



Report of the Great Lakes Commission's Ad Hoc Committee on Small Harbors and Coastal Communities

I. Introduction

The following is a report of the Great Lakes Commission's Ad Hoc Committee on Small Harbors and Coastal Communities. This report represents a nearly two-year effort to identify priorities for small harbors and coastal communities in the Great Lakes-St. Lawrence River basin. While the committee spent much time discussing and identifying priorities, needs and emerging issues for both small harbors and coastal communities, the body of this report focuses specifically on priorities and actions to address needs for small harbors. Information on the issues and challenges facing coastal communities and summaries of the many federal, state and provincial programs that contribute to their viability and sustainability are included in the appendices.

II. Purpose of the Ad Hoc Committee on Small Harbors and Coastal Communities

At its 2021 Semiannual Meeting, the Great Lakes Commission (GLC) formed an Ad Hoc Committee on Small Harbors and Coastal Communities (see Appendix I) to review past GLC policy in these areas, research the needs of small harbors (recreational, noncommercial, and small commercial) and coastal communities, and present one or more policy resolutions reflecting the findings of the committee.

While the original charge to the committee was to identify priorities and address policy needs for both small harbors and coastal communities, it became clear over time that the depth, breadth, and complexity of issues surrounding coastal communities would require a level of effort that was beyond the scope envisioned by the Great Lakes Commissioners when forming the committee.

After months of effort, the committee and GLC staff thus decided to narrow the scope of work to focus specifically on the policy needs of small harbors. Narrowing the scope of work to small harbors allows for a more focused discussion leading to actionable policy for the GLC to consider.

The rationale to narrow the scope of the effort is fourfold:

- The genesis of the decision to form an ad hoc committee was influenced primarily by the policy needs of small harbors. Three of the four resolutions originally reviewed for updating by the GLC's Resolutions Review Committee specifically focused on dredging, harbor maintenance and increased opportunities for the beneficial use of dredged material. These resolutions were fairly narrow in scope and related mostly to the needs of small recreational harbors.

- A fourth resolution (discussed later in the review process) focused on the need for federal legislation to support coastal community cleanup, revitalization and restoration in Great Lakes waterfront communities. This resolution was much broader in scope. The implications (and potential challenges) of adding this resolution into the mix and asking the Ad Hoc Committee to review these needs (alongside the small harbor-related resolutions) were not fully understood at the time. Staff and committee members have learned through extensive dialogue and information-gathering that attempting to address the broad range of issues surrounding coastal communities is untenable without the investment of more time and resources.
- Narrowing the scope of work to small harbors allows for a more focused discussion leading to actionable policy for the commission to consider.

III. Overview of Great Lakes and St. Lawrence Small Harbors

Great Lakes small harbors are shallow draft harbors primarily used for recreational purposes that may occasionally serve commercial interests such as fishing (both sport and commercial) and ferry services. They are often associated with waterfront communities and support and enhance local economies, culture, recreation and quality of life in these areas. Small harbors may be either publicly or privately owned.

Small harbors hold a special significance along the Great Lakes-St. Lawrence River. Local businesses rely on small harbors to provide tourists with watercraft rentals and marinas to dock their personal boats. Waterfront food, beverage, and lodging facilities benefit the tourism trade and contribute to the unique sense of place inherent in each small harbor in the region.

Great Lakes small harbors may also provide commercial opportunities for industries that rely on maritime transportation, such as commercial and sportfishing, ferry services, and small shipping enterprises, including vessel-based education and research. These ventures not only benefit the coastal communities adjacent to small harbors, but also the larger local region. Providing a place to recreate and engage in fishing and other commercial activities allows small harbor and surrounding waterfront communities to support a tourism-based economy. This in turn ensures that visitors will continue to frequent small harbors across the region, improving the quality of life for locals and tourists alike. Small harbors also provide a place for the shipping industry to transport cargo usually in volumes of less than one million tons per year. The livelihoods of visitors, locals, and business owners are determined by the water quality, navigability, and accessibility of small harbors; thus, it is essential that small harbors and their communities maintain a sustainable and resilient environment, ecosystem, and economy.

The U.S. portion of the Great Lakes supports 141 federally authorized harbors, 60 of which are deep draft commercial harbors and 81 are shallow draft/recreational harbors.



US Army Corps
of Engineers

Federal Harbors on the Great Lakes



Figure 1 (Appendix 7)

These 141 harbors are authorized under the Rivers and Harbors Act of 1899 which is the initial authority for the U.S. Army Corps of Engineers (USACE) to protect navigable waters in the U.S. and for the development of harbors and other construction and excavation. USACE, in addition to protecting and maintaining the countries navigable waterways, is the federal agency responsible for dredging the region's ports, harbors and connecting waterways. In addition to the federally authorized shallow draft/recreational harbors there are scores of small harbors that are not federally authorized, are not maintained by the USACE, but serve a variety of important local purposes. These will be discussed more fully in the sections below.

Following is a brief recap of priorities presented as issue summaries for small harbors. These summaries were developed based on a prioritization exercise conducted with the states and provinces in late 2021 (detailed in Appendix III) and consistent with committee discussion and the GLC's past policy related to small harbors. It should be noted that the committee spent much time discussing climate change impacts, the need to promote resiliency in small harbors and coastal communities, and how climate change has created emerging challenges for small harbors. In many cases, however, the issues identified are not "emerging" in the sense of being new but may be legacy or historic issues that have been exacerbated by the impacts of climate change, demographic and/or economic changes in the region, and/or changes in public policy.

Sediment Management and Dredging

Dredging of small commercial and recreational harbors has been an ongoing challenge for the Great Lakes states and provinces for many decades but has taken on greater importance over the past 15 years. About 3.3 million cubic yards of sediment is required to be dredged each year in U.S. Great Lakes ports, harbors and navigation channels. This dredging is necessary to maintain commercial and recreational navigation, support a vibrant economy, and reduce risk to human health and safety. Dredging is vital to ensure safe navigation for shippers engaged in maritime commerce and recreational boaters who utilize ports, harbors and shipping channels in the Great Lakes and the St. Lawrence River. Annual dredging requirements necessitate that the Great Lakes states and the U.S. Army Corps of Engineers (USACE) work together to plan for dredging projects that ultimately blend both federal and state regulatory standards into viable, cost-effective and environmentally sound management alternatives.

Managing dredged material in a manner that addresses both economic and environmental protection priorities is a challenge, but successful alternatives require continued collaboration among the port authorities, maritime interests, state resource agencies, and federal partners. Over the past two decades, as dredged material has generally become cleaner and confined disposal facilities (CDFs) reach their storage capacity, the need to find more opportunities to use dredged material beneficially also becomes more important.

Deep draft commercial harbors have historically taken precedence over shallow draft recreational harbors when the USACE establishes its annual workplan for dredging projects. The USACE does recognize the importance of small harbors to the Great Lakes and works to maintain these harbors especially remote and subsistence harbors, harbors running ferries that service islands, those that support commercial and Indigenous Nation fishing operations and those serving as U.S. Coast Guard stations for response, search, and rescue.

For the ten year period between 2001 and 2010, the USACE was able to consistently fund between 11-28 projects in shallow draft/recreational harbors (dredging and/or structural repairs). Between 2011 and 2016, funding challenges prevented the USACE from funding projects in shallow draft/recreational harbors except for 2014 (six projects) and 2016 (two projects). From 2017 through 2022 increased funding (primarily through congressionally directed spending) the USACE was able to fund dredging and structural repair projects at a handful of federally authorized shallow draft recreational harbors, 12 in 2017, 14 in 2018 and about four projects per year between 2019 and 2022. Increased funding over the past two fiscal years (discussed more fully below) has allowed the USACE to begin addressing dredging and maintenance needs at a larger number of shallow draft/recreational harbors.

Increased funding from congressionally directed spending requests and the *Infrastructure Investment and Jobs Act of 2021* (IIJA), USACE was able to fund 25 dredging and structural repair projects in small harbors in Fiscal Year (FY) 2023 with an equal number anticipated in FY 2024.

In FY 2022, the USACE funded 33 deep draft projects in the Great Lakes totaling 3,171,840 cubic yards of material. This included maintenance dredging in the channels of Lake St. Clair funded under the IIJA.

Also in FY 2022, the USACE funded five shallow draft projects totaling 151,850 cubic yards of material. This included maintenance dredging for Big Suamico Harbor in Brown County, Wisconsin, funded under the IIJA.



HISTORICAL SHALLOW DRAFT/ RECREATIONAL HARBOR FUNDING



Dredging & Structure Repairs

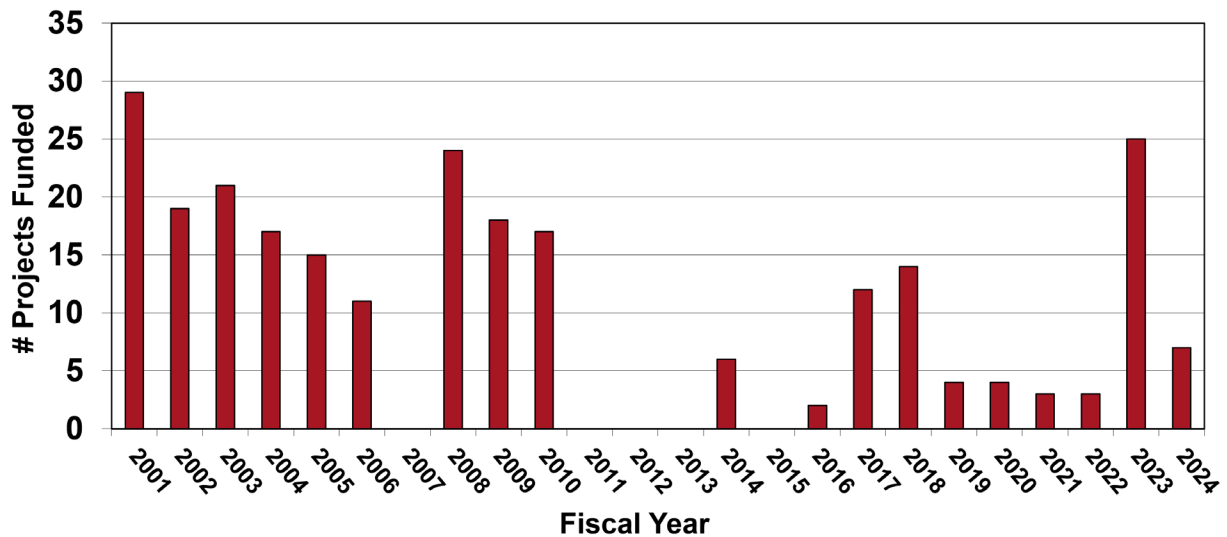


Figure 2 (Appendix 8)

In the Great Lakes Navigation System, it is estimated that there is currently a dredging backlog in shallow draft (recreational) harbors of approximately three million cubic yards of material. The USACE estimates that the backlog could be addressed and all of the shallow draft harbors could be adequately dredged at a cost of \$8 million annually.

Even with the additional federal funding to support dredging projects in shallow draft recreational harbors, states, provinces, and communities have had to think creatively about ways to continue dredging and conduct harbor maintenance to sustain business interests. One success story is the Lake Ontario Regional Dredging Council which is a shared dredged management program administered by the Niagara-Orleans Regional Alliance. The genesis of this program was a New York Department of State study on coastal resources that evaluated dredging needs for Lake Ontario counties. After reviewing the study, the interested counties established intermunicipal agreements for participation in the dredging council and identified funding needs and sources (i.e., pooled county resources) in order to issue a request for proposals for dredging services. By pooling their resources, the participating counties (accounting for 18 harbors) will be able to maintain dredging operations to keep their harbors open for recreation and other purposes.

In the Canadian portion of the Great Lakes-St. Lawrence basin, the federal government and the province of Québec agreed to develop new management tools for contaminated sediments and promote sustainable navigation on the St. Lawrence River, through the St. Lawrence Action Plan. To implement the plan, the governments organized their efforts into three main goals: improving water quality, protecting biodiversity, and ensuring sustainable use. Under the water quality goal, the subgoal to improve management tools for contaminated sediment aims to assess the extent of sediment contamination to better understand the areas of highest concern and support the integrated management committee for dredging and sediments. Other projects supporting the subgoal aim to reduce risks associated with sediment contamination, develop a registry of dredging activities, and study

the impacts of climate change on marine transportation. Advisory and coordination committees related to climate change, agriculture, and navigation develop and implement projects and consult the Agreement Steering Committee.

Harbor Infrastructure Maintenance, Repair and Safety

In addition to dredging, one of the greatest needs for small harbors relates to infrastructure maintenance and repair and harbor safety. Small harbors often don't have the resources to address these needs on a regular schedule, often relying on the USACE or state/provincial resource management or transportation agencies to help. Examples of the types of projects that are needed include maintenance work on breakwaters, piers, jetties and docks, as well as safety maintenance, replacement and repairs for breakwater railings, ladders, pier and dock surfaces, moorings, concrete and signage, etc.

Three important changes that have occurred recently at the federal level in the U.S. have provided some hope that infrastructure projects for small harbors may experience an increase in funding to address the highest priorities. These are: one, recent changes to the formulas for accessing funds under the Harbor Maintenance Trust Fund; two, the return of congressional directed spending opportunities; and, three, the passage of the IIJA. All are helping to address priority dredging and infrastructure maintenance projects at small harbors.

Harbor Maintenance Tax and Trust Fund

The Harbor Maintenance Tax (HMT) and the Harbor Maintenance Trust Fund (HMTF) were established in 1986 to fund the operation and maintenance of federally-authorized ports and harbors. The HMT is charged against the value of imports and domestic cargo arriving at U.S. ports that have federally-maintained harbors and channels with proceeds deposited into the HMTF. Appropriations from the HMTF are primarily used for maintenance dredging, dredged material management sites and placement areas, jetties, and breakwaters. Since 2002, there has been a growing gap between the annual amount of HMT collected and the annual amount of appropriations from the HMTF. The cumulative HMTF surplus rose to more than \$10 billion in FY 2019. Congress acted to address the harbor maintenance backlog by creating a spend-down plan that phases in increased annual HMTF expenditures. Over a period of 10 years (through 2030), this will exhaust the HMTF surplus and require USACE to fully allocate HMTF resources on an annual basis. These changes were made through the passage of the Water Resources Development Act (WRDA) in 2020. For the Great Lakes, this provided a significant additional source of funding for dredging and harbor maintenance projects in addition to the annual operations and maintenance (O&M) budget administered by USACE. WRDA 2020 requires the Great Lakes to receive not less than 13% of annual expenditures from HMTF. In addition, WRDA requires that nationally, not less than 15% of HMTF annual expenditures be directed to emerging harbors, those receiving less than one million tons of cargo annually.

These changes to the HMTF have made a tremendous difference in USACE's ability to maintain the nations' ports and harbors. The Great Lakes has benefited greatly from these funds, with 10 dredging projects in shallow draft recreational harbors being funded in FY 2023. However, there is still additional need in the Great Lakes for funding to support projects in shallow draft recreational harbors.

Congressionally Directed Spending and the IIJA

Historically, congressionally directed spending to individual projects provided supplemental funding for specific projects that otherwise would not receive funding under USACE's O&M budget. Congressionally

directed spending for individual projects, which served as a reliable source of supplemental funding for navigation projects, was discontinued in FY 2012 (calendar year 2011). Prior to 2011, there were several changes made by Congress adjusting the eligibility requirements for recipients of federal funding and adding processes to increase transparency related to congressional funding requests. These changes occurred during calendar years 2006-2010. These years corresponded with what is often referred to as the “dredging crisis” in the Great Lakes. USACE funding for Great Lakes navigation projects from FY 2006-FY2021 never exceeded \$180 million per year, with funding falling below \$100 million during six of those years. Additionally, a period of record low lake levels created an even greater need for dredging and navigation maintenance projects. Simultaneously, Congress discontinued the practice of allowing members to provide funding requests for specific projects (see Appendix VI for a more complete history of Great Lakes Navigation System funding).

Beginning in FY 2022, when congressionally directed spending requests for specific projects were reinstated, USACE’s budget (including O&M, congressional adds and stimulus funding) increased to more than \$400 million. The FY 2023 budget was also about \$400 million. These additional funds allowed USACE to begin to address the dredging backlog and fund necessary maintenance and safety projects on the Great Lakes. In FY 2023, \$26.6 million in congressionally directed spending allowed USACE to fund three projects at shallow draft recreational harbors. Of this amount, \$1.9M was designated to dredge the Burns Small Boat Harbor in Michigan City, Indiana, \$4.75 million was designated for structural repair and maintenance at Dunkirk Harbor in Chautauqua County, New York, and \$20 million was designated for structural repair to the east breakwall at Great Sodus Bay Harbor, a harbor of refuge on the south shore of Lake Ontario, in Wayne County, New York. IIJA funding also allowed USACE to fund an additional dredging project at a shallow draft recreational harbor.

Finally, USACE, through its normal O&M budget, was able to fund structural design and repair efforts at 11 shallow draft recreational harbors as well as fund two additional projects at shallow draft recreational harbors for breakwater safety and maintenance.

It is important to note that while the trend in federal funding has provided increased opportunity the past four years, this may not always be the case. Also, these funds can only be used at federally authorized harbors. There are many small harbors (mostly harbors of refuge) that are not federally authorized and therefore are ineligible to receive dredging and maintenance funds from USACE. The USACE does not track this information and does not have an estimate regarding how many of these nonfederally authorized harbors are in the Great Lakes navigation system. This is particularly true in Lake Ontario. For example, of the 19 harbors included in the original Lake Ontario Regional Dredging Plan, 10 harbors are not federally authorized.

Sustainable and Resilient Coastal Communities

Although the issues and recommended actions included later in this report focus to a large extent on the needs of small harbors, a discussion of the committee’s work on coastal communities is important to guide future work that may be undertaken by the GLC or its party states and provinces.

A common thread in the committee’s deliberations on the importance of coastal communities centered on sustainability and resilience. When considering the importance of developing sustainable and resilient coastal communities it is helpful to articulate the value and significance of these communities, as they are inextricably linked to the small harbors, ports and marinas attached to them.

There are many challenges being faced by coastal communities in the Great Lakes-St. Lawrence River region. Changes in climate, increased variability of lake levels, and other changing conditions continue to

affect the people, places, economy, and environment in coastal communities. The effects of these changes include increased risks to agriculture and aquaculture, recreation, maritime transportation and commercial navigation, marine and water and wastewater infrastructure, loss of biodiversity especially nearshore biological organisms, and impacts to shorelines and aquatic habitat, to name but a few.

Some of these challenges are acknowledged within the St. Lawrence Action Plan. For example, the sustainable management of water levels and flows is important to maintain the condition of ecosystems and enable recreational and industrial activities on the river. Water levels therefore need to be evaluated to support commercial and recreational navigation in light of current and future changes in the climate.

Great Lakes and St. Lawrence River coastal communities are important economic drivers for the eight states and two provinces of the region but also are situated in areas that include fragile and sensitive ecosystems in need of conservation and stewardship. Waterfronts historically have been centers of economic activity for coastal communities, supporting industries with freshwater, energy production, and part of a world-class waterborne transportation network for shipping raw materials and finished goods.

State, provincial and community leaders have long recognized the economic potential of freshwater to support the “blue economy” in the Great Lakes region and there is significant interest in understanding challenges and opportunities in this area. Multiple local, state, provincial and federal programs support healthy and sustainable coastal development, such as the U.S. federal Coastal Zone Management Program as implemented by the states and Québec’s “Advantage St. Lawrence”, among others.

While the economic potential of the region’s coastal communities is exciting it is largely untapped as many of these communities are socio-economically disadvantaged, sometimes isolated from centers of government and often without the necessary human capital and physical infrastructure to support community and ecosystem services for the residents and tourists that they depend on to support the local economy. The social and economic factors at play in coastal communities have a massive impact that extend far beyond the local geography along with the environmental ramifications of changing coastal ecosystems (terrestrial and aquatic) that are occurring at rapid rate due to climate change.

Therefore, more attention needs to be paid by government agencies and officials to social/environmental justice to support underserved coastal communities. One obstacle is the lack of a common approach to addressing these issues often stemming from outdated, narrow and inconsistent definitions of social/environmental justice and underserved communities. Various definitions of these terms are used in different ways and different situations and often there is confusion and lack of consistency regarding how these terms are used. Currently, there is no consensus definition for environmental justice and underserved communities. Because of inconsistent definitions and confusion over the meaning of terms, the committee developed a glossary of terms included in Appendix III.

IV. Actions to inform small harbors and coastal communities policy

Each year at its Semiannual and Annual Meetings, the GLC prepares, discusses, and acts on policy resolutions to address issues of interest to the agency. The work of the Ad Hoc Committee on Small Harbors and Coastal Communities will inform the development of future policy resolutions for GLC action. The following are potential actions related to dredging, harbor infrastructure safety and maintenance and sustainable and resilient coastal communities for the GLC to consider:

Dredging

- Continue to refine the definition of small harbors in concert with the states and provinces. Better understanding how states/provinces define small harbors to set policy and implement programs will help shape future work in this area. This action also applies to work associated with harbor infrastructure safety, maintenance and repair and building sustainable coastal communities.
- Continue to advocate for adequate funding for USACE for dredging projects in shallow draft recreational harbors, including ensuring the Great Lakes receives its proper share of funding through the HMTF.
- Continue to work with the states, provinces and USACE to increase opportunities for beneficial use of dredged material in shallow draft recreational harbors.
- Work with the states and provinces to explore new and cost-effective approaches to fund dredging and harbor maintenance projects in nonfederally authorized small harbors, such as shared dredged management programs, public private partnerships, and special improvement districts. This should include promoting beneficial reuse, applied research and novel partnerships within existing regional management plans such as the Healthy Ports model in Ports Bay, New York.
- Work with the states and provinces to determine sediment testing and monitoring needs in nonfederally authorized harbors prior to beginning any shared dredged management program
- Continue to work with the states and USACE to promote greater flexibility in the application of the Federal Standard for the placement of dredged material in order to create more opportunities for beneficial use of dredged material in small harbors

Harbor Infrastructure Safety, Maintenance and Repair

- Continue discussions with states/provinces as to what levels of government and which agencies are best suited to address ongoing harbor infrastructure, safety maintenance and repair needs. Federal agencies (in both the U.S. and Canada) such as FEMA, NOAA, U.S. Fish and Wildlife Service, Transport Canada and Department of Fisheries and Ocean Canada along with the USACE need to be involved in these discussions pertaining to new opportunities and new responsibilities of these agencies under the BIL and the IRA and any new Canadian programs
- Work with agencies mentioned above to review and recommend changes to the current evaluation criteria/thresholds for funding projects in shallow-draft recreational harbors and smaller coastal communities
- Work with the states and provinces to inventory shallow draft harbor needs regarding safety, maintenance and repair needs and identify creative funding opportunities to meet these needs, especially at nonfederally authorized harbors

Sustainable and Resilient Coastal Communities

- Pursue new funding partnerships to build capacity in coastal communities including evaluating successful public-private partnerships and pass-through grants programs to support sustainability.

- Help underserved coastal communities address equity/environmental justice needs by strengthening state, federal and local collaboration through PACs, regional/local councils of government and other planning groups.
- Support and promote regional studies that address coastal community priorities including asset inventories, data collection/research needs, economic development opportunities, communications/information sharing and others.

General findings/actions to guide future work

The committee, in issuing this report, recognizes that much of its value will be to serve as a road map to inform the GLC and its party states and provinces regarding future work around small harbors and coastal communities. The structure of the report and the content of the companion appendices were designed to serve this purpose.

Over the many months of deliberation leading to the preparation of this report, the committee identified and discussed numerous overarching themes that deserve mention. They are presented below as general actions for the GLC to consider.

Broadening participation in future work

- There is a need to broaden participation in any future work directed by the GLC. U.S. and Canadian federal agencies, Indigenous Nations, universities, nongovernmental organizations, business/industry groups and municipalities/community groups will be important partners in shaping future actions related to small harbor and coastal community sustainability.
- Input/involvement from Indigenous Nations should be sought in any future work efforts. This is especially important in areas related to small harbors and coastal communities that involve fisheries management, tourism and recreation, resource management and water management.

Understanding points of intersection/areas where issues overlap with small harbors and coastal community priorities

- As previously mentioned in this report, the committee acknowledges the breadth and depth of issues directly connected and intersecting with small harbors and coastal community needs and priorities. These include, among others, water and wastewater infrastructure, green infrastructure, zoning and planning, recreation, tourism, resource management, fisheries management, and equity/environmental justice issues. The GLC should consider small harbors and coastal community needs as it develops policy and considers future work in these areas of overlap and intersection.

Coordinating future small harbors-related work with other GLC standing and ad hoc committees

- The GLC should consider collaborative and alignment opportunities with its Standing Committee on Climate Resilience and the Ad Hoc Committee on the Great Lakes Circle Tour, specifically including actions and outcomes in the “Action Plan for a Resilient Great Lakes Basin” that overlap with infrastructure and coastal community resilience issues.

V. Summary and Conclusions

At its 2021 Semiannual Meeting, the GLC formed a Small Harbors and Coastal Communities Committee to identify regional needs considering changes that have occurred over the past 10 -15 years that have impacted shallow draft recreational harbors and surrounding coastal communities. As the starting point for its work, the committee was asked to review and suggest updates to GLC policy resolutions enacted between 2007 and 2015 (see Appendix II).

In forming the committee, Commissioners acknowledged the importance of small harbors and coastal communities to the region but also wished to better understand changes that have occurred since the earlier policies were enacted. The original intent was for the Committee to conduct and complete its work over six-nine months. However, the task of scoping the effort proved challenging as the need to understand the breadth, depth and nuances of issues affecting small harbors and coastal communities was quickly determined.

The committee discerned that the changes experienced by small harbors and coastal communities over the past decade or more are multi-faceted: some of the changes relate to the natural environment (e.g., loss of shoreline due to coastal erosion and water level fluctuations), some of the changes are programmatic (e.g., seeing greater cooperation between federal and state agencies on the management of dredging projects while seeking to use dredged material beneficially) and some of the changes are economic (e.g., the increased availability of funding to support infrastructure projects especially related to dredging and harbor maintenance and safety).

When looking at the issues and challenges facing small harbors and coastal communities, there is a tendency to view them as new and unique. However, in its deliberations, the committee found that these issues are not always new, but rather “emerging” in the sense of becoming more apparent, important, or prominent because of impacts resulting from climate change, or the need to better understand and adjust to trends and changes in community demographics or to local economies, among others.

Beginning in 2022, increased federal funding and partnerships with the federal government (especially in the U.S.) created opportunities to support projects in small harbors and coastal communities. These opportunities include not only ongoing support through the Great Lakes Restoration Initiative (GLRI) but also new possibilities through the IJIA and the Inflation Reduction Act (IRA).

Report Appendix VI provides information on tools, resources and programs managed by (or offered by) the states, provinces and federal governments to address small harbors and coastal community needs, by providing funding, strengthening local and regional partnerships and coalitions and building capacity at the community level. Compiling this information began early in the life of the committee (in late 2021) and was extremely valuable to the understanding of the programs already in place to support small harbors and coastal communities. Yet it also made clear the daunting size and complexity of the effort and that more needs to be done to support small harbors and coastal communities.

As this report was being completed, new funding and partnership opportunities were announced that will benefit the region’s small harbors and coastal communities. Brief descriptions of these programs are included in Appendix V. This report will hopefully be helpful and informative as these programs and others like them are funded and implemented.

During the past two-plus years, the issues looked at by the committee included but were not limited to trends in dredging funding and changes in dredging policy, climate change impacts to coastal communities and small harbors and the increased awareness of the importance of coastal resilience and managing coastal areas for sustainability. With this in mind, there are a few final observations that should be made on the work of the committee and the content of this report.

- Small harbors and coastal communities are extremely important to the Great Lakes-St. Lawrence River Region. These harbors and the communities associated with them are economic engines for recreational-based economies in the region.
- The issue of sustainability was foundational in the committee's work. Sustainability (see Appendix III) is defined as a societal goal that aims for communities to safely thrive by meeting present needs and support themselves over an extended period of time without compromising the ability of future generations to meet their own needs. Sustainability is commonly described along the lines of three dimensions (also called pillars): environmental, economic, and social. These three dimensions are complex and interrelated but also very broad. The committee recognized that while scope and capacity challenges prevented a deep-dive into these pillars for this report, it is important to not lose sight of the complex relationships that are part of sustainability in future work.
- The concept of resilience was a pervasive theme throughout the entire process. A resilient Great Lakes-St. Lawrence basin (see Appendix III) is defined as when communities, infrastructure, ecosystems, and the economy can withstand, adapt to, and recover from climate-related stressors and changing conditions to ensure equitable and inclusive social, economic, and environmental well-being across the basin. The concept of resilience was discussed at length and was often paired with the discussion of sustainability. In preparing this report, the committee acknowledged the work of the GLC's Standing Committee on Climate Resilience and recognizes that much of the future and ongoing work on resilience pertaining to coastal communities will be addressed through that committee.
- There was an acknowledgment that the development and implementation of policies and programs to address environmental justice concerns and to support and serve under-resourced/historically marginalized communities is necessary (see Appendix III for definitions). This concept was emphasized throughout the process. Environmental justice is viewed as an important component of efforts to address needs of small harbors and coastal communities, even implementation projects related to dredging and placement of dredged material, and navigation improvement projects in small harbors.
- The committee views capacity building at the community level as extremely important. Small harbors and the coastal communities associated with them don't always have a voice with regard to securing funding and managing programs to support planning and implementation efforts that promote resilience, sustainability and a high quality of life for their populations. The committee believes that program and policy development at the federal, state, and provincial level must strive to give these communities a stronger voice in future development efforts.

Report Appendices

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Ad Hoc Committee on Small Harbors and Coastal Communities Roster

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Charge to the Great Lakes Commission Ad Hoc Committee on Small Harbors and Coastal Communities

August 5, 2021

I. Charge

The charge to the Ad Hoc Committee on Small Harbors and Coastal Communities is to develop a policy resolution focusing on the needs of small noncommercial and recreational harbors and coastal communities. Depending on the timing and level of effort during August and September, this committee may present a policy resolution to the Great Lakes Commission (GLC) at its Annual Meeting in October 2021. If the Committee decides it wishes to take more time to address these issues, we may present a progress report in October and offer an updated policy resolution at the 2022 Semiannual meeting tentatively scheduled for June 7-9 in Green Bay.

The committee is also asked to consider the overall needs of the basin and the GLC's near-term and long-term roles on this issue and lay a foundation for associated activities going forward. Specifically, this will include:

- Developing a new draft policy on small harbors and coastal communities for consideration at an upcoming GLC meeting;
- Considering related state and provincial priorities and opportunities to advance those priorities;
- Connecting opportunities and needs to the GLC standing committee on climate resiliency; and,
- The role of the GLC in identifying, advancing and/or tracking progress on specific priorities.

II. Proposed Schedule

- The following is a proposed schedule for developing and updated policy (or report) for presentation to the Commission during the 2021 Annual Meeting (scheduled for October 12-14, 2021).
- Early August: Inaugural committee conference call to discuss process, approach and key concepts;
- Beginning mid-August: biweekly committee conference calls to develop draft policy;
- By September 10: Draft policy available for Board review
- September 16: Board to review draft policy
- By September 24: Resolve any remaining issues
- Week of September 27: Final draft distributed to Commissioners
- October 12-14: Presentation of final draft to the Commission

III. Background

Since 2016, it has been the practice of the GLC to review existing resolutions upon their 10-year anniversary and recommend whether those resolutions should be retained (stand as originally passed), updated or sunset. A committee of commissioners is assigned to work with staff to review the

resolutions passed 10 years previously and recommend to the Commission a suggested action for each resolution being reviewed prior to the corresponding Annual or Semiannual Meeting.

In advance of the May 2021 semiannual meeting, the resolutions review committee reviewed a 2007 resolution focused on the importance of recreational harbors that was retained by the Commission through action at the 2007 Annual Meeting, along with other related resolutions including:

- [*Support for Adequate Maintenance of Great Lakes Recreational Harbors \(2007\)*](#)
- [*Support for a New Approach to Navigation Maintenance Funding for Federally Authorized U.S. Great Lakes Ports and Harbors \(2012\)*](#)
- [*Flexibility in the federal standard for navigation dredging projects in the Great Lakes basin \(2014\)*](#)
- [*Advancing coastal community revitalization through strengthened federal legislation and programs \(2015\)*](#)

The committee discussed the importance of Great Lakes-St. Lawrence recreational harbors and coastal communities and considered the timeliness of revisiting this issue especially with the renewed emphasis on infrastructure under the current Biden Administration. While the 2007 resolution focused somewhat narrowly on dredging needs and the opportunity for the U.S. federal government to prioritize smaller commercial and recreational harbors for federal funding assistance for dredging, the committee stressed that a more comprehensive updated resolution will be desirable factoring in infrastructure needs, economic revitalization and coastal resilience priorities. The committee considers the 2007, 2012, 2014 and 2015 resolutions to be closely enough related topically to be considered together in an updated resolution.

At the May 2021 semiannual meeting the Commission subsequently approved an action item to establish an ad-hoc committee of commissioners (and possibly other topical experts) to review the 2007, 2012, 2014 and 2015 resolutions related to needs of and opportunities for small commercial and recreational harbors and coastal communities.

Definitions

1. Small Harbor – a shallow draft harbor primarily used for recreational purposes that may occasionally be used for small commercial purposes such as charter fishing and ferry services. Features of deep draft commercial harbors – such as a through-channel, turning basin, or high annual cargo tonnage (over 1 million tons) – do not typically apply to small harbors.¹
2. Great Lakes/St. Lawrence Seaway System – the maritime navigation system composed of the five Great Lakes (Superior, Huron, Michigan, Erie, and Ontario), their connecting channels, and the St. Lawrence River. It includes the navigable waterway stretching 2,340 miles (3,700 km) from Duluth, Minnesota on the west to the Gulf of St. Lawrence on the east.²
3. Draft – the number of feet that the hull of a ship is beneath the surface of the water.³
4. Harbor – a body of water sheltered by natural or artificial barriers. Harbors provide safe anchorage or mooring and permit the transfer of cargo and passengers between vessels and the shore or a place for vessels to obtain fuel, water, or supplies.⁴
5. Deep Draft Harbor – harbors that can accommodate large vessels such as cargo ships. For the Great Lakes, the U.S. Army Corps of Engineers defines deep draft as greater than 14 feet.⁵
6. Shallow Draft Harbor – for the Great Lakes, the U.S. Army Corps of Engineers defines shallow draft as less than 14 feet in depth.⁶
7. Harbor of refuge – any port, inlet, or other body of water normally sheltered from heavy seas by land and in which a vessel can navigate and moor safely.⁷ Some states have formal harbors of refuge programs to promote boater safety by providing sheltered havens to recreational boaters in cases of emergency or inclement weather.
8. Emergency/Low Use Harbor – this includes harbors of refuge, low use commercial harbors (those handling less than 1 million tons of cargo annually), and recreational harbors (those receiving zero tonnage of commodities on an annual basis).⁸
9. Marina – a specially designed harbor or portion of a harbor with docks or a basin providing secure moorings for recreational and commercial boats, research vessels, and pleasure craft. Marinas often provide various services including supply and repair facilities.⁹

¹ US Army Corps of Engineers. [Great Lakes Harbor Fact Sheets](#).

² Great Lakes St. Lawrence Seaway Development Corporation. [The Great Lakes-St. Lawrence Seaway System](#).

³ Chamber of Marine Commerce. [Glossary of Terms](#).

⁴ Chamber of Marine Commerce; modified through committee discussion. [Glossary of Terms](#).

⁵ Definition formed from personal communication with USACE-LRE staff.

⁶ Definition formed from personal communication with USACE-LRE staff.

⁷ Code of Federal Regulations (46 CFR ss 114.400) U.S. Coast Guard Dept. of Homeland Security. [Definitions of terms](#).

⁸ Definition formed from personal communication with USACE-LRE staff.

⁹ [Collins English Dictionary](#).

10. Port – a town or city with a harbor containing infrastructure for loading and unloading commercial goods or passengers, often where customs officers are stationed. The infrastructure and waterfront property is typically owned and managed by a Port Authority. In very simple terms, a port is a harbor with piers and docks.¹⁰
11. Port Authority – a government commission or entity responsible for the operation of ports which are usually incorporated under enabling state legislation to develop waterfront property for recreational, transportation, agricultural, industrial and commercial purposes. Port authorities may vary in governing structure including autonomous or semi-autonomous; bi-state or regional; state, county, or municipal; and independent port or navigation districts.¹¹
12. Ecosystem – a) a community of interacting organisms and their physical environment, functioning as an ecological unit;¹² and b) a network of interconnected systems (e.g., a business or community) resembling an ecological ecosystem especially because of its complex interdependent parts.
13. Coastal Zone – simply, the interface between the land and the water. More specifically, the interface between coastal waters and the adjacent shoreland, strongly influenced by each other through limnologic and terrestrial processes.¹³
14. Coastal Community – coastal communities are made up of people living on the land or water along the fluctuating line where the waters of the Great Lakes meet the land. While there is currently no agreed definition of a coastal community, one should be dependent on how people inhabit the environment and their sense of cultural identity.¹⁴
15. Under-resourced/historically marginalized communities – typically, groups that have limited or no access to resources or that are otherwise disenfranchised; populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.¹⁵ These groups or populations may be susceptible to and/or lack the capacity to withstand adverse impacts to which they are exposed, including climate change, underinvestment in water and wastewater infrastructure, and legacy pollution and other environmental hazards.
16. Environmental Justice – the fair treatment and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental justice occurs when all communities enjoy the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.¹⁶

¹⁰ Chamber of Marine Commerce; modified through committee discussion. [Glossary of Terms](#).

¹¹ Environmental Protection Agency. [Primer on Port Governance](#).

¹² National Geographic. [Ecosystem definition](#).

¹³ [Coastal Zone Management Act of 1972](#).

¹⁴ University of Plymouth. [A coastal definition](#).

¹⁵ The White House. [Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government](#). Each state evaluates and determines these terms according to its own parameters and depending on jurisdiction-specific needs.

¹⁶ Environmental Protection Agency. [Environmental Justice](#).

17. Place-based approaches – place-based approaches target the specific circumstances of a place and engage the community and a broad range of local organizations as active participants in their development and implementation.¹⁷ Being "place-based" means that programs are developed by a community for its own benefits as they pertain to a specific place or region.¹⁸
18. Resilience – a resilient Great Lakes basin is one in which communities, infrastructure, ecosystems, and the economy can withstand, adapt to, and recover from climate-related stressors and changing conditions to ensure equitable and inclusive social, economic, and environmental well-being across the basin.¹⁹
19. Sustainability – a societal goal that aims for communities to safely thrive by meeting present needs and support themselves over an extended period of time without compromising the ability of future generations to meet their own needs. Sustainability is commonly described along the lines of three dimensions (also called pillars): environmental, economic, and social.²⁰
20. Blue Economy – for the Great Lakes-St. Lawrence, the blue economy is the sustainable use of water resources for economic growth, improved livelihoods (well-being) of people, and the creation of jobs while preserving the health of the Great Lakes-St. Lawrence River ecosystem.²¹

¹⁷ Victorian Government. [A framework for place-based approaches.](#)

¹⁸ National Ocean Service. [Place-based conservation.](#)

¹⁹ Great Lakes Commission. [Action Plan for a Resilient Great Lakes Basin.](#)

²⁰ United Nations. [Our Common Future: Report of the World Commission on Environment and Development.](#)

²¹ The World Bank. [What is the Blue Economy?](#)

Guiding Principles for Sustainable Coastal Communities

In the fall of 2022, the committee deliberated on the vitality of coastal communities to the Great Lakes-St. Lawrence River region and the many challenges faced by these communities. A set of principles was prepared to inform the committee's work and anchor the discussions on issues and themes identified as priorities by the numerous state and provincial partners that participated in a committee-led information gathering exercise earlier in the year (See Appendix V).

The following over-arching principle, with several sub-principles were developed by committee as a reflection of its views on the need to create sustainable and resilient communities. They are presented as an ideal for coastal communities and to provide the foundation for future work that may be pursued by the GLC and the states and provinces themselves.

Sustainable and resilient coastal communities are essential to the health and wellbeing of the Great Lakes-St. Lawrence River region's environment, economy and quality of life. Sustainable and resilient coastal communities are ones in which individuals and neighborhoods are healthy, thriving, and able to adapt to changing economic, environmental, social, demographic and cultural changes; especially regarding the effects of changing conditions and climate-related stressors due to climate change. To this end,

- Coastal community planning and development centers on equity, inclusion, and justice for all citizens. Economic and social systems are built in a way that enhances quality of life and wellbeing, creates well-paying and sustainable jobs, and provides access to socio-economic, recreational, and cultural resources and amenities in the region.
- A strong stewardship and conservation ethic is developed and promoted among elected officials, managers, business leaders and the local citizenry to shape the community's culture, in a way that creates a place-based identity that nurtures a true sense of community.
- Great Lakes-St. Lawrence River region ecosystems are adaptable to changing conditions and stressors (i.e., socio-economic, environmental, cultural, climate-induced).
- Tools and solutions to problems (policies and practices) are scalable recognizing among coastal communities related to size, geography, industry mix and other factors.

Priorities for Small Harbors and Coastal Communities and the Federal, State and Provincial Programs That Support Them

In the United States and Canada, the federal government plays a key role in providing aid and resources to small harbors and coastal communities to help make them sustainable and more resilient to the issues addressed in this report. Several national and Great Lakes-specific policies and programs ensure that small harbors and coastal communities can properly manage and preserve their invaluable assets.

In late 2021, the committee, following a few months of discussion, initiated an exercise to ascertain priorities for small harbors and coastal communities and to develop a list of federal, state, provincial projects, programs and initiatives that support these vital areas.

Staff worked with committee members to prepare a detailed questionnaire (request for information) designed to pinpoint priorities and expand the committee's knowledge of programs and resources available at the state/provincial level. The request for information was coordinated through the committee and sent to numerous agencies, departments within agencies, and other select institutions in the eight states and Québec.

Information, compiled and provided to staff from more than 15 different respondents, was reviewed by the committee in February and March 2022. The responses received covered the following items:

- Ranking of priorities for small harbors and coastal communities based on a list provided by the committee;
- Listing of federal, state, and provincial programs currently in place to support small harbors and coastal communities;
- Identification of gaps and needs based on the priorities previously identified;
- Identification of emerging issues²² for small harbors and coastal communities;
- Discussion of opportunities for the GLC to assist the states/provinces in addressing needs for small harbors and coastal communities.

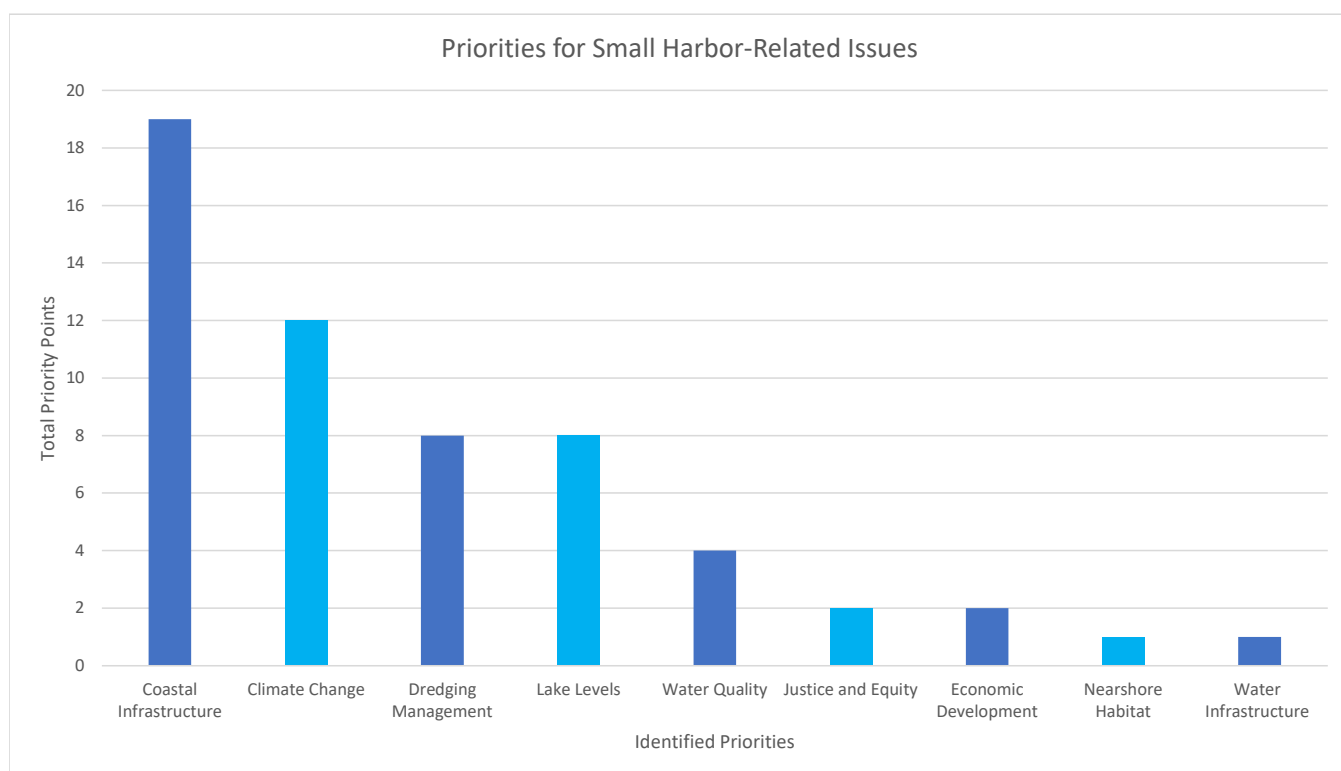
Based on the information provided by the states and Québec, the staff working with the committee have developed the following resources included in this appendix:

- A table/matrix displaying the priorities identified in the request for information
- A summary of state/provincial programs currently in place to support small harbors and coastal communities
- A summary of federal programs that the states/provinces participate in/rely on to support small harbors and coastal communities

²² In many cases the issues identified are not “emerging” in the sense of being new but may be legacy or historic issues that have been exacerbated by the impacts of climate-change, demographic and/or economic changes in the region or changes in public policy that have added new challenges to tackling already complex issues.

Small Harbors Matrix and Program Summaries - Priorities

State/Province	Priority One	Priority Two	Priority Three
Illinois	Coastal Infrastructure/Climate Change	Justice/Equity	Lake Levels/Nearshore Habitat
Indiana	Climate Change	Coastal Infrastructure	Lake Levels
Michigan	Coastal Infrastructure	Dredge Material Management	Water Quality
Minnesota	Climate Change	Water Quality	Lake Levels
New York	Climate Change	Coastal Infrastructure	Water Quality
Ohio	Dredge Material Management	Lake Levels	Coastal Infrastructure
Pennsylvania	Dredge Material Management	Coastal Infrastructure	Lake Levels
Quebec	Coastal Infrastructure	Economic Development	N/A
Wisconsin	Coastal Infrastructure	Lake Levels	Water Infrastructure



Small Harbors Matrix and Program Summaries - Priorities

Priority ¹	Total
Coastal Infrastructure	19
Climate Change	12
Dredging Management	8
Lake Levels	8
Water Quality	4
Justice and Equity	2
Economic Development	2
Nearshore Habitat	1
Water Infrastructure	1

Priority points were calculated using a weighted scale. Priority Ones were given 3 tallies, Priority Twos were given 2 tallies, and priority Threes were given 1 tally. The total tallies for each Priority area were calculated by summing each of the weighted point distributions.

¹Climate Change and Justice and Equity are multifaceted issues that are almost always incorporated into state/provincial programs. Thus, these items should be viewed as more than stand-alone independent components with regard to small harbors and coastal community needs and priorities.

Small Harbors Matrix and Program Summaries - Matrix Scoring

Category	Indicator	Jurisdiction								
		Illinois ³	Indiana	Michigan ¹	Minnesota	New York ²	Ohio	Pennsylvania ²	Québec	Wisconsin ^{2,3}
Agencies and Organizations	Natural Resource Agency	1	1	1	1		1			1
	Environmental Protection Agency	1	1	1	1	1	1	1	1	
	Transportation Agency	1		1	1		1	1	1	1
	Sea Grant	1		1	1	1	1	1		1
	Department of State					1				
	Department of Administration									1
	State Geological Survey	1								
Programs and Initiatives	Other	1		1	1			1		
	Grants	1	1	1	1	1	1	1	1	1
	Infrastructure			1		1		1	1	1
	Harbors	1	1	1	1	1			1	1
	Coastal	1	1	1	1	1	1	1		1
	Aquatic			1	1	1	1	1		1
Studies and Projects	Other	1	1	1	1	1	1	1	1	
	Transportation	1				1			1	
	Green Infrastructure	1			1	1				
	Harbor Development	1		1						
	Coastal Resiliency	1	1	1	1	1	1		1	1
	Dredging Management	1				1	1			1
Additional Support Needed	Other	1		1	1		1		1	
	Funding	1		1	1	1	1			1
	Equity/Justice Strategies	1		1						
	Communication/Outreach	1		1		1	1	1	1	
	Information Sharing					1	1	1	1	1
	Technical Assistance			1	1		1			1
Emerging Issues	Other	1		1	1	1	1			1
	Aging Infrastructure	1		1	1					1
	Sediment Management	1		1						
	Community Participation	1				1				
	Lake Levels	1		1		1	1			1
	Aquatic Invasive Species			1		1			1	
	Chemicals/Contaminants			1	1	1		1		
	Climate Resilience			1		1	1	1		1
	Economy/Workforce	1				1		1		1
	Other	1		1	1	1		1	1	
Total		26	7	26	19	24	18	15	13	19

¹Michigan's Environmental Agency, the Department of Environment, Great Lakes, and Energy (EGLE), submitted multiple responses through various divisions of the agency; these were all counted as only one in the Environmental Protection Agency row within the Agencies and Organizations category. These divisions include: Water Resources, Materials Management, Remediation and Redevelopment.

²These states have "super agencies," or agencies that encompass multiple categories listed in this table.

³These states submitted consolidated responses, consisting of multiple agencies and/or organizations

Important to note: a higher value does not mean a jurisdiction is doing better; this number indicates the responses given by the agencies and organizations in each category, not how well they are doing

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
Illinois	IL Coastal Management Program	Protects and enhances the environmental, economic, and social value of Illinois' Great Lakes Coastal Region. Created in 2012 under the authority of the federal CZMA and with	https://www2.illinois.gov/dnr/cmp/Pages/default.aspx
	IDNR Open Space Land Acquisition and Development (OSLAD) Grant Program	Provides funding to local government agencies to acquire and/or develop land for public parks and open space. State-financed grant program with awards up to \$750,000 for acquisition and \$400,000 for development projects.	https://www2.illinois.gov/dnr/grants/Pages/OpenSpaceLandsAcquisitionDevelopment-Grant.aspx#:~:text=The%20Open%20Space%20Lands%20Acquisition,publi c%20parks%20and%20open%20space.
	Chi-Cal Rivers Fund (grants for Habitat Quality, Green Stormwater Infrastructure, Public Access)	Supports green stormwater infrastructure, habitat enhancement, and public-use improvement through projects conducted in the Chicago and Calumet Rivers.	https://www.nfwf.org/programs/chi-cal-rivers-fund?activeTab=tab-1
	Green Infrastructure Baseline Inventory	Documents existing green infrastructure installations in the Calumet region through a free, publicly accessible dataset. The Metropolitan Planning Council coordinated with the Calumet Stormwater Collaborative to create this dataset.	https://www.metroplanning.org/work/project/23/subpage/7?utm_source=%2fgibi&utm_medium=web&utm_campaign=redirect&RedirectReferrer=https%3a%2f%2fwww.google.com%2f
	Rebuild Illinois Port Facilities Capital Investment Grant Program	Provides grants to public agencies to plan and develop facilities within public port districts included in the Illinois Marine Transportation System. Funding by the Rebuild Illinois Capital Bill, which appropriated \$150 million to the Illinois DOT in 2019 to oversee the program.	https://idot.illinois.gov/transportation-system/transportation-management/planning/illinois-port-facilities-capital-grant-program#:~:text=In%20the%20Spring%20of%202019,the%20Alexander%2DCairo%20Port%20District.
Indiana	Indiana Lake Michigan Coastal Program	Provides guidance, technical support, and financial assistance to local and state government agencies working to protect and enhance natural, cultural, and historical coastal resources. The NOAA Office for Coastal	https://www.in.gov/dnr/lake-michigan-coastal-program/
	Indiana LMCP Coastal Nonpoint Source Pollution Program	Combats sources of nonpoint source pollution to achieve EPA management measures in coastal areas. The program coordinator works closely with local governments and other organizations already undertaking similar work.	https://www.in.gov/dnr/lake-michigan-coastal-program/coastal-nonpoint-pollution-control-program/
	Indiana Coastal Atlas	Will address flooding, wetland management, and imagery for stakeholders to use to manage Indiana's Lake Michigan coastline through data-driven decisions. This project is ongoing with funding from NOAA and contracting through	https://www.in.gov/gis/gis-publications/feb.-2022-gis-newsletter/
	Clean Marina Program	Provides information, technical assistance, and guidance to marinas and recreational boaters to reduce potential environmental impacts of marina/boating activities. This voluntary program was developed through funding from	https://www.in.gov/idem/lakemichigan/indiana-clean-marinas/

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
Michigan	Michigan State Waterways Program	Provides funding for the construction, operation, and maintenance of public recreational boating facilities. Funding for the program is provided by boat registration fees and the Michigan marine fuel tax.	https://www.michigan.gov/dnr/managing-resources/prd/waterways#:~:text=The%20waterways%20program&text=The%20program%20supports%20state%2Dadministered,boating%20access%20sites%20throughout%20Michigan.
	Sustainable Small Harbors Program	Identifies barriers to sustainability for small harbors and equips coastal community leaders with tools to strengthen their waterfront assets. This program is funded by Michigan Sea Grant with the help of several partners.	https://www.michiganseagrant.org/topics/resilient-coastal-communities/sustainable-small-harbors#:~:text=Funded%20by%20Michigan%20Sea%20Grant,strengthen%20their%20own%20waterfront%20assets.
	Clean Marina Program	Promotes environmentally sound marina and boating practices to reduce pollution, enhance fish and wildlife habitat, and protect Great Lakes water quality. Established in 2001 as a public-private partnership with support from	https://www.michiganseagrant.org/michigan-clean-marina-program/about/
	Aquatic Invasive Species Program	Develops projects and makes recommendations to relevant departments to create policy, legislation, regulation, and more to manage and control AIS. The program is jointly overseen by EGLE, MDNR, and MDARD and receives \$5	https://www.michigan.gov/invasives
	Michigan Boating Pumpout Grant Program	Provides grant funding to build new pumpout/dump stations or upgrade existing facilities to reduce pollution from vessel sewage discharges. This program awards about \$200,000 annually through the MDNR and MISG.	https://www.michigan.gov/dnr/buy-and-apply/grants/rec/michigan-boating-pumpout-grants
	Watershed Council Grants	Awards grants to projects including environmental outreach to underserved communities, boat cleaning stations, and watershed management planning. This program awarded \$600,000 through EGLE.	https://www.michigan.gov/egle/newroom/press-releases/2022/04/25/20-watershed-organizations-share-\$600k-in-egle-conservation-education-grants#:~:text=The%20Watershed%20Council%20Support%20grants,within%20a%2012%2Dmonth%20timeline.
	Michigan Natural Resources Trust Fund	Provides grants to state/local governments to protect natural resources and promote outdoor recreation. This fund distributes about \$15-20 million each year.	https://www.michigan.gov/dnr/buy-and-apply/grants/rec/mnrtf
	Redevelopment Ready Communities	Certifies communities that integrate transparency, predictability and efficiency into their daily development practices as a redevelopment ready community. RRC is a voluntary, no-cost program that awards its certification	https://www.miplace.org/programs/redevelopment-ready-communities/rrc-overview/
	Michigan Coastal Management Program (MCMP)	Provides technical assistance and grant funding for communities to mitigate coastal hazards, ensure safe public access, and support tourism opportunities. This program	https://www.michigan.gov/egle/about/organization/water-resources/coastal-management

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
Minnesota	Lake Superior Coastal Program	Provides technical and financial resources for local coastal communities to preserve, protect, develop, and restore Minnesota's coastal resources. The program is administered through MN DNR Ecological and Water	https://www.dnr.state.mn.us/waters/lakesuperior/index.html
	One Watershed, One Plan	that align local water planning purposes to create a watershed-wide approach to management. This program is administered by the MN Board of Water and Soil Resources and supported by the Local Government Water Roundtable	http://bwsr.state.mn.us/one-watershed-one-plan
	North Shore Management Board: Coastal Erosion Hazard Mapping	Aims to solve problems associated with inconsistent and inaccessible data through creating a web-based mapping tool, a guide to living in the coastal zone, and a tool available to relevant stakeholders. This program is run	https://ardc.org/cehm/
	Twin Ports Regional Stormwater Protection Team	Educates people on actions to improve their local water systems through videos and lessons. This program is run by the Regional Stormwater Protection Team which is a	https://www.poopfairy.university/about
	MN Water Infrastructure Fund	Provides supplemental grants based on affordability criteria to build wastewater and drinking water projects for communities. The fund is administered by the MN Public Facilities Authority and distributes funds through the USDA	https://mn.gov/deed/pfa/funds-programs/wastewater.jsp
	MN Clean Marina Program	Provides information, guidance, and technical assistance to marina operators, local governments, and recreational boaters on best management practices to reduce pollution.	https://www.michiganseagrant.org/great-lakes-clean-marina/state-programs/

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
New York	NY Great Lakes Action Agenda	Implements shared goals developed by work groups to conserve, restore, protect, and enhance the Great Lakes lands and waters of New York. The work groups connect stakeholders to resources and technical expertise and	https://www.dec.ny.gov/lands/91881.html
	EPF-Water Quality Improvement Project	Provides grants for local governments and not-for-profit corporations to improve water quality, aquatic habitat, or drinking water sources. \$75 million is available for funding through the program.	https://www.dec.ny.gov/pubs/4774.html#:~:text=Program%20Description,protect%20a%20drinking%20water%20source.
	Office of Environmental Justice Community Impact Grants	Provides funding for projects that address environmental and public health threats in low-income and minority communities to improve water quality, restore habitat, and increase waterfront access. The program has available \$4.1 million for community based organizations, each of which	https://www.dec.ny.gov/public/31226.html
	Environmental Protection Fund Local Waterfront Revitalization Program	NYS DOS partners with waterfront communities to address local and regional waterway issues, including improving water quality, promoting public waterfront access, and	https://dos.ny.gov/local-waterfront-revitalization-program
	The Coastal Lakeshore Economy and Resiliency (CLEAR) initiative	levels by developing resiliency strategies to institute long-term protective measures and strengthen existing investments. Plans take into account the specific needs and	https://dos.ny.gov/coastal-lakeshore-economy-and-resiliency-clear-initiative
	Resiliency and Economic Development Initiative	Aims to increase resiliency of shoreline communities and bolster economic development along the shore of Lake Ontario/St. Lawrence River. The State has committed up to \$300 million to benefit communities in this region.	https://www.governor.ny.gov/programs/lake-ontario-resiliency-and-economic-development-initiative-redirect
	Local Waterfront Revitalization Program	Operates in partnership with coastal and inland waterfront communities across the state to improve water quality/natural areas, guide development away from sensitive resources, promote public waterfront access, and	https://dos.ny.gov/local-waterfront-revitalization-program
	Coastal Management Program	Provides a framework for federal and state agency decision-making affecting the coastal areas through policies that promote the beneficial use of coastal resources, the prevention of their impairment, and management of major	https://dos.ny.gov/state-coastal-management-program
	Climate Smart Communities Program	Supports local governments in leading their communities to reduce greenhouse gas emissions, adapt to a changing climate, and thrive in a green economy. The program is state-wide, community-led, and regionally important as	https://climatesmart.ny.gov/

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
Ohio	Ohio Lake Erie Commission - Ohio Dredge Material Management Program	Develops projects to put dredged sediment to beneficial use such as a farm field soil amendment, marketable soil, and for wetland creation projects. Working with USACE and local stakeholders, the program aims to eliminate the	https://lakeerie.ohio.gov/programs-and-projects/dredge-material-program
	Ohio Coastal Management Program	Creates management policies to preserve, protect, restore, and balance the use of coastal resources. The program is led by Ohio DNR-Office of Coastal Management in partnership at the federal level with NOAA.	https://ohiodnr.gov/discover-and-learn/safety-conservation/about-ODNR/coastal-management/ohio-coastal-mgmt-program/ohio-coastal-mgmt-program-document
	Ohio DNR - Healthy Lake Erie Initiative	(Section 223.10) to fund projects that enhance efforts to reduce and/or eliminate the disposal of dredged material into the open waters of Lake Erie. The initiative is administered by the Ohio DNR (Ohio Coastal Management Program) and has awarded \$32M to support dredge	http://archives.legislature.state.oh.us/BillText130/130_HB_497_EN_N.html
	Ohio Lake Erie Commission - Lake Erie Protection Fund	Finances research and projects to preserve and restore Lake Erie and its waterfront that focus on issues including nutrient reduction, wetland restoration, algal bloom research, and water quality protection. The Ohio Lake Erie Commission has distributed over \$12 million through the Fund since 1993.	https://lakeerie.ohio.gov/funding-opportunities/protection-fund#:~:text=The%20Ohio%20Lake%20Erie%20Commission,Lake%20Erie%20and%20its%20watershed.
	Ohio EPA - American Recovery Plan Act (A	Federal infrastructure/recovery funding in response to COVID. Ohio EPA is administering \$45M in ARPA funds to complete construction of four dredge material sediment processing facilities at Conneaut, Fariport, Lorain, and Toledo harbors. Engineering and Design costs for these	https://www.lsc.ohio.gov/documents/budget/documents/budgetfootnotes/v45n10.html
	USACE Section 204 Continuing Authorities	Provides funding for habitat restoration projects that beneficially use dredge material for habitat creation/restoration. In-water wetland restoration project in Ashtabula Harbor will beneficially use dredge material to provide fish and wildlife. This USAC project is funded 65% federal/35% non-federal in partnership with the Ashtabula	https://www.lrb.usace.army.mil/Media/News-Releases/Article/2856136/usace-completes-substantial-construction-of-beneficial-use-of-dredged-sediment/
	Maritime Assistance Program	Assists Public Port Authorities in the repair, rebuilding, and revitalization of maritime transportation systems. The Ohio DOT administers the program, investing \$23 million and leveraging over \$90 million in Water Port infrastructure.	https://www.transportation.ohio.gov/programs/maritime-freight/resources/ohio-maritime-awards

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
Pennsylvania	PA Coastal Resources Management Program	Implements sound coastal management program policies to address eleven policy areas, including coastal hazards, dredging and spoil disposal, port activities, and public involvement. The program is funded annually by NOAA; a portion of these funds are awarded as grants to state	https://www.dep.pa.gov/Business/Water/Compacts%20and%20Commissions/Coastal%20Resources%20Management%20Program/Pages/About-the-Program.aspx
	Pennsylvania Bluff Recession and Setback Program	Regulates development activities to preserve and restore natural ecological systems and limit property damage and shoreline erosion recession. The PA DEP identifies and establishes bluff recession hazard areas while local governments enforce the program and receive reimbursement from the Coastal Resources Management Program.	https://www.dep.pa.gov/Business/Water/Compacts%20and%20Commissions/Coastal%20Resources%20Management%20Program/Lake-Erie-Bluff-Recession-Control-Point-Monitoring/Pages/default.aspx#:~:text=The%20Bluff%20Recession%20and%20Setback,damage%20and%20shoreline%20erosion%20recession.

Small Harbors Matrix and Program Summaries - State Programs

State	Program	Description	Link
Québec	Advantage Saint-Lawrence	Aims to harness the power of the river to develop social and economic benefits to increase the collective wealth of Quebecers. Its vision focuses on providing modern and competitive port facilities, ensuring efficient navigation that respects natural ecosystems, and providing promising and sustainable development opportunities for shoreline communities.	https://www.transports.gouv.qc.ca/en/maritime-transport/avantage-st-lawrence/Pages/default.aspx#:~:text=With%20Advantage%20St.,development%20inherent%20in%20the%20St.
	Maritime Infrastructure Investment Program	Aims to increase the performance, competitiveness, and sustainability of ports and promote the use of short distance shipping for goods and people. Eligible entities (e.g., businesses, local and regional authorities) can receive financial assistance of up to \$20,000,000 or 50% of eligible project expenses.	https://www.transports.gouv.qc.ca/fr/aide-finan/programmes-aide/investissement-infrastructures-maritimes/Pages/investissement-infrastructures-maritimes.aspx#:~:text=Le%20Programme%20d'investissement%20en,les%20marchandises%20et%20les%20personnes.
	Marine, Air, and Rail Efficiency Program	Prioritizes electrification of transportation to reduce greenhouse gasses emitted by maritime, air, and rail transport of people and goods. The Government of Quebec offers financial contribution of up to \$4,000,000 to encourage new investments in this sector.	https://www.transports.gouv.qc.ca/fr/aide-finan/programmes-aide/Pages/Programme-aide-efficacite-maritime-aerien-ferroviaire.aspx
Wisconsin	DNR state regulatory waterways permitting for coastal activities	Protects shoreland from development activity that would pollute the water and diminish the waterway's natural beauty. Permits may be required for such activities as dredging projects, lakeshore and streambank erosion	https://dnr.wisconsin.gov/topic/Waterways/shoreline/shoreline.html
	WI Coastal Management Program	along the Great Lakes coasts through implementing existing state management policies, strengthen local government capabilities to initiate coastal management, and to	https://doa.wi.gov/Pages/LocalGovtsGrants/CoastalManagement.aspx
	WI Clean Marina Program	Promotes the adoption of BMPs by marinas and boaters by providing guidance, education, and technical assistance to reduce pollution from their facilities. Businesses can be certified as Clean Marinas to acknowledge their	https://wisconsin-cleanmarina.org/about/
	Recreational Boating Facilities Grant Program	Funds several projects related to recreational boating, including dredging channels, repairing locks, rehabilitating capital improvements, and other construction projects. The Wisconsin DNR provides cost sharing of up to 50% for eligible costs for the grant program.	https://dnr.wisconsin.gov/aid/RBF.html#:~:text=These%20grants%20may%20be%20used,for%20recreational%20boating%20facility%20projects.
	Fund for Lake Michigan	Invests in water quality initiatives to improve beaches and drinking water, restore habitats for healthy ecosystems and a strong economy, and promote human health and safety in Wisconsin. The Greater Milwaukee Foundation sponsors	https://fundforlakemichigan.org/
	Harbor Assistance Program	Assists harbor communities in maintaining and improving waterborne commerce through port projects including construction of docks, mooring structures, and dredged material holding facilities. Created by the Wisconsin legislature in 1979 with funding available through the WI DOT.	https://wisconsin.gov/Pages/doin-g-bus/local-gov/astnce-pgms/aid/harbor.aspx#:~:text=In%201979%2C%20Wisconsin's%20Legislature%20created,maintaining%20and%20improving%20waterborne%20commerce.
	Southeast WI Coastal Resiliency (CARES)	Enhances community capacity in southeastern WI counties to build resilience to coastal hazards through evaluating shoreline recession, creating guidance on risk reduction strategies, and organizing a community of practice. The NOAA Coastal Resiliency Grants programs funds the	https://wicoastalresilience.org/
	Collaborative Action for Lake Michigan Coastal Resilience (CALM) Project	Provides a network for all Lake Michigan coastal communities to build resilience to coastal hazards through collaboration, developing local plans, coordinating prioritization of needs, and strengthening existing networks. Funding is provided by the WI Coastal	https://wicoastalresilience.org/

Small Harbors Matrix and Program Summaries - Federal and Regional Programs

Source	Scope	Program	Description	Link
Federal Government	National	Coastal Zone Management Act (CZMA)	Provides for the management of the nation's coastal resources by preserving, protecting, developing, restoring, and enhancing the nation's coastal zone resources. Administered	https://coast.noaa.gov/czm/act/
Federal Government	National	Water Resources Development Act (WRDA)	This biennial omnibus legislation authorizes USACE activities or amends existing authorizations related to three general primary purposes: improving navigation, reducing flood risk, and restoring aquatic ecosystems. Once passed, Congress may oversee the WRDA's implementation or provide additional direction for USACE.	https://crsreports.congress.gov/product/pdf/IF/IF11322
Federal Government	National	FEMA Hazard Mitigation Grant Program (including BRIC, FMA, HMA)	Provides funding for state, local, tribal, and territorial governments to develop hazard mitigation plans and rebuild after disasters. The program includes Building Resilient Infrastructure and Communities (BRIC), Flood Mitigation Assistance (FMA), and Hazard Mitigation Assistance (HMA) grants).	https://www.fema.gov/grants/mitigation/hazard-mitigation
Federal Government	National	Federal Land and Water Conservation Fund (LWCF)	Invests earnings from offshore oil and gas leasing to safeguard natural areas, water resources and cultural heritage. The Great American Outdoors Act of 2020 authorized \$900 million annually in permanent funding to eliminate the need for annual Congressional appropriations.	https://www.doi.gov/lwcf
Federal Government	National	US Fish and Wildlife Service Boating Infrastructure Grant Program	Provides greater access to recreational, historic, and natural resources in the US for large cruising boats. The program began in 1998 and is funded through the Sport Fish Restoration and Boating Trust Fund, which is derived from excise taxes on fishing equipment, boating fuels, import duties, and fund interest.	https://www.fws.gov/program/boating-infrastructure
Federal Government/Private	National	NFWF National Coastal Resilience Fund	Founded by Congress in 1984 to protect and restore fish, wildlife, plants, and habitats for current and future generations by bringing all stakeholders together to discuss their needs and ideas. The Fund works with public and private partners in all 50 states and US territories to fund these projects.	https://www.nfwf.org/
Federal Government	Regional	USACE Great Lakes Dredging Team	Provides a forum for exchange of information on best practices, lessons learned, and innovative solutions to dredged material management in the Great Lakes. The body is not advisory, but serves to assist USACE in implementing its Environmental Operating Principles.	https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Dredging-Team/
Federal Government	Regional	USACE's Regional Sediment Management (RSM) program	Addresses sediment issues and supports sustainable supports to meet the Corps' needs through engagement with Federal and non-Federal agencies, academia, local stakeholders	https://rsm.usace.army.mil/index.php
Federal Government	Regional	Great Lakes Restoration Initiative	Accelerates efforts to protect and restore the Great Lakes by strategically targeting the biggest threats to Great Lakes ecosystems. The GLRI has received about \$3.8 billion between FY2010-FY2021 and is supported and implemented by multiple federal, state, and local entities.	https://www.glri.us/
Federal Government	Regional	Lakewide Action and Management Plans (LAMPs)	Aims to assess, restore, protect, and monitor the ecosystem health of each Great Lake and its connecting river system in furtherance of the goals laid out in the Great Lakes Water Quality Agreement. The governments of Canada and the US collaborate on these binational action plans to restore and maintain the integrity of the Great Lakes waters.	https://www.epa.gov/greatlakes/lakewide-action-and-management-plans-great-lakes

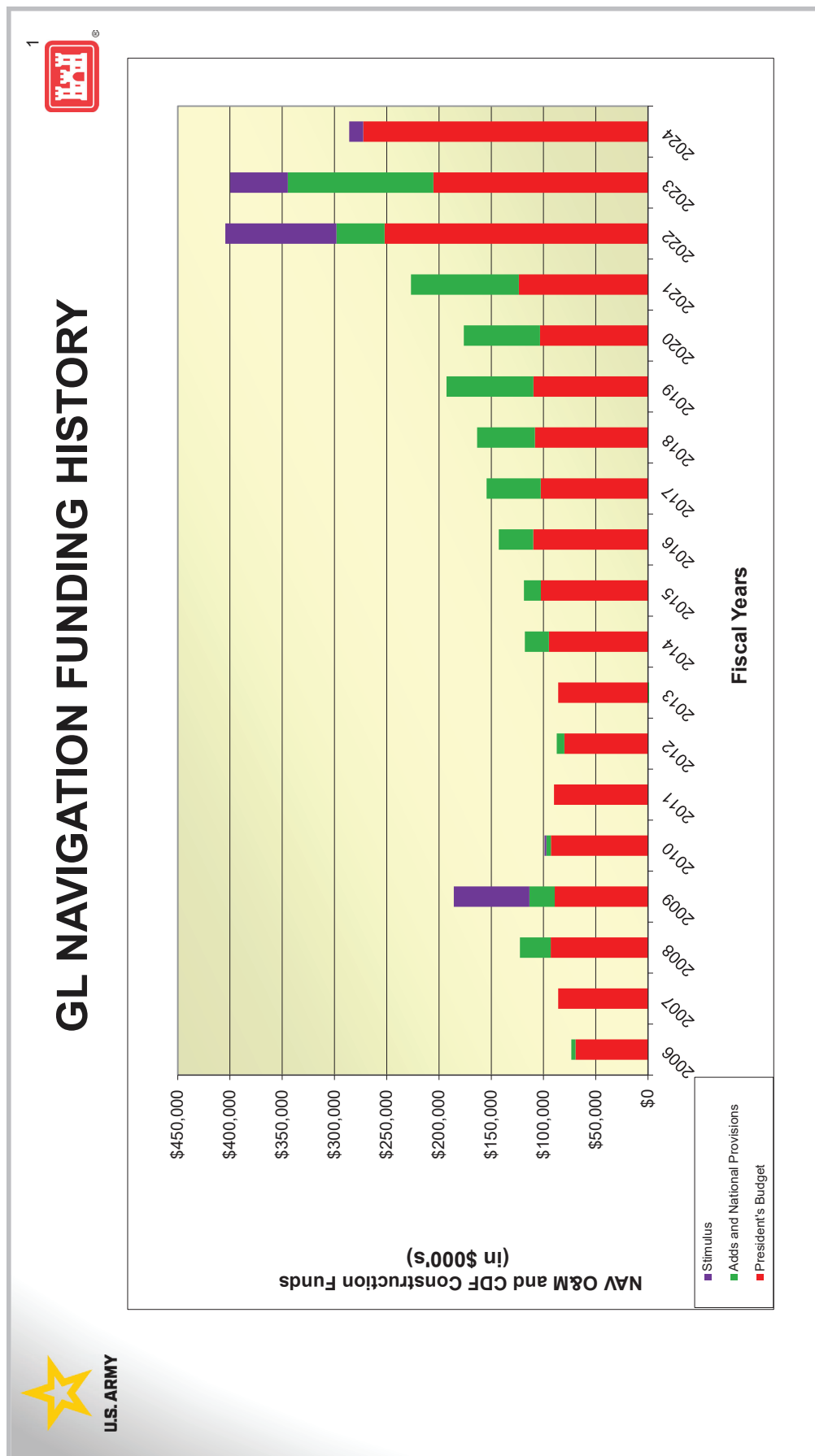
Small Harbors Matrix and Program Summaries - Federal and Regional Programs

Source	Scope	Program	Description	Link
Federal Government	Regional	Areas of Concern Program	Provides resources to clean up and restore highly degraded areas of the Great Lakes in both the US and Canada with identified beneficial use impairments resulting from	https://www.epa.gov/great-lakes-aocs/restoring-great-lakes-areas-concern
Federal Government/Interstate Agency	Regional	Great Lakes Sediment and Nutrient Reduction Program	Provides grants to local and state governments and nonprofits organizations to pursue innovative projects that install erosion and sediment control practices in the Great Lakes basin. The program is funded by the GLRI and	https://www.glc.org/work/sediment
Federal Government/NGO	Regional	Lake Michigan Coastal Resilience Initiative	Provides technical support to build capacity for Great Lakes cities to strengthen coastal resilience and respond to challenges like shoreline erosion, flooding, and increasingly frequent severe storms. The initiative is a two-year joint project between the Great Lakes and St. Lawrence Cities Initiative and NOAA to support the habitat and species goals in the GLRI Action Plan III.	https://glslcities.org/initiatives/lake-michigan-coastal-resilience-initiative/
Federal Government/State Governments	Regional	Great Lakes Coastal Resilience Study	Aims to protect economic, environmental, and social values of the Great Lakes shoreline and improve coastal resiliency by identifying vulnerable areas and recommending measures to bolster the coastline's ability to withstand, recover from, and adapt to future lake level conditions. The study is a collaborative effort by the eight Great Lakes states and several federal agencies: USACE, NOAA, USGS, FEMA, and EPA.	https://www.lrc.usace.army.mil/Missions/GLCRS/
NGO	Regional	Center for Great Lakes Literacy	Fosters informed and responsible decisions to advance basin-wide stewardship by providing hands-on experiences, educational resources, and networking opportunities to promote Great Lakes literacy among the region's stakeholders. The center is a collaborative effort led by Sea Grant educators throughout the Great Lakes region.	https://www.cgll.org/about-cgll/what-is-cgll/
Philanthropy/Interstate Agency	Regional	Green Infrastructure Champions Program	Convenes a knowledge-sharing network of community leaders across the Great Lakes basin to bring resources and expertise to communities to integrate nature-based solutions into their stormwater management. The program was operated in partnership by the Great Lakes Commission and the Erb Family Foundation from 2016-2020.	https://www.glc.org/work/champions#:~:text=The%20Great%20Lakes%20Commission%20Green,and%20emerging%20green%20infrastructure%20champions.
Philanthropy/NGO	Regional	Great Lakes Fisheries Trust	Compensates Michigan residents for the lost use and enjoyment of Lake Michigan's fisheries resources due to the operation of the Ludington Pumped Storage Plant. The Trust funds investments through four main categories: access to the Great Lakes Fishery, Ecological and biological fisheries research, Habitat protection and restoration, and Great Lakes stewardship.	https://www.glft.org/
Private/State Governments	Regional	Great Lakes Protection Fund	Created by the Great Lakes governors in 1989 to improve the health of the Great Lakes ecosystem through such projects as deploying remote monitoring of water levels and pumping activity, restoring natural flows in over 1500 miles of basin rivers, and creating the forum for the design/development of the Great Lakes-St. Lawrence River Basin Water Resources Compact.	https://glpf.org/about-us/history-endowment/
Interstate Agency	Regional	Action Plan for a Resilient Great Lakes Basin	Created by the Great Lakes Commission's Standing Committee on Climate Resilience, the Action Plan helps to prioritize efforts and forms a roadmap to advance climate resilience in the Great Lakes basin by leveraging existing efforts and supporting collaboration to share knowledge and create new partnerships.	https://www.glc.org/wp-content/uploads/GLC-Resilience-Action-Plan-2022.pdf

Small Harbors Matrix and Program Summaries - Federal and Regional Programs

Source	Scope	Program	Description	Link
Federal Government	National	Climate Resilience Regional Challenge	This Notice of Federal Funding Opportunity was released by NOAA to support projects that build resilience of coastal communities to extreme weather and other impacts of climate change (e.g., sea level rise and drought). Approximately \$575 million in funding was made possible by the passage of the Inflation Reduction Act.	https://coast.noaa.gov/funding/ira/resilience-challenge/
Federal Government	Regional	Great Lakes Environmental Justice Grant Program	The U.S. EPA's Great Lakes National Program Office (GLNPO) released a Request for Applications to fund a Great Lakes basin-wide program advancing environmental restoration projects in historically underserved Great Lakes communities. Approximately \$30 million in funded was made available by the Great Lakes Restoration Initiative and the Infrastructure Investment and Jobs Act.	https://www.epa.gov/great-lakes-funding/great-lakes-restoration-initiative-fy-2023-request-applications-rfa-create

Great Lakes Navigation System Funding History for Dredging and Structural Repairs



US Army Corps
of Engineers



