on-site service center for maintenance needs.

Sun-Up Marina: Located on the Salt River, just off of Anchor Bay, the marina provides 120 slips accommodating boats up to 45 feet. All slips are supplied with water and electric hookup and several have drive-up access.

Kenney's Marina and Harbor Heights Marina are also listed, but public information is limited.

FAIR HAVEN MARINAS (APPROXIMATELY 4 MILES WEST OF NEW BALTIMORE):

Mayea Marina: Established in 1911, this full-service marina in Fair Haven provides 250 slips from 25 to 50 feet with 20 slips reserved for transient use. The marina provides a gas dock, pump-out, boat repairs, mechanical service, party store, storage, bath houses, laundry, and the popular Island Grill Clubhouse. As recently as 2013, the marina basin depth was only three feet; since dredging the basin, the marina now markets itself as a “deep water marina.”

Terry’s Marina: Private marina offering slips for boats up to 50 feet with covered wells up to 38 feet. Services and amenities include a pump-out station, picnic area, bathrooms with showers, laundry facilities, recreation areas, pool, Wi-Fi, and an invitation to the annual marina party. Terry’s also offers floating cottages for rent and operates Hidden

Harbor Marina, providing additional covered and uncovered wells just down from the main marina.

Swan Creek Harbor: A 5-minute cruise up Swan Creek from Anchor Bay, the marina provides boat wells up to 40 feet, restrooms with showers, pavilion with barbeque area, Wi-Fi, buoyed entrance, winter storage, picnic areas, and a fire pit. The marina promotes its walkable access to restaurants and bars and marina parties with movie nights.

NEARBY PUBLIC BOAT LAUNCHES:

- Brandenburg Park (2.0 miles)
- Fair Haven Boating Access Site (6.1 miles)
- Deckers Landing Access Site (16.4 miles)
- Harley Ensign Launch (16.6 miles at mouth of the Clinton River)
- Clinton River Cut Access Site (14 miles)

DREDGING AND FEDERAL INFRASTRUCTURE

There are currently no dredging or federal infrastructure projects in New Baltimore.

VISIONING AND PLANNING

ASSETS AND LIABILITIES

As part of the visioning process, the community self-identified the following assets and liabilities.



Figure 2: Assets (top) and weaknesses or barriers (bottom) reported by the community, where larger text size indicates a higher frequency of mentions.

Source: Sustainable Small Harbors

COLLABORATORS

To draw upon community expertise, the following technical meetings were convened:

- Historic Commission;
- Downtown Development Authority; and
- Parks and Recreation.

To facilitate implementation support, the following initial state and regional partners were identified:

- MDNR Natural Resources Trust Fund program;
- Regional Prosperity Initiative field staff;
- Michigan Sea Grant staff;
- and Michigan State University Extension staff.

PREFERRED ALTERNATIVE: “NEW BALTIMORE 2035”

“New Baltimore 2035” represents a shared future vision of the community based on the charrette design process. The preferred alternative has Schmid Marina as public access with a boat launch, downtown redevelopment, and a harbor inserted to Front Street.

For the Schmid Marina focus area, the community engagement process supported public acquisition of Schmid Marina. The proposed design includes incorporation of six public boat launches and parking for boat trailers. Existing indoor dry storage buildings may be retained should the community desire, but would reduce parking capacity. One of the existing storage buildings could be converted into the New Baltimore Recreation Center. As proposed, the site hosts the youth sailing club, a kayak landing, and storage racks, which may be rented. Access to the site along Taylor Street would be widened and a bike lane added.

Full Charrette Report

For additional information on the three alternatives the community evaluated and the development of the “preferred alternative,” please see the full charrette report, [available for download on the website](#).



Figure 3: The preferred alternative for New Baltimore has Schmid Marina as public access with a boat launch, downtown redevelopment, and a harbor inserted to Front Street. Source: Sustainable Small Harbors

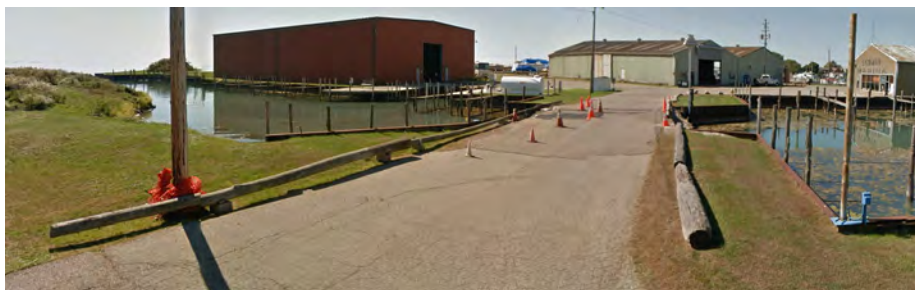


Figure 4: Current view and artistic rendering of widened bridge, sailing school site, kayak landing, and expanded parking area. Source: Sustainable Small Harbors



Figure 5: Artistic rendering of a concept for a downtown harbor. Source: Sustainable Small Harbors



Figure 6: Current view and artistic rendering of Washington St. and Front St. intersection, looking toward Lake St. Clair. Source: Sustainable Small Harbors

For the downtown focus area, the preferred design alternative illustrated new development. The “Brewery Block” infill to the west of Washington Street proposes 13,000 square feet of new retail. The “Library Block” infill to the east of Washington Street proposes 33,000 square feet of new retail, restaurant, and office space. The newly designed Willy & Babbish Building (approved for construction on the northwest corner of Washington and Front) will provide 3,200 square feet of new retail.

For long-term planning, residences within the two-block redevelopment area are removed in the proposed plan and replaced with mixed-use development and high-density housing. The library would remain, along with three other buildings, plus the planned development on the corner of Washington and Front Street. The old mortuary building on the corner of Maria Street and Main Street could be renovated into the brewery that would give this block its name (i.e., “Brewery Block”). Ten three-story townhouses with roof decks and drive-in garages are included and the townhouses have shared private green space. Finally, in the design, a portion of Front Street and Washington Street are “flexible streets,” which may be blocked off for festivals and farmers market days.

A Burke Park Marina was proposed, bringing boating to the heart of downtown. This design would remove the current beach area and require excavating to Front Street. The beach, volleyball area, and playground would be relocated within Burke Park. Preliminary investigation of existing underground infrastructure suggests this is technically feasible, although at a cost of more than \$4 million. A floating dock system with wave dissipaters could provide an estimated 80 protected boat slips. The harbor is designed with 30-foot and 45-foot slips as well as a few broad side areas for larger boats.

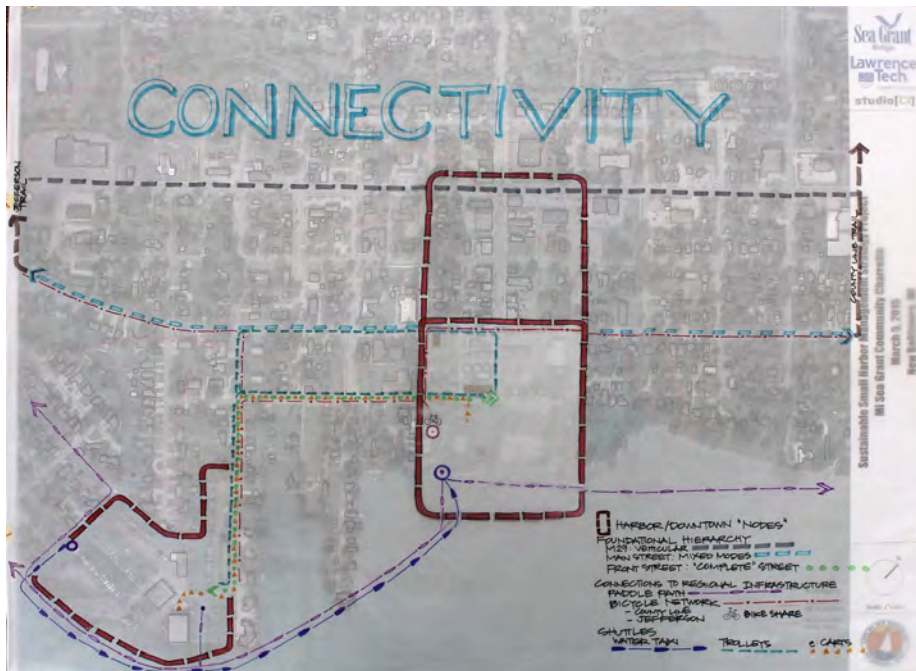


Figure 7: Design connectivity diagram. Source: Joseph Demski

CONNECTIVITY

There are many modes of connectivity proposed in this vision, including linkages for vehicles, bicycles, kayaks, pedestrians, water taxis, trolleys,

e-carts, and personal boats. Bicycle lanes striped on the existing roadway could connect bike traffic to County Line Street and Jefferson Street through the town and to the marina. Bike lanes are part of the design on Main Street

and would shift to follow Front Street for a block between Taylor Street and Maria Street. Kayaking connectivity includes adding a launch site and rentable storage racks at Schmid Marina. This launch site would be part of the existing Lake St. Clair paddle trail along the shore and would connect with the Burke Park beach where there is another launch site. A water-taxi and personal boats would provide additional transportation options.

Pedestrian paths between Schmid Marina and downtown should have improved lighting along the walkways, defined crosswalks, and sidewalks on Taylor Street and Front Street. Additional transportation between the marina and downtown could be provided by an e-cart, or small electric vehicle/shuttle, used as needed to transport people between the proposed recreation center, marina, and downtown. Participants also expressed interest in a trolley circling town and connecting to nearby towns.

VALUE CAPTURE – INITIAL EFFORTS

In support of this alternative, an economic analysis of retail capacity was conducted by a member of the charrette team. Current downtown New Baltimore contains approximately 77,000 square feet of retail, both occupied and vacant. The primary retail trade area has an estimated population of approximately 120,000 with an estimated 45,000 households. Currently the downtown businesses capture between 1.5 and 1.6 percent of the retail trade area, which is well below what a walkable historic downtown should capture. A comparison analysis of retail capture percentages of similar small downtowns in southeast Michigan showed retail capture percentages of

4 to 6 percent. A destination downtown like New Baltimore, further enhanced by waterfront improvements, should be able to capture up to 2.5 - 3 percent of the retail trade market. This would indicate a potential market for an additional 51,000 to 61,000 square feet of retail. Using the lower estimate (51,000 sq ft), this could break down into various major retail categories:

- 17,500 square feet of full-service or limited-service restaurants or pubs
- 18,000 square feet of general shopping goods
- 9,000 square feet of personal services
- 6,500 square feet of miscellaneous retail

The economic analysis for this alternative is supported by research conducted by Macomb County

Department of Planning and Economic Development. The department also reported that Schmid Marina currently operates approximately 80 slips and could be modified to accommodate 160 slips. If 90 percent of the 160 slips were occupied, that would potentially net over \$300,000, which would offset capital improvements. Additional revenue would also come from boat launch fees, onsite storage, marina store improvements, and leasing agreements with sailing clubs or similar entities.

ECONOMIC ANALYSIS

New Baltimore is located on Lake St. Clair, a popular destination for fishing and boating. However, public boat-launching facilities are limited, and the local marina is privately owned and disconnected from the nearby downtown.

Potential changes identified in the charrette design include the construction of a boat launch, municipal purchase of the private marina, a new marina abutting downtown New Baltimore, and additional downtown development. Economic modeling indicates that these changes could significantly enhance the sustainability of New Baltimore. The boat launch and a publically owned marina could generate revenues of approximately \$400,000 per year.

IMPLEMENTATION

USE OF DESIGN AND VISIONING PRODUCTS. The New Baltimore Charette Final Report provided instrumental documentation of New Baltimore community support and the professional assessment and recommendations made by the Small Harbors Study Team. The final recommendations were used as support documentation for the City of New Baltimore to move forward on an acquisition grant through the Michigan Department of Natural Resources Trust Fund. The City of New Baltimore was awarded a \$2.85 million grant on December 7, 2015, to acquire Schmid Marina for municipal use, as suggested through the charrette process.

In pursuing detailed plans for the property, the city provided the project documentation to Edgewater Resources, LLC. The city hired the firm to conduct further assessments and develop a business implementation plan for the Schmid Marina property.

INITIAL IMPACTS. In May 2016, the city approved the Michigan Natural Resources Trust Fund Land Acquisition Project Agreement for Schmid Marina; once the agreement is fully executed the city will move forward on the next steps of the acquisition process.

Edgewater Resources' initial financial projections for marina operations were very positive. A grant writing consultant for the city noted: "The design charette process made it possible to move the community of New Baltimore towards the vision of public access and beautiful recreational opportunities. Without that experience and process, the community of New Baltimore would not be where we are today."

Source: [Macomb Daily News](#) (2015)

CHALLENGES. Several residents neighboring the Schmid property, who did not participate in the design charrette, were initially displeased with the proposed design alternative. The city provided direct communication to engage the concerned parties, inviting several community members to join a Schmid study committee. As a result, the city has alleviated several concerns and established a dialogue with key stakeholders.

PRIORITIZATION AND FUNDING.

The \$2.85 million Michigan Natural Resources Trust Fund grant requires a roughly \$900,000 match from the city — a local match requirement of 25 percent of the requested state funding.

In January 2016, the city council approved funding for a proposal from Edgewater Resources to conduct a feasibility analysis of the marina development that includes an assessment of Americans with Disabilities Act (ADA) requirements at the site. In February 2016, the city council voted to allocate the \$22,000 in Community Development Block Grant funding the city will receive this year to bringing the marina in compliance with the ADA. This will ensure the public space is universally accessible.

In covering a May 2016 presentation to city council by Edgewater Resources, local newspaper *The Voice* reported the following update:

"The various renovations and improvements proposed by Edgewater Resources would total about \$2.6 million. A conservative revenue model that includes basin slips, canal slips, dry racks and winter storage shows potential annual revenues of about \$338,000, which would support a \$4.6 million bond at roughly 4 percent over 20 years, allowing for 'near reconstruction of the marina.'"

Sources: [The Voice News](#) (May 2016), [The Voice News](#) (February 2016)

MOMENTUM. The City of New Baltimore Mayor, City Council, Parks and Recreation Department, Planning Commission, Historic District, Downtown Development Authority, and residents and businesses are collaboratively leading implementation of several of the visions suggested through the community engagement process. Edgewater Resources has proposed to renovate the marina in stages so as not to impact the boating season or displace boaters.

The Macomb County Planning and Economic Development Department program manager of land and water resources said Schmid Marina is a key component "to the re-birth of southeast Michigan. I know that sounds like a stretch, but it really isn't...It needs to be known what New Baltimore is to the region because there really is not a walkable downtown outside of Detroit and maybe Windsor, and the city already has what's really key to its success," he said. "But it's also going to be about bringing the people here; it's about access to the water."

Source: [The Voice News](#) (May 2016), [The Voice News](#) (March 2016)

COMMUNITY PROFILE: ONTONAGON



The Sustainable Small Harbors project received funding from Michigan Sea Grant, Michigan Department of Natural Resources – Waterways Program, Michigan Department of Environmental Quality – Office of the Great Lakes, and Michigan State Housing Development Authority to engage stakeholders in waterfront communities around Michigan. In 2015-2016, through public workshops and design charrettes, the project team helped community leaders assess challenges and opportunities related to the economic and environmental sustainability of their waterfronts. This community profile captures the insights and future visions developed through that process. For more information, see: sustainablesmallharbors.org.



Community Basics

Waterfront: Ontonagon River, Lake Superior

County: Ontonagon

Area: 3.86 square miles

Population: 1,494 in 2011 (-15.5 percent change from 2000-2010)

Median Household Income: \$32,950

Median Age: 51 (52 percent residents 50+ years old)

Source: U.S. Census, 2010

COMMUNITY INVENTORY

The Village of Ontonagon is located at the mouth of the Ontonagon River, on the south shore of Lake Superior in the Western Upper Peninsula of Michigan. The village is the county seat and the only incorporated municipality in the county, positioning the village as a cultural and social center for a large part of the west-central Upper Peninsula.

Most of the village's residential and commercial development is established along the east side of the Ontonagon River, with industrial development adjacent to the harbor, which is located on the opposite bank of the river.

The village and township have historically depended on the extractive industries of mining, forestry and agriculture. The local economy has undergone a pattern of booms and busts related to copper and wood markets. Most recently, the copper mine closed in 1995, the shipbuilding operation in 1998, and the paper mill in 2010. The paper mill was razed in 2011, but the site is being considered for future industrial use.

Recently, tourism has influenced the local economy. The Porcupine Mountains Wilderness State Park, located 15 miles west of the village, has drawn roughly 300,000 visitors annually in recent years. New interest in recreational land use has stimulated

planning efforts for snowmobile, off-road vehicle (ORV) and water trail development.

Source: Village of Ontonagon, Township of Ontonagon Consolidated Recreation Plan: 2012-2017

PLANNING DOCUMENTS

- Ontonagon Village Master Plan (May 2007)
- [Village of Ontonagon, Township of Ontonagon Consolidated Recreation Plan: 2012-2017](#)
Village of Ontonagon, Michigan – Access Management Plan (September 2006)
- [Ontonagon County Multi-Hazard Mitigation Plan: 2013-2018](#)
- [USACE Harbor Infrastructure Inventories: Ontonagon Harbor, Michigan](#)
- Ontonagon Snowmobile & ORV Rules of The Road
- Ontonagon County Water Trails: Lake Superior and Ontonagon River

WATERFRONT INVENTORY

Ontonagon Harbor: Ontonagon Harbor is a deep-draft commercial harbor with over 4,800 feet of structures, including piers and revetments, and approximately 3/4 mile of maintained federal channel. The harbor also serves as a Harbor of Refuge (USACE, 2013).

Ontonagon Marina: Constructed in the early 1970s, the marina is open from May 1 to October 15. It consists of floating docks with 29 seasonal slips and 7 transient slips. Daily dockage rates range from \$24 to \$177. Amenities at the marina include water, electricity, restrooms, showers, gasoline, diesel, pumpout, ice, fish cleaning station, boat launch, hoist, long-term parking, day-use dock, and a playground with picnic tables and grills.



Nearby Facilities: Black River Harbor is approximately 40 miles west of Ontonagon and includes eight transient slips, seventeen seasonal slips and five commercial slips. Amenities and services include a boat launch, gas dock, grills, hoist, ice, picnic tables, playground and park, public phone, pump-out, restrooms and water. Approximately 55 miles to the east, Houghton County Marina has 54 seasonal and transient slips and a variety of amenities.

Source: [USACE, 2013](#)

Dredging and Federal Infrastructure

- Approximately 40,000 cubic yards of material must be dredged each year; the harbor was last dredged in 2011.
- Maintenance dredging is currently required within the harbor. Project depth is 23 feet in the entrance channel of Lake Superior, 22 feet in the inner harbor channel, 30 feet in the sedimentation basin, and 21 feet at the western upstream portion of the channel.
- The West Pier is currently in need of minor repairs.

Source: [USACE, 2016](#)

VISIONING AND PLANNING ASSETS AND LIABILITIES

As part of the visioning process, the community self-identified the following assets and liabilities:



Figure 1: Assets (left) and weaknesses or barriers (right) reported by the community, where larger text size indicates a higher frequency of mentions.

Source: Sustainable Small Harbors



Figure 2: Current view of shipyard (left) and “Ontonagon 2035” design rendering (right). The final design of the shipyard beach includes a hotel with meeting space, access to the pier and beach, lookout tower, beach amenities, handicap-accessible overlook, and new housing. Source: Sustainable Small Harbors

COLLABORATORS

To draw upon community expertise, the following technical meetings were convened:

- Marina and Waterborne Recreation (Harbormaster, Marina Commission, Sport Fishing Club, boaters, paddlers, and waterfront-related business representatives);
- Recreation and Tourism (Recreation Commission, Snowmobile Club, ORV Club, County Recreation Advisory Group, Museum/Historical Society, Chamber of Commerce, and community event representatives); and
- Business and Industry (Highland Copper Company, White Pine Electric, Ontonagon County Economic Development Corporation, Chamber of Commerce, County Economic Partnership, commercial real estate developers, Village Council, Planning Commission, and elected planning representatives).

To facilitate implementation support, the following initial state and regional partners were identified:

- Upper Peninsula representative from the governor’s office;
- Trust for Public Lands;
- Regional Prosperity Initiative field staff;
- Michigan Sea Grant staff; and
- Michigan State University Extension staff.

PREFERRED ALTERNATIVE: “ONTONAGON 2035”

“Ontonagon 2035” represents a shared future vision of the community based on the charrette design process. Alternative 1 had the majority of community approval votes, so the “preferred alternative” was developed primarily from Alternative 1 with aspects of Alternative 2 and 3 included, based on voting and oral feedback.

The final design would include converting the shipyard property into public beach access with a small amount of development. Rose Island would have an extended boardwalk and would follow closely with the current parks and recreation plan, with the addition of dockage and development along the north end. At the marina site, access to the lighthouse would be restored and marina facilities and amenities would be enhanced.

The area to the north of the marina was left as industrial land, and beyond adding access to the lighthouse, it was not altered for the final design. That property could host new industry for Ontonagon, like a bulk material terminal, light industry, or boat building.



Figure 3: Ontonagon Design Focus Areas. Source: Sustainable Small Harbors

Full Charrette Report

For additional information on the three alternatives the community evaluated and the development of the “preferred alternative,” please see the full charrette report, [available for download on the website](#).



Figure 4: At the marina, a playground and athletic fields were added to the design to create more activities near the marina. The pavilion added along the water could be rented for events or used by marina and park visitors. Inside the marina, a small boat launch and docks for small boats were added to allow easier launching of small craft in the safety of the marina instead of into the river current. The marina itself has expanded services with indoor boat storage and winterizing of boats. This figure shows boat storage and the boat club in the marina. This building is a warming station for boaters to get food or drink. Retail was also added near the marina with a new complex for marina-related shops, shown in this figure. Trades like small engine repair, fiberglass, and boat maintenance could be achieved through public-private partnerships at the marina. Source: Sustainable Small Harbors



Figure 5: Rose Island improvements include an “entertainment district” (destination restaurant, plane tours), rails-to-trails multi-use bridge, additional fishing piers, and a trail information center in this design. A boardwalk would connect current fishing piers, the historic fishing village, and the north end of the island. The old pump house would be restored as public restrooms for the island and the historic tug boat would be moved over to the fish shanties. This figure depicts a kayak landing added on the island along the slough. A pedestrian bridge over Paddies Creek is also shown at the end of Houghton Street. Source: Sustainable Small Harbors



Figure 6: At the opposite end of the site, the design includes conversion of an old rail station building for use as a trail center. This location would be a hub for pedestrian use, ORV, and snowmobile traffic since it is near the bridge crossing the Ontonagon River and would provide a back entrance and parking for downtown. Source: Sustainable Small Harbors

CONNECTIVITY

Given that the marina is physically separated from the downtown area by the Ontonagon River, connections by water, trail, and road are important. Also, improved signage along MI-64 may help capture more activity, since many visitors to the Porcupine Mountains pass by Ontonagon along this route. Clearer signage advertising local businesses and attractions would help direct people into the village.

VALUE CAPTURE – INITIAL EFFORTS

As a part of the engagement process, the team encouraged the community to reinvest in the downtown area, take steps to attract Porcupine Mountains visitors, and explore bulk cargo options. The team also outlined opportunities to incorporate the harbor vision into existing planning documents and provided an overview of potential funding sources.

To remain on the US Army Corps of Engineers' roster of commercial harbors, the community may want to explore use of the commercial pier. Potential users of a bulk cargo terminal on the west pier property include:

- Road salt, sand, and aggregate for the road commission;
- Limestone and aggregate for construction firms;
- Sand and gravel for landscaping;
- Dimensional and heavy lift cargo for industrial use; and
- Fertilizer for agriculture or landscaping.



Figure 7: Potential connections for current and proposed non-motorized transport, kayak access, water trail, snowmobile/ORV, rail line, bike lanes, and bridges. Source: Sustainable Small Harbors

ECONOMIC ANALYSIS

Ontonagon's greatest economic challenges arise from diminishing population and local employment opportunities. The drop in local mining and forestry jobs has partially driven Ontonagon and the surrounding county to lose an average 1 percent of population annually since the 1970s. The town's proximity to the popular Porcupine Mountains Wilderness State Park means that tourism could become an important new economic driver for Ontonagon, given targeted infrastructure and quality-of-life improvements.

Potential tourist draws could include a boutique hotel, a destination restaurant, and airplane tours. A tourism evaluation indicates that an 18-room hotel with seasonal occupancy rates similar to Upper Peninsula averages could capture 1.9 percent of state park visitors. The hotel would directly support 6 jobs. A destination restaurant could garner total revenues of \$956,000, based on 23,900 visits with an average tab of \$40 per meal. The restaurant would directly employ 24 people.

IMPLEMENTATION

USE OF DESIGN AND VISIONING PRODUCTS.

Within the Village of Ontonagon, the Village Council, the Recreation Commission, and the newly reestablished Downtown Development Authority (DDA) are all working to implement the sustainable harbors vision. The Village Council is hiring a grant writer to assist with funding proposed improvements. The DDA and Recreation Commission are identifying the easy-to-implement proposed improvements and potential funding sources. Ontonagon County, Ontonagon Township, MI-TRALE (trails user group), the snowmobile club, the Historical Society, the Chamber of Commerce, and Ontonagon County Economic Partnership (OCEP) have also added items related to the Sustainable Small Harbors Project to their agendas.

INITIAL IMPACTS. The Ontonagon DDA was reestablished as a direct result of the Sustainable Small Harbors study, effective March 2016. The DDA membership includes several individuals who championed the Sustainable Small Harbors study, including the newly elected president. The DDA has addressed beautification of River Street (e.g., plants, flowers,

cleanliness, and maintenance) and improvements for the Ontonagon welcome sign at M-64, and has worked to “crowd fund” a River Street outdoor amphitheater. The DDA has discussed using the images produced through the Small Harbor Sustainability study to support a request to the Michigan Department of Transportation for a needed paving project.

Regarding the Rose Island vision to develop a multi-use path to connect the marina and west side of town to downtown, the DDA president aims to facilitate cooperation between the Village Council, Recreation Commission, DDA, MI-TRALE and the Historical Society. The current pathway needs cleanup, railroad tie removal, grading, beautification, limestone/compaction, and signage. A representative from MI-TRALE has applied for grant funding from the Michigan Department of Natural Resources to install rail bridge decking to improve connection between the east and west sides of town, effectively providing an additional connection point to the marina.

In a related effort toward improving tourism opportunities, some members of the community have been rallying around improvements for the airport, which would allow commercial charter operators to use the facility.

CHALLENGES. While many elements of the “Ontonagon 2035” vision are already moving forward, other elements of the 20-year vision will require more time. For example, there are other proposed uses for the historic rail station, envisioned as a public trail center, which would have to be addressed before it could be converted. All vested parties would have to agree on the best future use.

The DDA has agreed that the future use of the shipyard property “would best serve the Village if it is used as indicated in the Small Harbor Sustainability Study.” However, any change for this tract would be a major shift in land use and potentially cost-prohibitive, as the sale price for the property is estimated to exceed \$1 million.

PRIORITIZATION AND FUNDING. The informal implementation team has reported some difficulty in determining phasing for the 20-year horizon suggested in the “Ontonagon 2035” vision. Key questions include identifying project priorities, designating leaders, and securing funding.

MOMENTUM. One local champion created an “Ontonagon Small Harbor Sustainability Project” Facebook page to create a social media following for the project. The page has 218 members as of April 2017, and is actively chronicling efforts to support revitalization efforts in Ontonagon, including actions toward realizing the “Ontonagon 2035” vision. The page features design renderings from the charrette process, allowing for a visual reminder for what reaching a goal could look like.

COMMUNITY PROFILE: PENTWATER



The Sustainable Small Harbors project received funding from Michigan Sea Grant, Michigan Department of Natural Resources – Waterways Program, Michigan Department of Environmental Quality – Office of the Great Lakes, and Michigan State Housing Development Authority to engage stakeholders in waterfront communities around Michigan. In 2015-2016, through public workshops and design charrettes, the project team helped community leaders assess challenges and opportunities related to the economic and environmental sustainability of their waterfronts. This community profile captures the insights and future visions developed through that process. For more information, see: sustainablesmallharbors.org.



Community Basics

Waterfront: Pentwater Lake, 0.4-mile channel to Lake Michigan

County: Oceana

Area: 1.62 square miles

Population: 857 people in 2010

Median Household Income: \$45,228 in 2013

Median Age: 60.3 (2010)

Source: U.S. Census, 2000, 2010, City Data

COMMUNITY INVENTORY

The Village of Pentwater is located on Pentwater Lake at the edge of Lake Michigan. In 1853, lumber baron Charles Mears built a channel to Lake Michigan and placed a sawmill, pier, store, and boarding house on its north bank while also running a ferry across the channel. This development was absorbed into Pentwater when the village was formed in 1867. The village is home to shops, restaurants, inns, bed and breakfasts, a public library, the Charles Mears State Park and campground, several parks including a Village Green, Pentwater Wire (light industry), and a Friendship Center serving lunch to seniors. Many businesses operate seasonally to accommodate summer visitors. In addition to four marinas, Pentwater

is home to a marine services shop that showcases new technologies for ship-building, including 3-D printing, metal casting, and other computer-controlled machine and woodworking tools.

The level of Pentwater Lake fluctuates with the level of Lake Michigan. The entrance to the channel that connects Pentwater Lake to Lake Michigan is notoriously shallow and for many years has dictated the size of vessels that the village is able to accommodate. Dredging has been an ongoing issue and financial concern for the community. The Pentwater Harbor Research Committee formed as a citizen-led response to tracking channel depths and assessing dredging needs.

Pentwater is currently known as a vacation and retirement destination with many rental properties available throughout the year. Special annual events include a juried art show, fishing tournaments, a Memorial Day parade, and an annual Homecoming celebration featuring a sandcastle-building contest.

Pentwater has seen significant demographic changes. Between 1990 and 2010, the population decreased by approximately 20 percent. However, these population figures reflect only year-round residents and do not account for the considerable effects

of seasonal residents. In 2015, almost 49 percent of the housing stock was defined as seasonal. Sixty percent of the Pentwater population is over the age of 45.

Source: Village of Pentwater Master Plan (2015), Pentwater Historical Society

PLANNING DOCUMENTS

- [Village of Pentwater Master Plan Update](#) (2015)
- Master Plan Update Community Survey (2008)
- [Pentwater Area 2013-2018 Recreation Plan](#) (2013; a collaborative plan adopted by Pentwater Village, Township, and Pentwater Public Schools)
- Pentwater Downtown Development Authority Long- and Short-Term Goals (2013)
- Amendment to the Pentwater Area Recreation Plan (2015)
- Pentwater Brand Collaborative: Pentwater Life Attributes (2015)
- [Downtown Development Authority District Map](#) (2006)
- Downtown Economic Enhancement Study (2005)



Figure 1: Pentwater municipal marina with a view of the fish cleaning station and interpretive signage (left). Pentwater municipal boat launch off of E. Lake Road (right). Source: Village of Pentwater

WATERFRONT INVENTORY

Pentwater Municipal Marina: The municipal marina features floating docks with 44 slips equipped with 30-amp electrical service. Many modern boats require 50-amp service, so this has been cited as a limitation. The marina also provides water service, a pump-out station, a picnic shelter, restrooms, a bath house, kayak racks, and a fish cleaning station. The marina is open from May through October and does not provide fuel. Approximately 22 slips are reserved for transient use and 22 for seasonal use; reservations can be made via an MDNR online service.

Pentwater Municipal Boat Launch:

The launch site includes public restrooms, a single launch ramp, a simple floating dock, and parking. Seasonal and daily boat launch permits are available from the village, starting in April of each year.

Snug Harbor Marina: Full-service marina with 54 slips (ranging from 20 feet to 75 feet in length, each with 30-50-amp electric service), 250 feet of broadside tie-up space, a gas dock, and a travel lift. A dock crew is available to assist with fueling and docking. Services include indoor and outdoor storage, pump-out, winterization, boat washing, body work (fiberglass,



Figure 2: USACE project area. Source: USACE

Dredging and Federal Infrastructure

- Project depth is 11-12 feet; the project is currently maintained at 8-10 feet.
- Approximately 2,125 feet of maintained federal channel between Lake Michigan and Pentwater Lake.
- More than 4,000 feet of maintained piers and revetments.
- The north and south harbor piers and revetments, originally built in the late 1800s, were reconstructed in the late 1990s and wave attenuators were added.
- In 2012, the dredging spoils were placed in Lake Michigan. This will almost certainly be the case at the next dredging.
- Maintenance dredging is currently required. Historically, the channel has required maintenance dredging of approximately 12,500 cubic yards on a nearly annual basis; the harbor was last dredged by USACE in 2010. The community performed limited dredging in 2012 and is pursuing limited dredging in 2017 using state and local funds.

Source: [USACE, 2016](#)

woodworking, gel coat), sailboat rigging, and mechanical repair. Amenities include picnic areas with grills, wireless internet, restrooms, showers, and laundry facilities.

Charlie's Marina: A full-service marina with winter and summer storage, in-and-out service, jet ski ramps, gas, boat launch, repair shop, and boat sales. The dock has approximately 85 slips.

Pentwater Yacht Club: A membership-based not-for-profit organization that includes a restaurant, dining room, deck, kayak racks, broadside tie-up, and a few slips.

LOCAL FUNDING FOR DREDGING

In July 2012, Pentwater undertook their own dredging efforts as federal funding was not available. Funding was provided as follows:

- Oceana County Community Foundation fund: \$45,000
- Pentwater Village: \$15,000
- Pentwater Lake Improvement Board: \$15,000

In December 2013, the Pentwater Harbor Research Committee predicted that approximately \$50,000 per year in non-federal funding will be required for the foreseeable future in order to keep the Pentwater channel clear for navigation. The committee proposed that this funding be offered by four sources: Village of Pentwater, Pentwater Township, Pentwater Lake Improvement Board, and “private funds under extraordinary conditions.”

Source: Pentwater Harbor Research Committee
(December 2012)

VISIONING AND PLANNING

COMMUNITY LIABILITIES

As part of the visioning process, the community self-identified the following economic, environmental, and social barriers:



Figure 3: Weaknesses or barriers reported by the community, where larger text size indicates a higher frequency of mentions. Source: Sustainable Small Harbors

COLLABORATORS

To draw upon community expertise, the following technical meetings were convened:

- Pentwater Chamber of Commerce;
- Downtown Development Authority;
- Village Planning Commission; and
- Historical Society (via written summary).

To facilitate implementation support, the following initial state and regional partners were identified:

- Regional Prosperity Initiative field staff;
- Michigan Sea Grant staff; and
- Michigan State University Extension staff.

PREFERRED ALTERNATIVE: “PENTWATER 2035”

“Pentwater 2035” represents a shared future vision of the community based on the charrette design process. The final design includes developing a Pentwater Marine Technology Institute, expanding marina facilities, and capitalizing on several redevelopment opportunities downtown and along the lakefront.

For the municipal boat launch focus area, the preferred alternative includes adding boat slips, moving the pavilion, adding an extended pier, and moving the sailing school sand launch to be adjacent to the boat ramp. As a potential site for the Pentwater Marine Technology Institute building, the site could be developed in phases to include additional structures as the institute expands. Fish habitat structures may be added to improve fish populations in Pentwater Lake.

For the downtown waterfront and municipal marina focus area, components from a prior marina improvement plan were incorporated, including additional slips and electrical upgrades. Bioswales and rain gardens were added to the municipal park design to help improve water quality in Pentwater Lake and serve as a demonstration project to educate residents about native plants, stormwater runoff, and actions residents can take to improve water quality in the lake. These green infrastructure components are in addition to existing stormwater infrastructure and could potentially be maintained by a volunteer garden/landscaping club to avoid adding maintenance work for the village staff. The design also suggests a destination restaurant on the Snug Harbor property. A “year-round” destination restaurant that would include banquet and meeting space with catering service could draw people from other communities into Pentwater.



Figure 4: Current view of boat launch (top) and artistic rendering (bottom) of the expanded dock and Pentwater Marine Technology Institute building. Source: Sustainable Small Harbors



Figure 5: Artistic rendering of proposed destination restaurant and municipal park modifications. Source: Sustainable Small Harbors

Full Charrette Report

For additional information on the three alternatives the community evaluated and the development of the “preferred alternative,” please see the full charrette report, [available for download on the website](#).

Its waterfront location would make it unique in the region.

For the harbor and channel focus area, design recommendations address Pentwater’s ongoing dredging needs.

Sedimentation control was suggested, including the identification of potential dune revegetation areas along Mears State Park and at the edge of the channel; this restoration will stabilize areas of soil and help to control sand

blowing away from the beach and further support prior temporary fencing efforts to slow air transport of sand. The preferred alternative suggests an expanded dredging area to prolong the dredging cycle, which could ultimately save in mobilization costs.

At the end of Bridge Street, a new pocket park, referred to as Bedstead Park, is designed as a connection point between downtown and the channel. The site was the location of the Bedstead Factory until 1900. This park would have a kayak launch and additional storage racks that the Village could rent to people, following the process used for current kayak storage service. The park would be located at the end of the channel, so it could support a boat crossing between there and the opposite side of the channel. A chain ferry, reminiscent of Pentwater's historic ferry crossing, is included in the design with landings on each side.

CONNECTIVITY

The harbor connections via car, bike, foot, and boat are all important in Pentwater. Lowell Street, 6th Street, and Hancock Street are key connections for pedestrians and vehicles. These streets should be designed as "Complete Streets," which are defined by their ability to be accessible to all transportation modes and abilities.

VALUE CAPTURE – INITIAL EFFORTS

As a part of the engagement process, the team encouraged the community to consider ways to increase year-round residency in Pentwater, namely by engaging in development of an educational institute to draw youth to the area and to capitalize on resident expertise. Value capture on the suggested improvements can occur through existing taxes and consideration of waterfront-specific financing options, including marine investment funds or water resources tax increment financing. The team



Figure 6: Expanded dredging area and dune restoration. Source: Sustainable Small Harbors



Figure 7: Artistic rendering of proposed "Bedstead Park," featuring a chain ferry landing, kayak storage racks, kayak launch, and bike share station. Source: Sustainable Small Harbors



Figure 7: Complete Street section of Lowell Street. The design is based on current right-of-ways and infrastructure. A six-foot designated bike path is designed on one side of the street and parking on the other. Source: Sustainable Small Harbors

outlined opportunities to incorporate the overall design vision into existing planning documents and provided an overview of potential funding sources.

ECONOMIC ANALYSIS

A summer tourist destination, Pentwater has historically relied on federal funding to keep the passage

to its harbor dredged to a navigable depth. The recent loss of that funding has resulted in a precarious situation with respect to harbor access, which could threaten the town's long-term economic sustainability. However, Pentwater residents and leaders may not choose to support development that would lead to larger summer

crowds. Thus, enhancing economic sustainability through development and traditional tax increment financing, which would be used to fund dredging, may not be a socially desirable solution.

The charrette designs include developing a Pentwater Marine Technology Institute (PMTI). One vision for the PMTI involves focusing on 3D design and automated manufacture of wooden boats. The institute would coordinate with colleges and universities to attract students and faculty, as well as relying on local engineering and fabricating talent. The PMTI would be consistent with the character of Pentwater, and it would provide year-round economic activity estimated at \$500,000 in goods and services. About \$25,000 per year would go toward funding dredging activities.

IMPLEMENTATION

USE OF DESIGN AND VISIONING PRODUCTS.

The “Pentwater 2035” Sustainable Small Harbor Study Report, Final Presentation, and funding opportunities documents are all posted to the Village Planning Commission webpage. In July 2015, all Planning Commissioners were advised to review the harbor study documents.

Pentwater Planning Commission Meeting Minutes (July 2015)

INITIAL IMPACTS. The planning commission updated their bylaws to include the goal to create and maintain a vision and long-term plan for village sustainability. In July 2015, a member of the Downtown Development Authority proposed an “Initiative – Entity/ Advocacy Matrix” to keep track of the progress of recommendations in the Sustainable Harbor Report. The matrix was suggested for review in August 2015, but there was no indication of this review in the minutes. A Village Councilor concurred that the Village needs a way to measure objectives and timeframes. He also stated that as a result of the Studies report, the Village

is already looking at making Lowell Street a “Complete Street.” Another planning commissioner noted the limits of what the village as a governing body can take action on. In June 2015, the Village Manager noted that a capital improvements plan was in progress.

Source: Pentwater Planning Commission Meeting Minutes (February 2016); Pentwater Planning Commission Meeting Minutes (July 2015)

CHALLENGES. Dredging continues to be a pressing concern in the community. Through the Pentwater Harbor Research Committee (pentwaterchannel.org), citizen volunteers have gathered information and communications about channel dredging. In support of the “citizen champion” model, one community member noted: “If it weren’t for [the committee], I’m not sure the channel would be open for larger boats.” The citizen-led funding structure for dredging is a new chapter for Pentwater.

In June 2016, Pentwater rallied local funds to conduct dredging in the channel. Funding was provided in part by the Pentwater Lake Improvement Board. However, dredging did not happen as planned. Locally reported channel depth in the spring of 2016 was 7 feet on the north side of the channel, forcing larger boats to enter Pentwater Lake only via the south side.

PRIORITIZATION AND FUNDING. In March 2015, the Village prepared and submitted an MDNR Michigan Waterways Grant Application for a Preliminary Engineering Study at the marina to upgrade 10 slips to 50-amp service. The application was approved in April 2015 and an engineering survey was conducted to inform the upgrade. While the work was planned for the spring of 2016, the upgrade was delayed due to a more pressing, unexpected infrastructural failure. In September 2015, Dockside Restaurant on Hancock Street was destroyed in

a fire. The extreme volume of water applied to the fire drained to the marina and washed out the wall on the north end of the marina. After the fire, the wall repair was given higher priority, so the electrical upgrade will be re-proposed for 2017.

MOMENTUM. Several participants have noted a resistance to change within the community, as many are very fond of Pentwater as it is. One community member reflected that Pentwater is big on “free enterprise,” suggesting that local government may be less likely to lead activities otherwise championed by private groups or individuals. There is also a reported sense that “I worked hard for 40 years, and I picked this place to lay back and relax.”

The “Pentwater Branding” initiative continues striving to “promote Pentwater as not only a year-round tourist destination, but as an exceptional place to live, work, grow a business, and retire” while also “preserving and promoting what is best about village life in the extended Pentwater community.” Based on findings that indicate 60 percent of visits to western Michigan are to visit a friend or relative, the branding initiative coined the tagline: “Discover Pentwater. Come for a day, a week, a life!”

Source: Pentwater Brand Collaborative (April 2015)

2.2 COMMUNITY ENGAGEMENT PROCESSES

The project leadership team and advisory board selected four representative small harbor communities in Michigan to serve as case studies for a conceptual version of the visioning process described in this guidebook. Two additional communities served as proof-of-concept demonstrations of a draft version of this guidebook. In both phases, community selection was based on five criteria: type of harbor (e.g., shallow draft, harbor of refuge), harbor location relative to the community

type (e.g., suburban, city, downtown), population size, current economic condition, and chance of successful implementation. Harbors were selected from across the state and included communities on multiple Great Lakes.

Over the course of six months, the research team conducted charrettes — multiple-day visioning meetings — in selected communities. This facilitated community visioning process is designed to solicit recommendations from community members that help

develop a long-term vision for the environmental, social, and economic sustainability of the community waterfront.

For the case study communities, researchers followed the NCI Charrette System, a three-phase, holistic, collaborative planning process during which a multiple-day design charrette was held as the central event (Figure 1). Single-day visits at the beginning and end of the project introduced the process and conveyed project outcomes.

Research, Education, Charrette Preparation



1-9 months

Charrette



2-4 months

Plan Implementation



Figure 1: Phases of the National Charrette Institute planning process. Source: National Charrette Institute.

The project team adopted a “one day – three day – one day” format for each case study community engagement cycle (Figure 2).

The initial meeting was dedicated to project introduction and preliminary community discussion of assets, weaknesses, barriers, and connections. The design charrette, a three-day event, included three public events, technical meetings, feedback loops, and iterative design work. The final visit coincided with a regularly scheduled council meeting and was dedicated to delivery of a refined preferred alternative, including additional design renderings to illustrate the preferred alternative.

A final report prepared for each case study community was published to record the process and details of the 20-year vision. Additionally, community-specific economic analysis reports were developed to evaluate specific economic impacts of waterfront scenarios.

In the proof-of-concept phase, the project team adopted an abbreviated “one day – one day – one day” format, featuring an introductory meeting, a half-day community visioning event, and a final meeting. While this was a helpful first step in waterfront visioning, the project team concluded that this abbreviated format was less

robust than the full “1-3-1” format, lacking the richness provided by iterative public input meetings and the generation of a preferred alternative for the community. Future Sustainable Small Harbor community visioning efforts could explore additional variations on the schedule to meet community needs, while still leaving time to reflect on design elements and unite the community around a common vision.

A fifth full design charrette was also conducted in Rogers City during the proof-of-concept phase. Five charrette reports are available on the project webpage.

THREE VISITS TO THE COMMUNITY



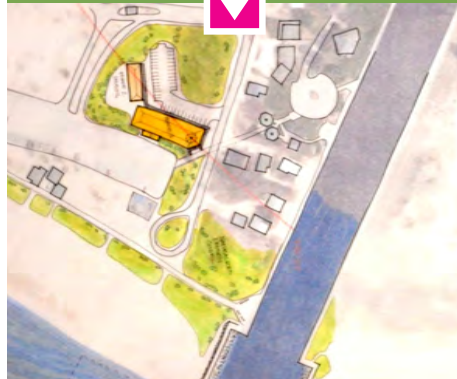
INITIAL VISIONING MEETING 1 DAY

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



DESIGN CHARRETTE 3 DAYS

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



FINAL PRESENTATION 1 DAY

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



Figure 2: The 1-3-1 structure for charrette community visits allowed for careful information gathering, an extended public workshop, and a final presentation of results.

2.3 BEST PRACTICES OBSERVED DURING CASE STUDY CHARRETTEs

Each community approached the design charrette in a unique manner. For details on each charrette, please see the five charrette reports available through the project website. See: sustainablemallharbors.org

Approaches and best practices include:

NEW BALTIMORE CHARRETTE

The local implementation team was led by the mayor, city administrative assistant, and a consultant grant writer/community planner. This community leadership and staffing dynamic made for an enthusiastic, capable team that was motivated and equipped to take action on the preferred alternative. The visioning process was characterized by an interest in providing public access, improving waterfront amenities, and capturing investment downtown. The team used charrette design renderings and referenced the public engagement process as part of a successful application to the Michigan Natural Resources Trust Fund grant to acquire a private marina property to expand public waterfront access. *Key words: Grant writing, use of design renderings*

PENTWATER CHARRETTE

The local team was led by the village president, zoning administrator, harbor research committee chair, and village manager. The team was characterized by the engagement of motivated, willing citizen volunteers. As a retirement community, Pentwater has attracted bright, capable people, increasing the community's volunteer capacity. The likelihood of the preferred alternative gaining traction will benefit from this group of professional retirees' vision and dedication. The visioning process was characterized by a stated

need for dredging assistance through improved funding mechanisms, interest in developing various housing options, enabling walkability, and bringing more people to the area. Initial outcomes include planning for a Pentwater Marine Technology Institute: an educational, non-governmental organization for marine education, teaching, and learning. The institute would leverage existing intellectual talent and community capacity by creating a formal structure for knowledge transfer. This organization would serve to bring new multi-generational educational opportunities and youth to the area as an economic stimulus. *Key words: Community capacity, dredging, youth*

AU GRES CHARRETTE

The local team was led by the city manager and city park manager. The state, which held the riverside Au Gres mooring facility for decades, intends to return ownership to the city. This scenario provides an opportunity for the city to determine best use for the currently vacant property, which sits near the heart of the downtown area. The visioning process was characterized by interest in bringing more people to the city, willingness to change uses, and identification of opportunities to increase connectivity between the city, river, bay, and boat access site — a unique challenge due to the distance between downtown Au Gres and Saginaw Bay. Repurposing the rarely used marina as a public space, while continuing to support natural resources tourism at the boat access site, was a key shift. Due to the local impact of a state highway bisecting the downtown area, involving the Michigan Department of Transportation (MDOT) in

implementation efforts will be key. Au Gres has been awarded a grant from the Saginaw Chippewa Indian Tribe for proposed improvements at the mooring facility property, which was the central focus of the charrette. Including tribal interests, as applicable, is a best practice; here, the effort included suggesting that signage include a native language component. *Key words: Tribes, connectivity, public access, MDOT*

ONTONAGON CHARRETTE

The local team was led by the village manager, village president, and a local citizen. Efforts were leveraged by the local citizen champion — a recent downtown business manager — who dedicated many hours to promoting charrette events and engaging the media. Volunteer-led community outreach paired with strategic invitations from the village manager yielded the most well-attended of the case study charrettes. Identification and activation of key players was a lesson evolving from this engagement process. The fact that invitations were made by local contacts established a sense of trust and willingness to engage in this effort to revitalize the community. Further, extensive media coverage helped build excitement about the process. The visioning process was characterized by interest in finding a balance among residential, recreational, and industrial use. The village has since seen reestablishment of the Downtown Development Authority as a critical driver in maintaining momentum. This is an excellent example of a community activating the preferred alternative vision by identifying an implementation team. *Key words: Leadership (staff and volunteer), media, Downtown Development Authority, industry*

2.4 ATTRIBUTES OF A SUSTAINABLE HARBOR

In the process of engaging small harbor communities, several characteristics of sustainable harbors were brought to light. Many of these features link

back to the concept of placemaking, as introduced in Section 1.2 “Connecting people to place — building connectedness and opportunity.”

For an illustrated summary of these features, see Figure 1: Visitor Attractions.



Figure 1: Components of a robust, potentially sustainable harbor. Source: Michigan Sea Grant

3.0 ECONOMIC SUSTAINABILITY



SUSTAINABLE
SMALL
HARBORS

3.1 CHARACTERIZING ECONOMIC SUSTAINABILITY OF SMALL HARBORS

For this project, “economic sustainability” was characterized as the ability of small harbors to self-fund their continued operation and maintenance costs in the face of decreased federal funding. Many small harbors are not financially viable in the sense that revenues no longer cover costs. Faced with this situation, harbor operators have a set of potential responses.

These include:

- Reducing operations,
- Seeking additional external funding,
- Increasing fees,
- Increasing taxes, and
- Undertaking activities that increase revenues relative to costs.

Operators could choose one or more of these potential responses, each having potential complications. Reducing dredging can affect accessibility. Securing additional external funding is challenging as it may require operators to substantially demonstrate how useful those expenditures would be. Increasing slip fees can have an uncertain impact on revenues. Tax increases to local property owners and businesses require local political support and are typically unpopular. Finally, undertaking activities that increase revenues relative to costs (such as harbor infrastructure improvements) can be complex and expensive.

3.2 SMALL HARBOR ECONOMIC SUSTAINABILITY CONCEPTS

Small harbors can be economically complex. Many small harbors and their communities are symbiotic; desirable harbors lead to more visits and expenditures in both harbors and harbor towns. As a result, undertaking any of the activities previously described can impact outcomes for both entities.

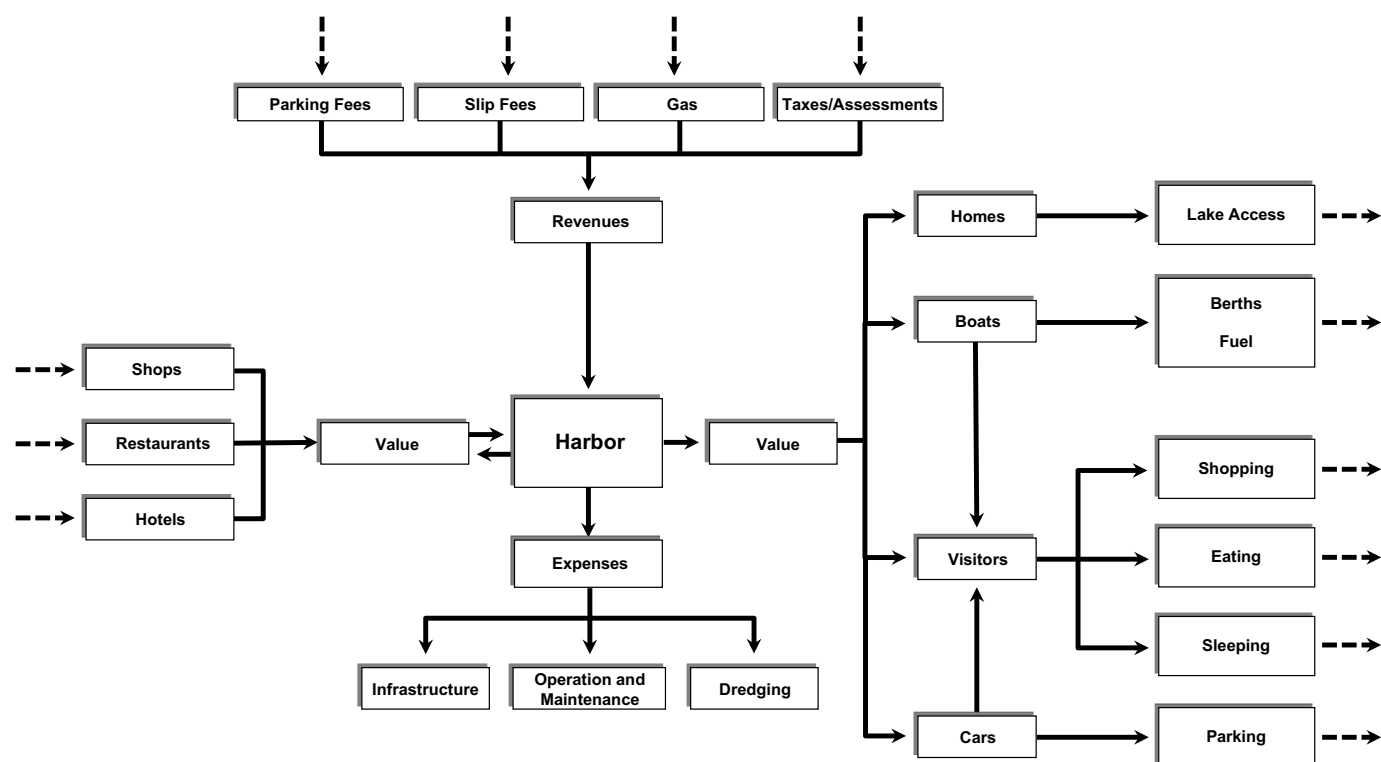


Figure 1: Economic relationships between a harbor and its users. Source: Veritas Economic Consulting, LLC

As Figure 1 shows, the harbor provides economic value to shops, restaurants, and properties in the harbor town. It also provides a sense of place to residents and visitors. Visitors receive value as they purchase berths and fuel, shop, eat, stay overnight, and park. Their expenditures are received in the form of revenue, which represents value received by shops,

restaurants, and hotels. The harbor receives revenues from providing services, such as gas sales and fees for slips and parking, as well as potential revenues from taxes and assessments. The harbor incurs normal operating expenses, including salaries, utilities, and routine maintenance. The harbor may also incur periodic dredging or infrastructure replacement expenses.

To evaluate this value capture concept, an economic model was developed to support characterizing potential economic outcomes at four case study harbors (Au Gres, New Baltimore, Ontonagon, and Pentwater). These were characterized in the charrette process, as documented in Section 2 “Community Profiles.”

An economic model was developed to support characterizing potential economic outcomes at four case study harbors (Au Gres, New Baltimore, Ontonagon and Pentwater). The most comprehensive strategies to address small harbor sustainability include undertaking activities to increase revenues relative to costs. These were characterized in the charrette process.

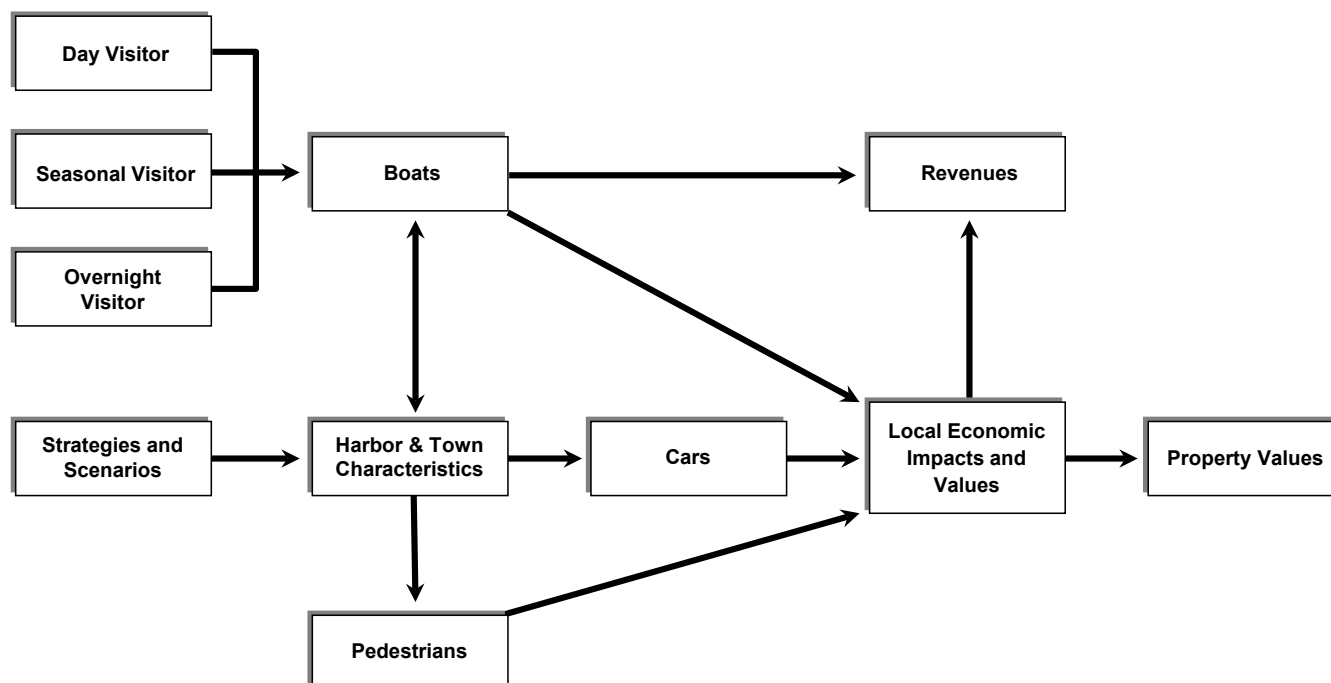


Figure 2: Economic model architecture: strategies and scenarios connect to costs and revenues. Source: Veritas Economic Consulting, LLC

As Figure 2 shows, strategies developed during the charrette process would influence harbor and town characteristics, and there are implementation costs associated with each suggested strategy. The harbor and town characteristics impact the level of boat visits, pedestrian visits, and car visits. A vibrant harbor can draw additional visits. Changes in boat visits can drive changes in both harbor costs and harbor revenues, as when, for example, the harbor operator purchases and sells more gas and utility services.

Along with these trips come expenditures, which are represented by local economic impacts and values. With these expenditures, local businesses make profits and pay taxes. This change in value is a potential source of indirect revenue for the harbor. Also, along with improved tourism prospects, property values could potentially change. This is another improvement in value that could cause taxes to increase and be a potential source of revenue.

The economic simulation model is constructed to support the evaluation of sustainability strategies under different scenarios. This model interface supports the evaluation of results and strategy and scenario inputs and allows access to other parts of the computational model. The final economic analysis reports for the case study communities are available on the project website: sustainablemallharbors.org

Findings are summarized in the community profiles in Section 2 “Community Profiles.”

3.3 FINANCIAL INSTRUMENTS, PROGRAMS, AND STRATEGIES TO SUPPORT LONG-TERM SUSTAINABILITY

The project team recognizes that funding 20-year waterfront visions can be expensive. Furthermore, it is imperative for communities to identify and implement mechanisms of capture to ensure that values accrued from community revitalization efforts are, in part, retained by the community in order to fund needed harbor maintenance and dredging.

INCORPORATING THE VISION IN PLANNING DOCUMENTS

To facilitate adoption and eventual implementation of the suggested 20-year vision, it is imperative to incorporate the vision elements in planning documents. This effectively uses any existing planning framework to ensure the vision is not abandoned. For example, state statute requires Michigan communities to review their master plan every five years. Using this cycle to incorporate vision elements will ensure general acknowledgment of the waterfront as a unique component of the community and will set the stage for subsequent planning efforts.

Master Plans

Statute requires local governments in Michigan to assess their current master plan every five years in order to decide if the plan needs to be updated. A master plan is prepared by the municipality's planning commission or consultant and is a policy document outlining the community's vision for the future. It should be the basis for, or influence, the community's future environmental protection, economic development, zoning, and other regulatory ordinances.

Source: Kurt H. Schindler, Michigan State University Extension msue.anr.msu.edu/news/most_local_governments_need_to_update_their_master_plan

Having a clear vision for the waterfront may simultaneously protect important aspects of the waterfront while enabling desired forms of development that stimulate economic activity.

For example, in a community where form-based code is established (e.g., building requirements for height and view lines), a potential developer knows the requirement and can move more efficiently than if faced with a lengthy review process. This advance permission is often perceived to add value to a property.

Additional opportunities for a community to tie in the 20-year vision include adoption of goals in a recreation plan, capital improvements plan, and downtown development authority plan. Planning resources may also include water or land trail plans, hazard mitigation plans, habitat or park plans, and more.

FUNDING STRATEGIES FOR MUNICIPAL MARINAS

Communities will need to explore financing opportunities from the local, state, and/or federal government,

including grants or loans supported through general fund revenue, bonds, or indirectly through taxes. Foundation funding and “crowd-sourcing” are also options.

Example Funding Opportunity

The Michigan Economic Development Corporation (MEDC) and Michigan State Housing Development Authority (MSHDA) have combined efforts to provide a “Public Spaces Community Places” funding opportunity to leverage citizen fundraising with public dollars to fund placemaking efforts. Local projects meeting fundraising goals can receive a matching grant from MEDC/MSHDA of up to \$50,000. Communities, non-profits, and other business entities can submit projects. Qualifying projects include:

- Public plaza and green space development,
- Access to public amenities,
- Farmers markets, community kitchens, pop-up retail and incubator spaces,
- Alley rehabilitation, and
- Any other place-based (or public space improvement) project.

Source: Michigan Economic Development Corporation

www.michiganbusiness.org/community/public-spaces-community-places

Additionally, several State agencies are well suited to assist coastal communities. For example, the Coastal Zone Management (CZM) Program in the Michigan Department of Environmental Quality (MDEQ) Office of the Great Lakes offers grant funds annually for creative projects that further the following objectives:

- Protect and restore healthy coastal ecosystems, including fish and wildlife habitat,
- Create and enhance public access to the Great Lakes and coastal resources,
- Preserve historic maritime structures,
- Revitalize urban waterfronts,
- Minimize loss of life and property in areas vulnerable to coastal hazards, including erosion, floods, and dangerous currents,
- Promote stewardship of coastal resources, and
- Protect coastal water quality.

Source: Michigan Department of Environmental Quality www.michigan.gov/deq/0,1607,7-135-3313_3677_3696--,00.html

The Michigan Department of Natural Resources (MDNR) administers a suite of recreation grant programs, including grants available from the Michigan Natural Resources Trust Fund, Land and Water Conservation Fund, and Recreation Passport. Grants for boating infrastructure, boat pump-outs, aquatic invasive species management, trails, and more are also available.

Source: Michigan Department of Natural Resources www.michigan.gov/dnr/0,4570,7-153-58225--,00.html

The MDNR Waterways Program also administers a grant competition. Waterways Program grants are funded through the Michigan State Waterways Fund from state marine fuel tax and water craft registrations. The Waterways Program is overseen by the MDNR Parks and Recreation Division. Harbor grant applications for the Waterways program require:

- A Recreation Harbor/Marina Facilities Five-Year Recreation Plan, which must include: a description of how the community intends to address recreational plan elements like facility size, marketing plans, dredging needs, frequency of dredging cycles, dredging volume, disposal location, infrastructure replacement schedules, annual maintenance schedules, and replacement or habilitation schedules of large investments like docks, buildings, etc.,
- The last three years of harbor logs, and
- The last three years of financial summaries for the harbor.

Source: Michigan Department of Natural Resources www.michigan.gov/dnr/0,4570,7-153-58225_37985-124962--,00.html

An example of a five-year recreation plan that focuses on waterfront recreation strategies can be found on the Sustainable Small Harbors project website; see: sustainablemallharbors.org

To provide additional guidance on potential funding opportunities, an inventory of potential grant and loan opportunities was developed. See: [Michigan Grant And Loan Funding Opportunities](#) (PDF)

VALUE CAPTURE

Once revitalization efforts are in place, communities must close the loop by capturing new economic value. This ensures funds are available to maintain the features that make waterfront communities unique. Efforts to capture value include:

- Marine investment fund,
- Tax strategies, such as
 - Implementing a water resources tax increment financing authority (TIFA),
 - Increasing the tax base,
 - Offering tax incentives to reward the type of development the community seeks, or
- Fee structure for public facilities.

A marine investment fund is a mechanism wherein non-marine users pay to help offset working waterfront infrastructure improvements. The National Working Waterfront Network (www.wateraccessus.com) developed a case study for the Sustainable Working Waterfronts Toolkit that features a community using this mechanism:

“In 2010, amendments to the [Portland, Maine] zoning code established a ‘non-marine use overlay zone’ along Commercial Street that allows compatible non-marine uses (no residential or hotels). Projects within the overlay zone must meet performance standards to facilitate marine uses on the piers and must contribute to a marine investment fund to support infrastructure improvements in the central waterfront. Outside of the overlay zone, ground floors must maintain 55 percent marine use, while 45 percent is allowed for compatible non-marine uses. These non-marine uses must still meet performance standards related to facilitating marine uses. When seeking tenants, pier owners must provide first option to water dependent uses (marine uses) at reasonable rates before leasing to non-marine uses.”

Source: Sustainable Working Waterfronts Toolkit (www.wateraccessus.com/case_study.cfm?ID=32) and the City of Portland, Maine, Planning and Urban Development Department.

For more information on establishing an overlay zone to fund a marine investment fund, read the full case study: *Portland, Maine: Balancing Maritime Uses and Waterfront Diversification Through Municipal Zoning*. See: www.wateraccessus.com/case_study.cfm?ID=32

Another mechanism to capture value is tax increment financing (TIF) that is specific to water resources. Tax increment financing is a public financing method that is used as a subsidy for redevelopment, infrastructure, and other community-improvement projects. Through the use of a TIF, municipalities typically divert future property tax revenue increases from a defined area or district toward an economic development project or public improvement project in the community. While communities can establish a TIF to be administered by existing authorities, it is also possible to establish a new authority that focuses on the waterfront: a water resources tax increment financing authority. A tax increment finance

authority (TIFA) is a local agency authorized to guide use of funds accrued through the TIF; the agency may perform some of the same tasks as a government agency (e.g., buying or selling property, issuing bonds for public improvement projects). Establishing a TIF requires designation of a district boundary, specific plans, and cost estimates for improvement projects. If an agency is being established, permission from the State Tax Commission is required. It is important to note that tax increment financing does not directly increase property taxes, but serves to capture and redirect a portion of currently paid and future taxes for a specific purpose. The annual, incremental increase in taxes is therefore not remitted to the local city or government agency, so a contingency for those revenues may be required.

For more information on the use of TIF for value capture at the waterfront, see the National Working Waterfront Network's report: *The Tiff Over TIF: Extending Tax Increment Financing to Municipal Maritime Infrastructure*. See: www.wateraccessus.com/docs/report/EDA_App_G_TheTiffOverTIF.pdf

For an example of a community that has established a water resource improvement TIFA, see the Saugatuck Douglas Harbor Plan website at: www.sdharborplan.com

MARKETING STRATEGIES

The local chamber of commerce, downtown development authority, regional development agency, planning commission, and other existing groups with shared interest in bringing more people to a particular community could be vital partners in developing marketing strategies. Many visions for the future will serve both residents and visitors. The purpose of a marketing campaign can be to attract new residents, repeat visitors, or people making their first trip to the harbor community.

CROSS-MARKETING

Visitors to the harbor and waterfront arrive from both land and water, so marketing efforts should be targeted accordingly. To reach new visitors from the region, consider targeted advertisements. For example, one case study community identified a neighboring inland community within a day's drive that could send new visitors. The inland community was assessed for perceived spending potential and feasibility of attracting single-day or overnight visitors. The harbor community's chamber of commerce then undertook a seasonal marketing campaign by placing advertisements in the inland community's weekly newspaper to attract new visitors.

To target boaters, a community's harbor and an updated roster of amenities should be listed on popular boating websites such as Active Captain and Marina Life. For more information, see Section 4.2.4 "Value Capture."

Also, communities should seek out opportunities to engage in regional marketing efforts such as Heritage Route 23 and collaborations with

Definition of Tax Increment Financing

Tax increment financing (TIF) is a financing technique used by local governments for development projects which uses future gains in taxes to cover the costs of current improvements. Tax increment financing allows local governments to use all or a portion of the taxes generated by new development within a designated TIF District to pay for improvement costs of that development. A TIF is designed to work as follows: as development occurs in the TIF District, tax revenue increases, and the increased tax revenue is used by the local government to pay off loans or bonds and to finance further redevelopment activities. The "increment" is the annual increase in tax revenue from the base year when the TIF was established.

Source: National Working Waterfront Network

local institutions to increase visitor awareness. Examples include maritime museums, bike trails, marine sanctuaries, lighthouses, and federal research stations.

COMMUNITY CHAMPIONS

Sports teams often have booster clubs. Several communities have found this volunteer support model useful at the community scale. Such a voluntary group may include representatives from existing community development groups, such as a chamber of commerce, and could extend to include city or village staff, key influencers, and motivated volunteers.

This approach to identifying and convening a group of key individuals to lead marketing and promotion efforts has been helpful in Boyne City, Michigan. The area chamber of commerce reported:

“Team Boyne is a voluntary group of members of the business community, nonprofits and leading organizations interested in promoting entrepreneurship and development. It is a welcoming environment where new and existing businesses can get confidential support and guidance from the rest of the Boyne City community. Team Boyne brings community leaders together on a monthly basis for some very important networking. It isn’t uncommon to have 25-30 people sitting around the table, each sharing what is new or important with their organization, as well as what they are hearing on the street. This way, everyone has a good, general understanding of where the community is going and any items that might need to be addressed. This process helps avoid surprises and circumvent parties working at cross purposes. It has been amazing how guards have come down and real dialogs have developed.”

Source: Boyne Area Chamber of Commerce.

Local Allies

An integral component of ensuring sustainability is identifying collaborators that will stand by efforts to improve social, environmental, and economic sustainability. To this end, efforts to gain allies include:

- Seeking out public-private partnerships to facilitate access to a wide range of funding sources,
- Establishing non-profit organizations in support of working waterfronts to improve access to funding sources and reap tax benefits, and
- Creating new or using existing trade associations in support of working waterfront initiatives.

For more information and advice on this approach, see the full article, “Proper Prior Partnerships Prevent Pitifully Poor Performance: Boyne City’s Team Boyne Experience,” in the November/December 2016 issue of *The Review* (pgs 35-37). Available at: ow.ly/n3op30baufC

PLACEMAKING

As introduced in Section 1.2 “Connecting people to place — building connectedness and opportunity,” “placemaking” is a term for efforts to develop and celebrate all that makes a community unique and livable. The State of Michigan has adopted and promoted this approach through the MIplace initiative (www.miplace.org/resources). The initiative identifies several key components of effective placemaking: housing, transportation, historic preservation, green space, talent, and entrepreneurship.

The Michigan Main Street program provides technical assistance to downtown businesses to help them revitalize and preserve their traditional commercial districts. For more information on the Michigan Economic Development Corporation’s Michigan Main Street Program, see: www.michiganbusiness.org/community/development-assistance/#MichiganMainStreet

An initial step in adopting a placemaking approach for a community is completing the Michigan State University Land Policy Institute’s Placemaking Assessment Tool. The tool is listed in this guidebook as a Highly Recommended action in Section 4.2.3 “Visioning/ Planning.” The tool helps communities develop quality places to live, work, and play that are attractive and functional. The LPI Placemaking Assessment Tool helps a community to:

- Understand the scope of what might be involved in different types of placemaking and which is the right one for their community,
- Think about placemaking in the context of larger efforts of strategic planning for the community and region,
- Determine their capacity to do effective placemaking at the present time, and
- Determine what to do to become more effective in the future.

To access the Michigan State University Land Policy Institute’s Placemaking Assessment Tool, see: landpolicy.msu.edu/resources/placemaking_assessment_tool

3.4 STRATEGIES FOR SELF-SUFFICIENCY: A SOUTH HAVEN CASE STUDY



As Michigan's Great Lakes recreational harbors look to a future of reduced reliance on federal support for harbor maintenance, some have already explored long-term management strategies aimed at developing a more self-sustainable economic approach. South Haven is a good example of such a community.

Located at the mouth of the Black River on Michigan's southwest coast, South Haven is typical of many Michigan small harbors. It was established in the mid-1800s for the lumber trade, and the harbor was improved in the early 20th century to handle more diverse waterborne freight and passenger steamships. By the 1960s and 70s, however, industrial activity on the waterfront had been phased out and the transition had begun to a harbor devoted exclusively to recreational boating, charter fishing, and other tourism-related activity.

Today, the South Haven harbor supports some 1,200 seasonal and transient boat slips accessed by about 3,100 feet of federally authorized channel and protected by over 4,300

feet of navigation structure, including breakwaters, piers, and revetments. South Haven also invested heavily in public access, including extensive river walk infrastructure linking the downtown to the harbor, marinas, piers, and beaches. This linkage is key for economic development.

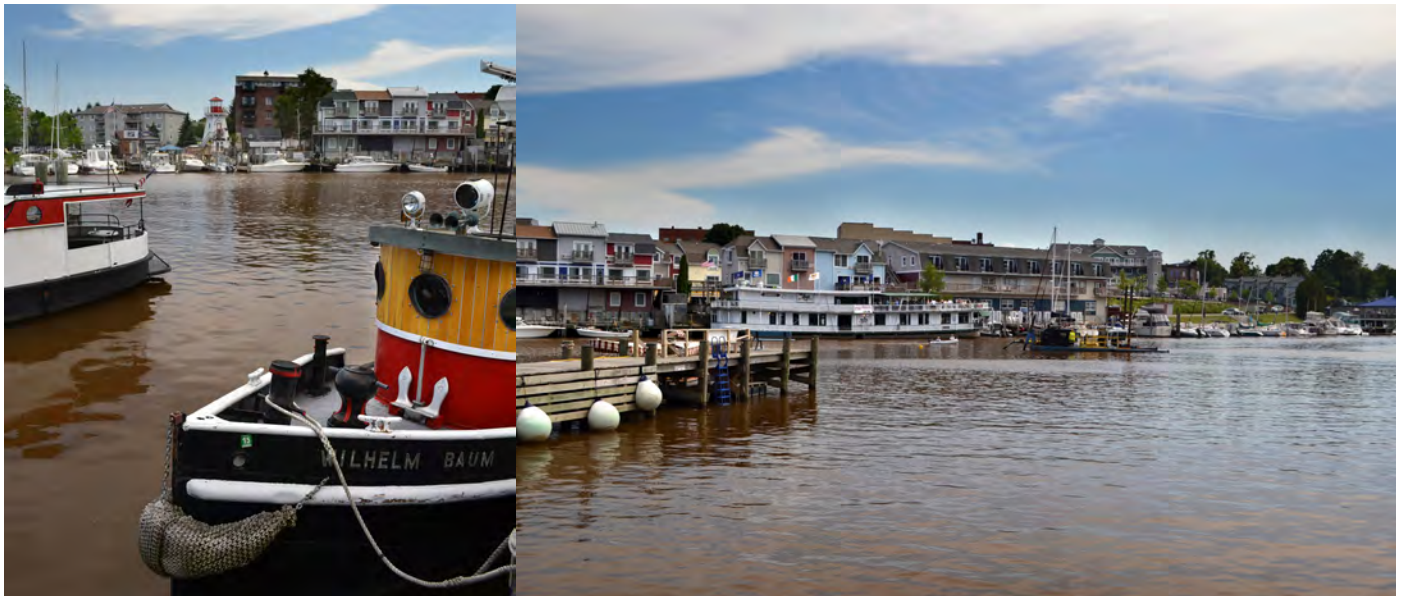
Historically, the federal channel was dredged by the U.S. Army Corps of Engineers at a frequency of every three to four years to clear both river initiated sediment loading and littoral drift of sand across the Lake Michigan pier heads. South Haven's most recent maintenance dredging project in 2013 removed a total of 22,262 cubic yards of material at a cost of about \$520,000.

While that project was largely supported by federal dollars as part of the Hurricane Sandy relief fund and by a State of Michigan emergency dredging grant, the city is not counting on such assistance being available on any regular basis going forward. Its current strategy is to establish a maintenance dredging program supported primarily by the city's marina operations and by the South

Haven Downtown Development Authority (DDA), while continuing to access state and federal assistance when available. This strategy is outlined in the River and Harbor Recreation Plan Amendment (February 23, 2015) to the City of South Haven Recreation Plan. A copy of this plan is available on the project website.

The financial objective is to be able to fund major dredging projects as necessary and to provide resources, as available, for other harbor-related capital improvement projects. The River and Harbor Recreation Plan includes a five-year capital improvement and operation plan that projects expenses through Fiscal Year 2019. This allows the community to anticipate revenue requirements.

To support this five-year strategy, the city aims to maintain a \$1 million balance among three funds designated for harbor operation and maintenance. Those three funds are the Marina Fund, the Black River Park Fund, and the River Maintenance Fund. The Marina Fund generates revenue from seasonal and transient docks operated by the



city at three municipal marina facilities (Northside, Southside, and Turning Basin) downriver from the Dykman Avenue bascule bridge. The Black River Park Fund is supported by seasonal and transient dock rentals at that facility upriver from the bridge and generates additional revenue from boat launching fees (both seasonal permits and daily fees) and parking fees at the boat launch.

In Fiscal Year 2016, the Marina and Black River Park funds generated a net revenue of \$253,533, representing about a 65/35 split between seasonal and transient boaters. Six percent of the net revenue produced by those two funds then goes to a third fund, the River Maintenance Fund, which is earmarked specifically for maintenance dredging. The River Maintenance Fund also includes the DDA's annual contribution, which totaled \$10,000 in 2016. An additional contributor to the fund in recent years has been the Michigan Maritime Museum located in the harbor's Turning Basin marina sector. Assured navigation access via a specially maintained 12-foot-deep channel is critical to the museum, which owns and operates the historic replica tall ship *Friends Good Will* as a principle revenue source. At the

end of Fiscal Year 2016, the River Maintenance Fund showed a balance of \$120,979. The Marina and Black River Park funds had balances of \$673,034 and \$268,078 respectively for a total balance of \$1,062,091 (above their target goal). As such, they are prepared for future dredging and operational costs planned for the next five years. It should be noted that, in 2013, the city funds operated at a deficit, so this process of financial sustainability was developed over a three-year period through planning and financial decisions regarding their waterfront resources.

During periods of extremely low water levels, South Haven has explored other approaches to support critical dredging needs, including establishment in 2005-2006 of a waterfront special assessment district that generated funds for emergency dredging. While special assessments for future crisis situations have not been ruled out, city management has learned not to extend multi-year pay options. There is no guarantee that water levels will recover over a certain period of time, thus creating a possible scenario of going back to special assessment district property owners for another assessment — with all the requisite

hearings and due diligence — before the first one is completed. The city's plan going forward is therefore 12-month special assessment payoff periods only.

The vagaries of weather and climate that necessitate flexibility and advance planning from a monetary standpoint also apply to regulatory readiness for small harbors. Channels can take years to silt in, but storm events can close a harbor overnight. As an extra measure of preparedness, a private engineering firm is on retainer to make sure that South Haven has all state and federal dredging permits kept current at all times so that, in emergency situations, critical time is not lost in having to apply for or renew applicable permits.

Finally, a collaborative approach has helped build more public awareness in South Haven of the importance of a reliably navigable harbor. By engaging the DDA and the Maritime Museum as harbor maintenance partners, the City has broadened community involvement and made it easier to marshal support in times of critical need.

3.5 BUYING A DREDGE: THE ULTIMATE IN HARBOR MAINTENANCE SELF-SUSTAINABILITY

By David L. Knight

Michigan's small harbors are not alone in the challenges they face to keep their harbors dredged despite diminished federal assistance in recent years. Shallow draft, recreational harbors throughout the Great Lakes — and even along United States seacoasts — are facing similar pressure as the U.S. Army Corps of Engineers (USACE) continues to reduce its dredging obligations for all but the busiest deep draft cargo ports.

Seeing little hope for change in USACE policy, and with congressional earmarks long since eliminated as a work-around option, a group of seven shallow draft ports on Oregon's Pacific Coast decided in 2014 to take matters into their own hands. The Oregon South Coast Ports Coalition was formed through an intergovernmental agreement to "address common problems and issues, and agree to act together whenever possible when contracting for goods and services." Not only was the issue of federal funding at play, but the ports' remote locations on Oregon's southern coastline also added to the cost and scheduling difficulty associated with bringing in dredging contractors.

Though the coalition never incorporated formally, wanting to avoid creation of another bureaucratic entity, its collective voice spoke loudly enough to the Oregon state legislature and governor to persuade them to buy a dredge for the coalition members' use. Using some \$900,000 from state lottery revenue, an Ellicott 360 SL swinging ladder portable dredge was



New Ellicott Dredge in Bandon, OR. Source: www.dredgingtoday.com

purchased at a cost of \$650,000, along with a 24-foot push boat and 3,000 feet of dredge pipe. The coalition members were responsible for deploying and operating the equipment, and several of the member communities sent crews to be trained on the equipment. Member harbors were also responsible for having appropriate permits for the dredging and management of the dredged material.

In October 2014, the dredge was mobilized for the first time at the port of Bandon, a community of about 3,000 people located at the mouth of the Coquille River. Having missed a critical dredging window two years previously due to the aforementioned scheduling and funding problems, the harbor's launch ramp and mooring areas were almost unusable from accumulated siltation. During the permitted dredging window between October and February, the dredge removed about 31,000 cubic feet of material from the launch and boat basin at an estimated

cost of \$3.35 per cubic yard (\$3.51 with depreciation of the barge included). The community's total outlay, after some reimbursements from the state, was a little over \$120,000. It is projected that Bandon's harbor will not have to be dredged again for six years (an average financial outlay of \$20,000/year).

Of all the strategies available to Michigan's recreational harbors looking to keep their channels dredged in the post-USACE era, buying a dredge has rarely been considered seriously. The daunting capital cost, plus operational expenses, training, state and federal permits, liability, and a myriad of other issues all work against a small-harbor community going into the dredging business for itself. One small harbor, though, decided to take on all the challenges and is forging ahead with just such a plan.



Fishtown, Leland, MI. Source: Sustainable Small Harbors

Leland Township Harbor, on the windward coast of the Leelanau Peninsula, requires removal of about 17,000 cubic feet of drifted sediment annually to keep its harbor navigable. In addition to being the home port for recreational, tribal fishing, and ferry service vessels to North and South Manitou islands, it is the only harbor of refuge for an 80-mile stretch of Lake Michigan coastline. Until recent years, the harbor was dredged annually by USACE. With the de-prioritization by USACE of all shallow draft harbors starting about ten years ago, as well as the elimination of congressional earmarks, Leland has had to seek other ways to remain open, including relying on emergency, one-time funding from the State of Michigan in 2013 and dipping into its own limited resources.

Leland finally went without dredging in 2016 and — even with above-normal Lake Michigan water levels at the time — faced closure and imminent loss of the 2017 boating season, not to speak of its long-term viability as a harbor. With cash reserves of \$300,000 on hand and few options left, township officials decided to purchase a \$500,000 eight-foot cutter head, hydraulic dredge manufactured by the DSC corporation in Greenbush, Michigan, and immediately embarked on a local fundraising campaign to generate the \$200,000 difference to avoid the cost of borrowing.

As of March 2017, the fundraising goal had been met, the down payment made, the dredge ordered, training arranged, and a dredging schedule set to accommodate an early spring dredging window. Leland Harbor Commission staff anticipates annual operating costs of about \$34,000 and a steep operational learning curve — not the least of which will involve compliance with rigorous oversight by the Michigan Department of Environmental Quality. But ongoing challenges notwithstanding, for the time being at least, Leland Harbor has its fate in its own hands.

4.0 TOOLS & TACTICS



SUSTAINABLE
SMALL
HARBORS

4.1 FLOWCHART

The *Michigan Sustainable Small Harbors Strategic Flowchart* describes a process for communities working to achieve a more sustainable future. The flowchart consists of four basic elements — Inventory, Visioning/Planning, Value Capture, and Implementation — that can be approached in a nearly sequential fashion. Each of the four elements has three levels: Highly Recommended, Recommended, and Additional Resources. The Highly Recommended level lists actions that are essential for a community working to create a sustainability plan. The Recommended level includes resources the project team and case study communities identified as being helpful. The last level, Additional

Resources, contains resources that a community should consider reading or processes they might want to undertake depending on community capacity.

Completion of the flowchart will not make a community “sustainable,” but it does establish a long-term plan toward sustainability and prepare communities for applying for grant funding to implement the plan.

A community should start by designating a person to guide the community through the entire process (process manager) and to coordinate engagement of the right people at the right time. Depending on the community, the process manager

could be the mayor, manager, planner, or a key citizen appointee (assuming they have enough authority or respect to elicit the necessary participation). This role can be shared between two or three individuals — such was the case in two of the case study communities — but a single point of contact is preferred. Once the process manager or process management team has been identified, they should begin guiding the community through the flowchart starting with the Inventory element.

Overall, the flowchart is likely a 6- to 12-month process, depending on community capacity and level of engagement in the individual elements.



Figure 1: The Michigan Small Sustainable Harbors Strategic Flowchart describes a process for communities working to achieve a more sustainable future.
Source: Sustainable Small Harbors

4.2 REFERENCES AND TACTICS

What follows is a detailed list of references and tactics contained within the strategic flowchart. Each listed item has an item description and a place to make notes on actions taken. Where applicable, a link to an online resource is provided.

A hyperlinked version of this document is available on the project website:

- sustainablemallharbors.org/tools-tactics

4.2.1 INVENTORY COMMUNITY



4.2.1 INVENTORY – COMMUNITY

The Inventory element calls for the compilation of existing community data and documents. This element contains two separate checklists: one for community documents and one for documents that have a waterfront emphasis. Both columns should be completed simultaneously. It is critical that a community first assess what work has already been done and what local information is available. In many cases, these documents are going to be readily available but could be significantly out of date. For example, in two of the case study communities, master plans were available but were out of date (more than five years old).

The Community Inventory element of the flowchart is necessary for a community to launch the process. This information is used in every remaining element. The first task is to identify community capacity and key stakeholders. These are the individuals necessary for successful implementation of the process and are not only elected officials. For the case study communities, the community leaders included hired consultants, engaged citizenry, and city staff, in addition to elected officials and executive officers. With regards to documents gathered, a review of existing master plans can inform the community visioning process by building off of what has already been completed or, more commonly, identifying gaps in the planning process that need to be filled during the Visioning/Planning element. Information on zoning, public spaces, community infrastructure, demographics, economics, and tourism will all be used to inform the Visioning/Planning element and set the stage for successful value capture.

INVENTORY – COMMUNITY

HIGHLY RECOMMENDED

☐ **Identify community capacity and possible participants/leaders**

Identify people in the community that could help attain the goal of becoming a sustainable harbor. This may include harbor committees, local development organizations, community leaders, etc.

Document name / Comments: _____

☐ **Collect existing data and documents:**

☐ **Economic information**

Collect economic information that is available in your area. Economic information may include harbor and community budgets, funding mechanisms, grants received, etc.

Document name / Comments: _____

☐ **Existing tourist information (fliers, magazines, etc.) and wayfinding signage**

Collect existing tourist information and take note of the signage in your community. Observe if signage is sufficient for navigating through your community and guiding visitors toward important areas. Are there welcome signs? Does your harbor/waterfront access have signage?

Document name / Comments: _____

☐ **Recent planning or improvement grants received**

Collect any recent planning or improvement grants submitted or received. These documents will have information that will assist with the Visioning/Planning element.

Document name / Comments: _____

☐ **Community master plan**

Collect your community's current master plan and determine if there are any fixed plans to update the plan. A master plan is a policy document outlining a community's vision for the future. It should be the basis for — or an influence on — the community's future environmental protection, economic development, zoning, and other regulatory ordinances. In Michigan, statute requires local governments to assess their current master plan every five years in order to decide if the plan needs to be updated.

Document name / Comments: _____

☐ **Zoning maps**

Collect your community's zoning maps, especially those that include your harbor, downtown, and adjacent land areas. Keep these accessible for future visioning and planning efforts. Zoning ordinances are one way to formalize and implement components of a community master plan.

Document name / Comments: _____

INVENTORY – COMMUNITY

HIGHLY RECOMMENDED

☐ **Capital improvement plan**

Collect your community's most recent capital improvement plan (CIP). Keep this accessible for future visioning and planning efforts. A capital improvement plan is a short-range plan, usually four to ten years, which identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan.

Document name / Comments: _____

☐ **Parks and recreation plan**

Collect your community's most recent parks and recreation plan. Keep this accessible for future visioning and planning efforts.

Document name / Comments: _____

☐ **Regional plan(s)**

Collect your community's most recent regional plan(s). For example, explore the Michigan Association of Regions resources to see what is available for your region.

miregions.com

Document name / Comments: _____

☐ **Land use data**

To better understand the impacts of land use and other management decisions, reviewing maps that document land cover (forests, development, wetlands, etc.) and how it has changed is essential. Land cover information may be available from your local planning department or agency. The NOAA Office for Coastal Management provides land use resources through Digital Coast.

Digital Coast: www.coast.noaa.gov/digitalcoast

Land Cover Atlas: www.coast.noaa.gov/digitalcoast/data/ccapregional

Document name / Comments: _____

INVENTORY – COMMUNITY

RECOMMENDED

□ **Collect existing data and documents:**

□ **Organizational/leadership charts of the community**

Collect organizational/leadership charts for your community. This may help with contacting relevant people and identifying potential task leaders.

Document name / Comments: _____

□ **Employment and related census data**

Collect your community's most recent census data from online sources or your community's management offices. Census data help during planning efforts to identify trends in economy, population, etc. This information also can be used to compare local, state, and regional statistics.

datausa.io/?gclid=CLX51JTYu8wCFQgoaQodqgNLQ

Document name / Comments: _____

□ **Aerial photos, maps, and GIS**

Collect available aerial photos, maps, and geographic information system (GIS) files for your community. Aerial photos can be obtained from Google Earth or other sources. Your community offices may have aerial photos, maps, or GIS data that will be useful during visioning and planning. In Section 4.2.2 “Inventory — Waterfront” you will be encouraged to access waterfront images.

google.com/earth

Document name / Comments: _____

□ **User feedback and surveys**

Collect your community's user feedback reports and surveys. Communities often survey residents when updating recreation or master plans.

Document name / Comments: _____

4.2.2 INVENTORY WATERFRONT



4.2.2 INVENTORY – WATERFRONT

The second half of the Inventory element is directly related to the waterfront and harbor aspects of the community. The required information includes municipal harbor statistics and an evaluation of environmental conditions, including historical water level variation and sediment dynamics. The municipal harbor statistics are useful for the Visioning/Planning element and are required as part of the Michigan DNR Recreation Grant Programs, which are featured in the Value Capture and Implementation elements. Evaluating existing environmental conditions will aid a community in formulating capital improvement plans and better planning for dredging cycles.

The project team also highly recommends communities complete the Michigan Clean Marina Program self-assessment checklist, a list of environmental best practices for marinas and harbors that, if completed, will contribute to a sustainability plan. Finally, there are several documents regarding harbor resiliency and best practices that are recommended for community leadership review, both for inspiration and for future planning purposes. These documents are a compilation of resources that other communities have used to plan for a more sustainable future.

INVENTORY – WATERFRONT

HIGHLY RECOMMENDED

□ **Collect marina statistics (boats berthed or launched, slip demand, etc.):**

□ **Compile three years of harbor financial summaries**

Collect three years of municipal harbor financial summaries, both for the broader balance sheet and for submitting for MDNR grants.

Document name / Comments: _____

□ **Compile three years of harbor logs**

Collect three years of harbor logs (boats berthed or launched, slip demand, etc.) that demonstrate harbor use based on watercraft type, length of stay, etc.

Document name / Comments: _____

□ **Complete the Clean Marina self-assessment checklist**

The Michigan Clean Marina Program is a voluntary certification-based program for marina and boatyard operators to pledge to maintain and improve Michigan's waterways by reducing or eliminating releases of harmful substances and phasing out practices that can damage aquatic environments. Best practices address petroleum control, sewage handling, stormwater management, and other issues that impact water quality. The self-assessment checklist provides an overview of the mandatory and recommended best management practices required for certification. Note: pursuing certification is suggested in the Implementation element.

miseagrant.umich.edu/michigan-clean-marina-program/resources

Document name / Comments: _____

INVENTORY – WATERFRONT

HIGHLY RECOMMENDED

□ **Determine water level variances**

Use U.S. Army Corps of Engineers (USACE) historical water level data to determine the range of water levels that harbor and waterfront infrastructure could be exposed to during its life. This will aid in operations and management plans.

- **Great Lakes Lake Level Viewer — NOAA:** A visualization tool about changing lake levels.

www.coast.noaa.gov/digitalcoast/tools/llv

- **Water Level Bulletins and Forecasts — U.S. Army Corps of Engineers:** Historic, current and predicted water levels.

www.lre.usace.army.mil/Missions/GreatLakesInformation/GreatLakesWaterLevels.aspx

- **Great Lakes Water Level Dashboard — NOAA:** View current, historical, and projected water levels.

www.glerl.noaa.gov/data/dashboard/GLWLD.html

- **Great Lakes Hydro-Climate Dashboard — NOAA:** Includes data on drivers behind water levels.

www.glerl.noaa.gov/data/dashboard/GLHCD.html

Document name / Comments: _____

□ **Assess local sediment dynamics**

Document the local sources of sediment and primary transport mechanisms using Section 1.4 “Dredging in the Great Lakes” as a guide. This will assist the community in better planning for dredging and maintenance and, in some cases, could lead to strategies for alleviating sediment deposition through preventative measures.

Document name / Comments: _____

INVENTORY – WATERFRONT

RECOMMENDED

□ **Collect existing data and documents:**

□ **U.S. Army Corps of Engineers jurisdiction and federal dredging**

Determine who has dredging jurisdiction for your harbor and harbor entrance, as well as the extent of U.S. Army Corps of Engineers boundaries. Collect dredging logs to assess the amount and frequency of dredging for operations and maintenance planning purposes.

Document name / Comments: _____

□ **U.S. Army Corps of Engineers oblique waterfront photos**

The U.S. Army Corps of Engineers has high-resolution oblique photos of Great Lakes shorelines available online. The photos are useful for waterfront planning.

<http://greatlakes.erdc.dren.mil> or <http://greatlakes.usace.army.mil>

Document name / Comments: _____

INVENTORY – WATERFRONT

ADDITIONAL RESOURCES

☐ **Evaluate harbor resilience**

Read *Reinforcing our Waterfronts: Increased Resilience at Marinas and Harbors*. This document summarizes climate-related risks and impacts for marina and harbor owners and the best management practices to prepare for these risks. Risks addressed include fluctuating water levels, storm frequency and intensity, and changes in precipitation and temperature. The document also includes tools and resources for assessing and preparing for risks.

miseagrant.umich.edu/wp-content/blogs.dir/1/files/2012/05/14-728-Increase-Resilience-at-Marinas-and-Harbors.pdf

Document name / Comments: _____

☐ **Track Great Lakes Region: Quarterly Climate Impacts and Outlook reports**

U.S. and Canadian organizations in the Great Lakes region contribute to the publication of these quarterly reports, which include a snapshot of information on temperature, precipitation, water levels, ice cover, and impacts to agriculture, transportation, wildlife, coastal erosion, recreation, and tourism.

mrcc.isws.illinois.edu/pubs/pubsGreatLakes.jsp

Document name / Comments: _____

☐ **Collect National Oceanic and Atmospheric Administration and Federal Emergency Management Agency flood mapping**

The Federal Emergency Management Agency (FEMA) website is one of the many places to find flood data. Determine the areas of your waterfront that are susceptible to flooding according to the National Oceanic and Atmospheric Administration (NOAA) and FEMA using this site.

msc.fema.gov/portal

Document name / Comments: _____

☐ **Review dynamic waterfront plan (if exists)**

If your community has a dynamic waterfront plan, review for completeness and accuracy. If the plan is out of date or does not exist, consider drafting a waterfront plan as part of your community planning efforts. Additional information will be provided in the Implementation element.

Document name / Comments: _____

☐ **Review hazard response plan (if exists)**

If your community has a hazard response plan, review for completeness and accuracy. If the plan is out of date or does not exist, consider drafting one as part of your community planning efforts. Additional information will be provided in the Implementation element.

Document name / Comments: _____

INVENTORY – WATERFRONT

ADDITIONAL RESOURCES

□ Read:

□ ***Achieving Hazard-Resilient Coastal & Waterfront Smart Growth***

This report from the National Oceanic and Atmospheric Administration and U.S. Environmental Protection Agency discusses the opportunities and challenges for coastal growth. It includes siting, design, plans, policies, engagement, communication, and education for coastal hazard resilience

coastalsmartgrowth.noaa.gov/pdf/hazard_resilience.pdf

Document name / Comments: _____

□ ***National Working Waterfronts Executive Summary***

This summary of the *National Sustainable Working Waterfronts Toolkit* contains information and tools for policy and regulation, financing, planning, zoning, taxation, community engagement, mapping, land conservation, and more. The executive summary includes key findings and recommendations for working waterfronts and a brief overview of the available tools.

http://api.ning.com/files/ECapeI07GTrOQSGjEoqxmSilaNotr*1S1CwhwQRWTYhBT*mkfC9lJbmFaIEpDDmU0RIl8Q2crc4lY4DQeMgVwz28g7xFIkC4/EDAProject_exec_summary_March2013.pdf

Document name / Comments: _____

□ ***Clean Marina Program Dredging Best Practices***

The *Dredging Best Practices* document contains information about dredging from the Clean Marina Program, including how to determine jurisdiction, what you need to get started, permits, funding, and more.

miseagrant.umich.edu/wp-content/blogs.dir/1/files/2012/05/15-702-CMP-Dredging-Practices.pdf

Document name / Comments: _____

□ ***Clean Marina Program Infrastructure Best Practices***

The *Infrastructure Best Practices* document contains information from the Clean Marina Program regarding infrastructure risks and adaptations to changes in climate and wear. The document provides information on how to evaluate infrastructure and steps for maintaining marina grounds and multiple types of shoreline infrastructure.

miseagrant.umich.edu/wp-content/blogs.dir/1/files/2012/05/15-703-Infrastructure-Best-Practices.pdf

Document name / Comments: _____

INVENTORY – WATERFRONT

ADDITIONAL RESOURCES

□ ***Great Lakes Nearshore and Coastal Systems***

This booklet briefly describes natural processes that take place along Great Lakes coasts and contains advice on bluff stabilization, runoff and groundwater control, and shoreline protection. It discusses the coastal environment and how coastal investments, including homes, developments, industrial buildings, and recreational facilities, can be protected. It is written for coastal property owners, potential owners, and those involved in related banking, insurance, realty, appraisal, and development industries.

glisa.umich.edu/media/files/NCA/MTIT_Coastal.pdf

Document name / Comments: _____

□ ***Living on the Coast: Protecting Investments in Shore Property on the Great Lakes***

This report discusses long-term changes in Great Lakes water levels, increased storm magnitude and frequency, the impact of increasing intensity of storm events (changes in ice cover, temperature, evaporation, algal blooms, etc.), erosion, and other environmental changes.

aqua.wisc.edu/publications/PDFs/LivingOnTheCoast.pdf

Document name / Comments: _____

4.2.3 VISIONING/ PLANNING



4.2.3 VISIONING/PLANNING

The second element on the flowchart is Visioning/Planning. To implement a sustainable plan, the community must be involved in the planning process. A community-involved planning process is required as part of the Michigan DNR Recreation Grant Program and is critical for the social component of a sustainable future. The project team recommends the community complete the Land Policy Institute's (LPI) Placemaking Assessment Tool, initiate the Michigan Economic Development Corporation (MEDC) Redevelopment Ready Community certification process, and determine their Walk Score using an online calculator. All of these tools are meant to initiate the Vision/Planning element.

Next, the community is ready to determine the appropriate level of community engagement and planning. For inspiration and future planning purposes, the community planning team and additional key community members should read the Sustainable Small Harbors case study community profiles in Section 2 of this guidebook. Additional detail is available in the full charrette reports and economic analysis reports, which are uploaded on the project website.

Community engagement in visioning for the waterfront is a key factor in the Sustainable Small Harbors project approach. At a minimum, a community should conduct a facilitated community visioning meeting focused on the waterfront. This meeting should be at least two hours long and should involve planning professionals. If a recent community planning process has not been initiated, it is recommended that the community conduct a National Charrette Institute (NCI) design charrette process or comparable multi-day planning event. The NCI Charrette is an iterative rapid design process involving public interaction. A scaled version of the NCI Charrette Process was used for the four case study communities with extremely positive outcomes. For more information, see the four case study charrette reports: sustainablemallharbors.org/communities

Finally, if a community does not have a dynamic water level plan, a hazard response plan, or a capital improvements plan, they should initiate the process of creating these plans, since they are important for implementing a long-term small harbor sustainability plan. For more information on these plans, see the Implementation element.

VISIONING/PLANNING

HIGHLY RECOMMENDED

□ **Conduct a facilitated community visioning meeting**

Typically, a professional from outside the community is brought in to facilitate a public meeting focused on community visioning. This engagement process may entail one or multiple meetings that include discussion about visions for the future, positives and negatives about the community, strengths and weaknesses, and types of future development within the community. It may even include one or more designers to help the community visually represent their ideas. A more in-depth option is the National Charrette Institute's charrette process (see listing in Recommended section).

Document name / Comments: _____

□ **Review case study community charrette reports, community profiles, and economic analysis reports**

Explore the products and processes used in the original Sustainable Small Harbor case study and proof-of-concept communities: Au Gres, New Baltimore, Ontonagon, Pentwater, Rogers City, and St. Ignace. Full charrette reports, economic analysis reports, and community profiles are available for Au Gres, New Baltimore, Ontonagon, and Pentwater. Community profiles are available in Section 2 of this guidebook. The charrette reports and economic reports are available on the project webpage.

sustainablesmallharbors.org/communities

Document name / Comments: _____

□ **Initiate the Michigan Economic Development Corporation (MEDC) Redevelopment Ready Communities (RRC) Best Practices certification process**

This document contains the best practices for the Michigan Economic Development Corporation (MEDC) Redevelopment Ready Communities Program. It promotes effective best management practices for redevelopment and analysis to determine if a community or site is ready for redevelopment. The site includes checklists to evaluate community plans, public outreach, zoning, development review, recruitment, education, economic development, marketing and promotion. An initial step in the certification process is to review the evaluation criteria in the *Michigan Economic Development Corporation (MEDC) Redevelopment Ready Communities (RRC) Best Practices* document.

michiganbusiness.org/cm/Files/Redevelopment_Ready_Communities/RRC-Best-Practices.pdf

Document name / Comments: _____

VISIONING/PLANNING

HIGHLY RECOMMENDED

□ **Complete Land Policy Institute (LPI) Placemaking Assessment Tool**

This site contains the Land Policy Institute's placemaking tool to help communities develop quality places to live, work, and play that are attractive and functional. The LPI Placemaking Assessment Tool was discussed in Section 3.3 "Financial instruments, programs, and strategies to support long-term sustainability."

The tool is divided into five parts:

1. Information and Background
2. Short Assessment for Standard, Creative, and Tactical Placemaking
3. Strategic Placemaking Assessment
4. Improving Your Community's Chances for Effective Placemaking
5. Additional Resources

landpolicy.msu.edu/resources/placemaking_assessment_tool

Document name / Comments: _____

□ **Engage in local, county, and regional planning efforts**

Contact your county planning and economic development corporation or organization. Form a relationship with them to find out if they can help with planning efforts and economic development efforts. Also explore regional planning efforts through the Michigan Association of Planning Regions. Michigan has fourteen regional planning agencies that serve a variety of federal, state, and local programs while providing planning support.

www.miregions.com

Document name / Comments: _____

VISIONING/PLANNING

RECOMMENDED

□ **Determine your community's waterfront and downtown Walk Score**

The Walk Score website provides a quick analysis of how walkable a specific location is. Use the addresses of your city center, town offices, and waterfront sites to assess the walkability and connectivity of your community. The site generates a score of 0-100 for walkability, transit friendliness, or bike friendliness based on distance to amenities, services, and programs.

An increased Walk Score is often associated with social and economic benefits to a community. Communities in Michigan with very high Walk Scores include several prominent waterfront communities including Traverse City, Holland, and Grand Haven. By completing the online Walk Score calculator, a community can benchmark the score with those from other communities.

walkscore.com

Document name / Comments: _____

□ **Review Michigan Coastal Community Working Waterfronts resources**

The Coastal Community Working Waterfronts report, with 11 case studies, was compiled to describe national and state trends related to working waterfronts, identify uses that occupy coastal land, highlight how communities are supporting and planning for their working waterfronts, and increase awareness of the importance of protecting water-dependent uses and public access to the Great Lakes.

The site contains case studies and a report on vibrant working waterfronts around Michigan. The report contains information about the economics, land use, best practices, and recommendations associated with Michigan's working waterfronts.

miseagrant.umich.edu/explore/coastal-communities/vibrant-waterfront-communities-case-studies

Direct link to Recommendations:

miseagrant.umich.edu/wp-content/blogs.dir/1/files/2013/08/13-719-Recommendations-Working-Waterfronts-Case-Study.pdf

Document name / Comments: _____

□ **Review Sustainable Working Waterfronts Toolkit**

The Sustainable Working Waterfronts Toolkit, developed by the National Working Waterfronts Network, includes information and tools for policy and regulation, financing, planning, zoning, taxation, community engagement, mapping, land conservation, and more. This link is to the financing section, which contains methods and sources of financial support.

wateraccessus.com

Document name / Comments: _____

VISIONING/PLANNING

RECOMMENDED

□ **Review *Smart Growth for Coastal & Waterfront Communities* report**

This report was written by the National Oceanic and Atmospheric Administration, U.S. Environmental Protection Agency, International City/County Management Association, and Rhode Island Sea Grant. It describes 10 elements of sustainable development in coastal and waterfront communities.

coastalsmartgrowth.noaa.gov/report.html

Document name / Comments: _____

□ **Prioritize natural solutions**

In conducting cyclical planning efforts, ensure that you prioritize environmental sustainability by seeking natural solutions to reduce risk and prolong the life of coastal infrastructure. Incorporating natural solutions in your planning efforts can improve the livability and economic stability of your community.

A variety of tools are available to support this effort:

- **Coastal Flood Exposure Mapper** — Use this tool to see where your community assets, including natural resources, are most vulnerable to coastal flooding, and use this information to start conversations about local risk reduction strategies.

coast.noaa.gov/digitalcoast/tools/flood-exposure.html

- **Green Infrastructure Mapping Guide** — Use this guide to develop a GIS work plan to prioritize green infrastructure for coastal resilience.

coast.noaa.gov/digitalcoast/training/gi-mapping.html

- **Habitat Priority Planning** — Input your data into this tool to create the informative maps and “what if” scenarios that help people make effective conservation and restoration decisions.

coast.noaa.gov/digitalcoast/tools/hpp.html

- **A Guide to Assessing Green Infrastructure Costs and Benefits for Flood Reduction** — Discover this six-step process for analyzing green infrastructure techniques for flood reduction and their respective costs and benefits.

coast.noaa.gov/digitalcoast/training/gi-cost-benefit.html

Document name / Comments: _____

□ **Conduct a National Charrette Institute (NCI) charrette**

This site contains information about the National Charrette Institute (NCI) accelerated design process (charrette) which is a multiple-day, collaborative design workshop with the public. It also has a database of NCI-accredited facilitators who can help your community conduct a charrette.

charretteinstitute.org

Document name / Comments: _____

VISIONING/PLANNING

ADDITIONAL RESOURCES

- **Read *Land Policy Institute (LPI) Building More Livable Communities: Corridor Design Portfolio***

The Michigan State University Land Policy Institute developed guidelines for community development. Themes include livability, governance, environment, community, and economy.

landpolicy.msu.edu/resources/mmpgs_corridor_design_portfolio

Document name / Comments: _____

- **Read *Land Policy Institute (LPI) Placemaking as an Economic Development Tool: A Placemaking Guidebook***

The Placemaking Guidebook seeks to assist neighborhoods and communities with quickly reshaping their thinking and acting on how effective placemaking can greatly enhance community and economic development. This publication includes the research that supports placemaking, identifies the elements (good form, public engagement, planning processes of placemaking and the regulatory tools) to achieve it, and then takes a deep dive into each of the four types of placemaking. To request an electronic copy of the report, contact the Land Policy Institute (see link below for an “Order Book” link).

landpolicy.msu.edu/resources/pmedtguidebook

Document name / Comments: _____

- **Complete Coastal Community Planning and Development Training**

NOAA Digital Coast provides a two-part training, the first of which is available online and can be completed independently of the second component; the second requires an in-person workshop. Resources include videos on development patterns and tools for influencing growth.

coast.noaa.gov/digitalcoast/training/resources/planning-development-workshop.html

Document name / Comments: _____

- **Engage with the Regional Prosperity Initiative**

This State of Michigan initiative combines public, private, and nonprofit sectors into similar service zones throughout the state. The program provides grants to State-designated planning regions and metropolitan planning organizations, as long as those organizations are already working with local businesses and communities.

michigan.gov/dtmb/0,5552,7-150-66155---,00.html

Document name / Comments: _____

4.2.4 VALUE CAPTURE



4.2.4 VALUE CAPTURE

The third element is Value Capture, which evolves from the Visioning/Planning element. This element establishes future economic sustainability and determines revenues required for long-term harbor maintenance. The first step is assembling municipal harbor documents, which are part of the Michigan Department of Natural Resources (MDNR) Recreation Grant program and are necessary for the completion of an income versus expenses balance sheet suggested in this element. A community needs to evaluate three years of expenses and revenues as part of determining a future economic sustainability plan. The MDNR Waterways Program indicates that a good example of a Five-Year Recreation Plan, featuring an income vs. expenses balance sheet, was provided by the City of South Haven. See: miseagrant.umich.edu/smallharborsustainability/files/2016/05/CityofSouthHavenRecPlanAmendment.pdf

Community leaders should explore value capture alternatives that leverage investment in municipal waterfront spaces. This includes reviewing the finance and economic sections of the *Sustainable Working Waterfronts Toolkit* and exploring which value capture options lend themselves to implementing the vision established in the previous element. There are also resources available to identify grant requirements for funding specific components of the community vision. Depending on the complexity of a future vision and community capacity, the community may want to hire a consultant to assist with value capture and subsequent implementation. For example, two of the four case study communities hired professional grant writers to assist in obtaining funding for projects. More information about various funding strategies and opportunities can be found in Section 3.3 “Financial instruments, programs, and strategies to support long-term sustainability.”

As part of case study development, a professional economist was retained to evaluate the economic impact of community-specific waterfront strategies. More information about the economic assessment can be found in Section 3 “Economic Sustainability.” A community might consider hiring an economist to evaluate which vision components would theoretically bring the most economic value to a community as part of implementation. Finally, the project team recommends that community leaders review several documents on planning, financing, and economic placemaking best practices, both for inspiration and for future value capture alternatives that could be part of the Implementation element.

VALUE CAPTURE

HIGHLY RECOMMENDED

- **Complete expense vs. income balance sheet for the marina/harbor, including lifecycle assessment, operations and maintenance, capital improvements, dredging, and administration**

The community should develop an expense vs. income balance sheet for municipal marina and/or waterfront amenities based on lifecycle cost analysis (LCA), operations and maintenance (O/M), capital improvements, dredging, and administration. This exercise will determine how much revenue the harbor/community will need to generate for these amenities to function in the long-term.

Document name / Comments: _____

- **Identify harbor marketing opportunities**

Outreach and marketing efforts can bring more people to the harbor, which will improve visitation to the harbor and community. Work with your regional development agency or regional planning commission (as described in Section 3) to get the word out about your harbor. Remember, visitors and residents come to the harbor from both land and water, so target marketing efforts accordingly. For example, ensure that your harbor is listed on popular boating websites such as Active Captain and Marina Life.

activecaptain.com

www.marinalife.com

Document name / Comments: _____

VALUE CAPTURE

HIGHLY RECOMMENDED

□ Evaluate value capture options

□ Marine investment fund

The community should consider establishing a marine investment fund to finance harbor operations through various revenue streams. For more information on establishing an overlay zone to fund a marine investment fund, read the Sustainable Working Waterfront Toolkit's *Case Study Portland, Maine: Balancing Maritime Uses and Waterfront Diversification Through Municipal Zoning* wateraccessus.com/case_study.cfm?ID=32

Document name / Comments: _____

□ Water resource tax increment financing (TIF)

The community should consider establishing tax increment financing (TIF) and a tax increment financing authority (TIFA) to finance waterfront improvement and harbor operations through tax capture. National Working Waterfront Network report: *The Tiff Over TIF: Extending Tax Increment Financing to Municipal Maritime Infrastructure*

wateraccessus.com/docs/report/EDA_App_G_TheTiffOverTIF.pdf

For an example of a community that has established a water resource improvement TIFA, see the Saugatuck Douglas Harbor Plan website.

sdharborplan.com

Document name / Comments: _____

□ Fee structures for public facilities

The community should evaluate its user fee-based structure for maintaining public facilities.

Document name / Comments: _____

□ Public/private partnerships

The community should evaluate public/private partnerships for enhanced revenue streams associated with waterfront amenities.

Document name / Comments: _____

□ Review grant funding opportunities and requirements

Refer to the Sustainable Small Harbors inventory of potential grant and loan funding opportunities. This list contains possible funding sources and grant opportunities for waterfront communities. Additionally, explore federal grants such as U.S. Department of Agriculture rural development grants and Great Lakes Restoration Initiative grants. Also, reach out to local and community foundations.

www.miseagrant.umich.edu/smallharborsustainability/files/2014/09/grant-loan-table.pdf

Document name / Comments: _____

VALUE CAPTURE

RECOMMENDED

☐ **Review MIplace Resources section**

The MIplace site includes a suite of information about placemaking. The Resources section hosts a set of tools to encourage creating, improving, and maintaining quality places in Michigan. Tools include loan and grant opportunities, resources, services, and techniques for waterfronts, downtowns, and other specific locations.

www.miplace.org/resources

Document name / Comments: _____

☐ **Review *Sustainable Working Waterfronts Toolkit* — Financing and Economics sections**

This site contains the National Working Waterfronts Network's *Sustainable Working Waterfronts Toolkit*, which has information and tools for policy and regulation, financing, planning, zoning, taxation, community engagement, mapping, land conservation and more.

- ☐ **Financing section** — In addition to the different sources of support (state, federal, trade associations, and foundations) this section identifies tools to address the issues facing working waterfronts. These include: grants, loans, loan guarantees, dedicated revenue, tax incentives, and technical/planning assistance.

www.wateraccessus.com/financing.cfm

- ☐ **Economics section** — The economics section contains background information from waterfront economic analysis around the country, trends, and resources.

www.wateraccessus.com/econ.cfm

Document name / Comments: _____

VALUE CAPTURE

ADDITIONAL RESOURCES

□ **Consider advanced (professional) economic modeling**

A community might consider hiring a professional economist to model different visioning scenarios to prioritize investment and plan improvements.

Document name / Comments: _____

□ **Read water trails economic data resources**

This National Parks Service site has economic studies of water trail implementation and grant opportunities. The resources can help communities with waterways — especially rivers — develop trails.

nps.gov/ncrc/portals/rivers/projpg/watertrails.htm

Document name / Comments: _____

□ **Read the Clean Marina Program *Planning and Financing Best Practices***

The Clean Marina Program Planning and Financing document lists best practices for marina adaptive planning.

miseagrant.umich.edu/wp-content/blogs.dir/1/files/2012/05/15-701-Planning-and-Financing-Best-Practices.pdf

Document name / Comments: _____

4.2.5 IMPLEMENTATION



4.2.5 IMPLEMENTATION

The fourth and final element is Implementation. This flowchart is designed to help communities develop small harbor sustainability plans. However, it is up to the communities to take the next step and implement their plans. This is also when the various plans that have been either created, updated, or are in the process of being updated should be synchronized.

The key here is to finalize an implementation committee and identify specific task leaders. It is likely that a majority of the implementation committee is already in place as part of the Vision/Planning and Value Capture elements. However, this is an opportunity to formalize the committee and draft action plans for specific objectives. In all four case study communities and the two proof-of-concept communities, the community leadership team — which became the implementation team — was a mixture of elected officials, municipal staff, and key private stakeholders. In two of the case study communities, this committee was formal and in place before the project began. In the other two case study communities, the community leadership team was more ad hoc but evolved to be more formal through the process.

The Implementation element is a continuation of the Vision/Planning element and the Value Capture element. Completion of this element helps a community determine which grants to apply for, and it creates a mechanism for value capture for the required long-term operation and maintenance of waterfront assets. The final element also includes contacting regional or state agencies that can assist in implementation efforts. There are significant resources available for waterfront communities that are organized and proactive.

IMPLEMENTATION

HIGHLY RECOMMENDED

☐ **Form implementation team and identify task leaders**

The implementation team may include participation from the mayor/manager/council chair, harbor master, downtown development authority (DDA), chamber of commerce, public/private enterprise, grant writing consultant, community planner, university extension staff, other state agency staff, or consultants. These people should be engaged to determine how they will be involved during the implementation stages. Developing a work plan may help the team ensure that goals are accomplished on a set timeline and tasks are assigned appropriately.

Document name / Comments: _____

☐ **Develop or update existing plans with focus on the waterfront**

Through the processes recommended in this guidebook, new plans may have been generated. Review the new and old plans and synchronize them for future use.

Update:

- ☐ Community master plan
- ☐ Five-year recreation plan (see example on project webpage: miseagrant.umich.edu/smallharborsustainability/files/2016/05/CityofSouthHavenRecPlanAmendment.pdf)
- ☐ Waterfront operations and maintenance plan
- ☐ Zoning and ordinance
- ☐ Capital improvement plan
- ☐ Emergency response plan

Document name / Comments: _____

IMPLEMENTATION

RECOMMENDED

□ **Apply to applicable grant programs**

Pursue the grants or loans that were deemed appropriate for your community, as identified in Section 4.2.4 “Value Capture.” Many grant applications require communities to exhibit prior community engagement and updated planning documents, making all investments in completing the recommendations in this guidebook foundational for a strong grant application. For example, as previously noted, to qualify for one of the popular Michigan Natural Resources Trust Fund grants, an updated five-year recreation plan is required.

Document name / Comments: _____

□ **Pursue Redevelopment Ready Communities certification**

The Redevelopment Ready Communities (RRC) program, hosted by the Michigan Economic Development Corporation, was introduced in the Visioning/Planning element. Certification in the RRC program formally recognizes communities for being proactive and business-friendly. Certified communities clearly signal they have effective development practices such as well-defined development procedures, a community-supported vision, an open and predictable review process, and compelling sites for developers to locate their latest projects.

michiganbusiness.org/community/development-assistance/#rrc

Document name / Comments: _____

□ **Pursue Clean Marina certification**

The Michigan Clean Marina Program was introduced in Section 4.2.2 “Inventory — Waterfront.” In order to receive certification as a Michigan Clean Marina, participants need to complete a 10-step process, including training, a self-evaluation checklist, and a site visit; fees apply. Certified marinas strive for continuous improvement in daily environmental stewardship practices.

michigancleanmarina.org

Document name / Comments: _____

□ **Create a dynamic water level plan**

Through this process, your community may have determined if a dynamic waterfront plan is important. The plan should address the average, high, and low situations determined in Section 4.2.2 “Inventory — Waterfront.” Varying water levels can impact dredging requirements, dock accessibility, and other waterfront amenities. This can be a component of your Waterfront Operations and Maintenance Plan.

Document name / Comments: _____

IMPLEMENTATION

ADDITIONAL RESOURCES

☐ **Create a directory of contacts for important agencies for engagement and implementation**

Develop a directory of contacts for important agencies that may be able to assist with engagement and implementation. In some cases, members of these groups will already be part of your local implementation team. The directory may include, but is not limited to:

- ☐ Michigan Department of Natural Resources (MDNR) (Waterways Program, Harbor Coordinator)
- ☐ Michigan Department of Environmental Quality (MDEQ) (Office of the Great Lakes, Coastal Zone Program)
- ☐ Michigan Economic Development Corporation (MEDC) (regional Community Assistance Team representative)
- ☐ Michigan Department of Transportation (MDOT)
- ☐ Michigan State Housing Development Authority (MSHDA)
- ☐ Michigan Sea Grant
- ☐ Michigan State University Extension
- ☐ Regional Council of Government (COG) and economic development agency/commission (see Section 4.2.3 “Visioning/Planning”)
- ☐ Local community foundations
- ☐ U.S. Army Corps of Engineers

Document name / Comments: _____
